StabNet 1.1





Version 1.1

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StabNet 1.1

Online Help

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Documentation in additional languages can be found on http://documents.metrohm.com.

Table of contents

1	Introductio	n	1
	1.1	Welcome to StabNet	1
	1.2	Operation	2
	1.3	Device integration	2
	1.4	Method editor	3
	1.5	Database	3
	1.6	Communication	4
	1.7	Conformity	5
	1.8	Versions	6
	1.9	Online help	6
	1.10	What is new in StabNet?	7
	1.10.1	New features	8
2	General pro	ogram functions	9
	2.1	Program parts	9
	2.1.1	Program parts	
	2.1.2	Workplace - User interface	
	2.1.3 2.1.4	Database - User interface	
	2.1.5	Configuration - User interface	
	2.2	Login/password protection	12
	2.2.1	General information on Login/password protection	
	2.2.2	Logging in	
	2.2.3 2.2.4	Logging out manually Logging out automatically	
	2.2.5	Changing the password	
	2.3		
	2.3.1	Rules for electronic signatures	
	2.3.2	Procedure for electronic signatures	
	2.3.3	Signature Level 1	
	2.3.4	Signature Level 2	
	2.3.5	Deleting signatures level 2	19
	2.4	Formula editor	
	2.4.1 2.4.2	Input field	
	2.4.2	Variables	
	2.4.4	Operators/Functions	
	2.5	Editing	
	2.5.1	Selecting the date	60

	2.5.2	Text editor	60
	2.5.3	Hyperlink	
	2.5.4	Selecting a color	62
	2.6	E-mail	
	2.6.1	Sending an e-mail	
	2.6.2	Managing e-mail templates	
	2.6.3	Editing e-mail templates	64
3	Workplace		66
	3.1	Workplace - General	66
	3.1.1	Workplace - Definition	66
	3.1.2	Workplace - User interface	
	3.1.3	Workplace - Menu bar	
	3.1.4	Workplace - Toolbar	
	3.1.5	Workplace - Functions	68
	3.2	Workplace management	
	3.2.1	Opening a new workplace	
	3.2.2	Selecting workplace	
	3.2.3	Closing a workplace	
	3.3	Measuring position display	70
	3.3.1	Measuring position display - General	
	3.3.2 3.3.3	Toolbar Actions at the end of the determination	
	3.3.4	Selecting the method	
	3.3.5	Switching on / switching off heater	
	3.3.6	Switching on / switching off gas flow	
	3.3.7	Sample data	
	3.3.8	Selecting a sensor	
	3.3.9	Carrying out a determination	76
	3.3.10	Live curve	
	3.3.11	Modifying sample data live	
	3.3.12	Sample data modification comment	
	3.3.13	Changing stop criteria	
	3.3.14	Displaying an application note	
	3.4	Determining the temperature correction	
	3.4.1	Determining the temperature correction - General	
	3.4.2 3.4.3	Step 1 - Selecting an external temperature sensor Step 2 - Connecting a temperature sensor	
	3.4.4	Step 3 - Starting the measurement	
	3.4.5	Step 4 - Measurement	
	3.4.6	Step 5 - Saving the temperature correction	
	3.5	Determining the cell constant	86
	3.5.1	Determining the cell constant - General	
	3.5.2	Step 1 - Preparing the determination	
	3.5.3	Step 2 - Carrying out the determination	
	3.5.4	Step 3 - Saving cell constants	
	3.5.5	Table - Conductivity standard values	88

	3.6	Timer	89
	3.6.1	Timer tasks	89
	3.6.2	Editing a single task	90
	3.6.3	Editing recurrent tasks	91
	3.7	Text templates	92
	3.7.1	List of text templates	
	3.7.2	Editing text template	
4	Database		93
	4.1	Database - General	93
	4.1.1	Database - Definition	
	4.1.2	Database - User interface	
	4.1.3	Database - Menu bar	
	4.1.4	Database - Toolbar	
	4.1.5	Database - Subwindow	
	4.1.6 4.1.7	Database - Functions Views	
	4.2 4.2.1	Database display	
	4.2.1	Opening a database	
	4.2.3	Selecting a database	
	4.2.4	Displaying databases next to one another	
	4.2.5	Displaying databases one above the other	
	4.2.6	Closing a database	
	4.3	Managing databases	107
	4.3.1	Managing databases	
	4.3.2	Creating a new database	
	4.3.3	Renaming a database	109
	4.3.4	Deleting a database	
	4.3.5	Database properties	
	4.3.6	Backing up database manually	
	4.3.7	Restoring the database	
	4.4	Templates	
	4.4.1	Report templates	
	4.4.2 4.4.3	Templates for control chart	
		Export templates	
	4.5	Subwindow - Determination overview	
	4.5.1	Determination overview - General	
	4.5.2	Determination overview - Functions	
	4.6	Subwindow Information	
	4.6.1	Information - Overview	
	4.6.2 4.6.3	Information - DeterminationInformation - Method	
	4.6.4	Information - Method	
	4.6.5	Information - Configuration	
	4.6.6	Information - Messages	
		<u> </u>	

	4.6.7	Information - Determination comment	. 234
	4.7	Results subwindow	235
	4.7.1	Results - General	. 235
	4.7.2	Results - Results	
	4.7.3	Results - Statistics	. 236
	4.7.4	Results - Monitoring	. 237
	4.8	Curves subwindow	
	4.8.1	Curve window - General	
	4.8.2	Curve window - Display	
	4.8.3	Curve window - View	
	4.8.4	Labeling of the axes	
	4.8.5	Zooming	
	4.8.6	Moving the curve	
	4.8.7	Curve window - Properties	
	4.8.8	Curve window - Display of the curves	. 243
5	Method		244
	5.1	Method - General	
	5.1.1	Method - Definition	
	5.1.2	Method - User interface	
	5.1.3	Method - Menu bar	
	5.1.4	Method - Toolbar	
	5.1.5	Method - Functions	. 246
	5.2	Method editor	
	5.2.1	Creating a new method	
	5.2.2	Opening a method	
	5.2.3	Selecting a method	
	5.2.4	Editing a method	
	5.2.5	Checking a method	
	5.2.6	Saving a method	
	5.2.7	Modification comment on method	
	5.2.8	Printing method reports (PDF)	
	5.2.9	Closing a method	
	5.3	Managing methods	
	5.3.1	Managing methods	
	5.3.2	Renaming a method	
	5.3.3 5.3.4	Copying a method	
	5.3.5 5.3.5	Moving a method	
		Deleting a method	
	5.3.6 5.3.7	Sending a method to	
	5.3.7 5.3.8	Exporting a method Importing a method	
	5.3.9	Renaming an imported method	
	5.3.10		
	5.3.10	Showing the method history	
		·	
	5.4 5.4.1	Managing method groups	
	5.4.1	Managing method groups	. ∠03

	5.4.2	Edit method groups	266
	5.5 5.5.1 5.5.2	Measuring parameters subwindow Measuring parameters Table of temperature correction values	267
	5.6 5.6.1 5.6.2 5.6.3 5.6.4	Evaluation subwindow Evaluation - General Evaluation - Parameters Evaluation - Results Evaluation - Documentation	272 272 275
	5.7 5.7.1 5.7.2 5.7.3 5.7.4	Properties subwindow Properties - General Properties - Sample data Properties - Graphics Properties - Comments	285 285 289
6	Configurati	ion	296
	6.1 6.1.1 6.1.2 6.1.3 6.1.4 6.1.5 6.1.6 6.1.7	Configuration - General Configuration - Definition Configuration - User interface Configuration - Menu bar Configuration - Toolbar Configuration - Subwindows Configuration - Functions Views	
	6.2 6.2.1 6.2.2 6.2.3	Administration User administration Security settings Program administration	304 313
	6.3 6.3.1 6.3.2 6.3.3 6.3.4	Configuration data Export/Import Backup/Restore Templates Options	328 330 333
	6.4 6.4.1 6.4.2 6.4.3	Audit Trail Audit Trail - General Audit Trail - Table Audit Trail - Functions	337 340
	6.5 6.5.1 6.5.2 6.5.3	Devices subwindow Devices - General Device table Device properties	352 352
	6.6 6.6.1 6.6.2 6.6.3	Sensors subwindow Sensors - General Sensor table Sensor properties	355 356

	6.7	Temperature coefficients subwindow	365
	6.7.1	Temperature coefficients - General	
	6.7.2	Temperature coefficients table	365
	6.7.3	Temperature coefficients - Properties	368
7	Devices		374
	7.1	892 Professional Rancimat	374
	7.1.1	Device properties	
	7.1.2	Device display	
	7.2	893 Professional Biodiesel Rancimat	381
	7.2.1	Device properties	381
	7.2.2	Device display	
	7.3	895 Professional PVC Thermomat	
	7.3.1	Device properties	
	7.3.2	Device display	393
8	How to pro	oceed?	395
	8.1	Audit Trail	395
	8.1.1	Opening the Audit Trail	395
	8.1.2	Filtering the Audit Trail	
	8.1.3	Exporting the Audit Trail	
	8.1.4	Archiving the Audit Trail	
	8.1.5	Deleting the Audit Trail	
	8.2	Backup	
	8.2.1	Backing up a database	
	8.2.2	Restoring a database	
	8.2.3	Backing up configuration data	
	8.2.4	Restoring configuration data	
	8.2.5	Backing up methods	
	8.3	Determinations	
	8.3.1	Starting a determination	
	8.3.2 8.3.3	Searching for determinations Filtering determinations	
	8.3.4	Displaying determinations of a batch	
	8.3.5	Signing a determination	
	8.3.6	Exporting determinations	
	8.3.7	Importing determinations	
	8.3.8	Deleting determinations	
	8.3.9	Making a determination version current	
	8.3.10	<u> </u>	
	8.3.11	Printing a determination report	
	8.3.12	·	
	8.4	Databases	
	8.4.1	Opening a database	421
	8.4.2	Closing a database	
	8.4.3	Creating a database	
	8.4.4	Backing up a database	423

	8.4.5	Restoring a database	. 425
	8.4.6	Deleting a database	. 426
	8.5	Configuration data	426
	8.5.1	Exporting configuration data	
	8.5.2	Importing configuration data	. 427
	8.5.3	Backing up configuration data	
	8.5.4	Restoring configuration data	. 429
	8.6	Methods	430
	8.6.1	Opening a method	. 430
	8.6.2	Closing a method	. 430
	8.6.3	Creating a method	. 431
	8.6.4	Saving a new method	. 431
	8.6.5	Deleting a method	
	8.6.6	Exporting a method	
	8.6.7	Importing a method	
	8.6.8	Signing a method	
	8.6.9	Making a method version current	
	8.6.10	5	
	8.6.11	Backing up methods	. 437
	8.7	Method groups	439
	8.7.1	Creating a method group	. 439
	8.7.2	Deleting a method group	. 440
	8.8	Reports	440
	8.8.1	Creating a report template	. 440
	8.8.2	Editing a report template	. 442
	8.8.3	Printing a determination report	
	8.8.4	Printing a determination overview	. 444
Glossa	ary		446
Index			450

1 Introduction

1 Introduction

1.1 Welcome to StabNet

Introduction



Version 1.1

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StabNet

StabNet is a control and database software for stability measuring instruments.

Overview of the main program features

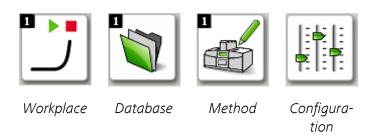
- Easy-to-operate and easily configurable user interface
- Simple integration of instruments
- Convenient method editor
- Database-based program with client/server functionality
- Wide range of import and export functions
- FDA compatibility in accordance with 21 CFR Part 11
- Comprehensive online help
- Program versions

1.2 Operation

1.2 Operation

Introduction

The modern **user interface** makes it easy for users to find their way around **StabNet**. All commands and control elements are located where you would expect. The bar on the left edge of the screen gives you access to the four basic elements of **StabNet**:



Depending on the access permissions, these buttons are either visible or hidden. The menu bar is in the upper part of the screen. It is also possible for the individual commands to be hidden, depending on the access permissions.

In the center of the screen, you can find the **information windows** with the settings, sample entry masks, live curves or results. This view can be set individually for each user with the aid of the layout manager. As a result, users see only those windows or buttons they actually need for their work. This reduces the introductory period for routine users to a minimum. Incorrect operation as a result of overcrowded screens is also a thing of the past.

A wide range of tried-and-tested methods allow any user to create new methods quickly and simply and to use them immediately.

1.3 Device integration

Introduction

The following instruments can be operated with **StabNet**:

- 892 Professional Rancimat
- 893 Professional Biodiesel Rancimat
- 895 Professional PVC Thermomat

1 Introduction

1.4 Method editor

Introduction

A method comprises measuring parameters, evaluation parameters and properties of the sample data, graph and comments. With the aid of the three templates, methods can be created quickly and easily. For most routine and automated tasks, there are tried-and-tested methods available. Just a few clicks and they are adapted and ready to use.

Overview of functions

- Method editor (see Chapter 5.2, page 247)
- Method manager (see Chapter 5.3.1, page 254)
- Separate management of access permissions for each method group (see Chapter 5.4.2.3, page 267)
- Templates for method development and calculations (see Chapter 5.2.1, page 247)
- Plausibility check for methods (see Chapter 5.2.5, page 250)

1.5 Database

Introduction

StabNet is based on an **object-oriented database** that has proven itself in practice. All program settings, the user administration, methods and templates are stored in the **configuration database** and the determination data is stored in the **determination databases** defined by the user. These databases can be installed locally on the computer reserved for measurements and make up a simple measurement system. **StabNet** is however scalable and grows with operational requirements. As soon as data security and central data management make it necessary, **StabNet** is installed as a **client/server configuration**. The **StabNet** database is then installed on a server. All measurement and office computers work as clients. All results are stored centrally in this network and can be accessed and processed by all Client PCs. All clients also access the same pool of methods.

The new database has all the major tools necessary for managing, searching for and grouping results. Quick filters allow the user to browse through thousands of determinations within seconds and to display the result clearly. Chart plots give a fast overview of the sequence of results based on time.

All options for **reprocessing** are available to the user.

1.6 Communication

Overview of functions

- Object-oriented client/server database (see Chapter 6.2.3.1, page 322).
- Layout manager for the database view (see Chapter 4.1.7, page 101).
- Quick filters (see Chapter 4.5.2.5.3, page 173).
- Efficient search functions (see Chapter 4.5.2.4, page 170).
- Access permissions control for every database (see Chapter 4.3.5.3, page 111).
- Automatic database backup (see Chapter 4.3.5.4, page 111).
- Fast overview of results or specially designed control charts (see Chapter 4.5.2.15, page 189).
- Curve overlay (see Chapter 4.5.2.16, page 198).
- Reprocess determinations (see Chapter 4.5.2.17, page 203).

1.6 Communication

Introduction

StabNet is communicative. Data generated in **StabNet** can be exported in XML and CSV format. Connection to LIMS systems on the market is thus not difficult. Export to long-term archiving systems such as NuGenesis SDMS or Scientific Software Cyberlab is also supported.

The **Report generator** provides a simple and flexible solution for creating analysis reports. The report generator allows you to freely define the report templates. It is therefore possible at any time to display one or more determinations in a choice of PDF format or as a printout.

A special feature is that **StabNet** can send messages, error messages or results from the method run to the user by **e-mail**.

Overview of functions

- Various export formats, e.g. XML, CSV, TXT (see Chapter 4.4.3.2.1, page 157).
- Report templates (see Chapter 4.4.1.4.1.1, page 119).
- E-mail functions for status messages, error messages or results (see Chapter 2.6, page 63).

1 Introduction

1.7 Conformity

Introduction

StabNet also sets new standards with respect to the fulfilling of **GMP**, **GLP and FDA requirements**. The latest quality standards and validation procedures were implemented in developing and programming the software. **StabNet** has been designed to fulfill the FDA Guidance 21 CFR Part 11 and the customer-specific interpretations. This is confirmed by a Certificate of Conformity. A centralized user administration defines the access permissions for program functions and determinations, whereby any number of users with freely definable access profiles are possible. The system administrator can conveniently access the user administration from any **StabNet** client. Access to the software is password-protected and there is a choice of **StabNet** or Windows login.

The use of **digital signatures** makes it possible to sign methods and results. There are two signatures available with differing properties. With the first signature (Level 1, Review) the user confirms that he has programmed the method correctly or carried out the analysis correctly. With the second signature (Level 2, Release) the method or result is shared and protected against further modifications. It is thus possible to mirror customized workflows in **StabNet**.

All data is **version-controlled** and protected against unauthorized access, modification or deletion in the database. The database itself controls access to the data in network operation and provides archiving and restore functions.

All actions by the user and all major system processes are logged in the **Audit Trail**.

Conformity-relevant properties of StabNet

- Conformity is priority in development and validation.
- Central user administration (see Chapter 6.2.1.1, page 304).
- Detailed access permissions (see Chapter 6.2.1.2.2, page 307).
- Password protection under StabNet or Windows (see Chapter 6.2.2.2, page 314).
- Digital signature on two levels (see Chapter 2.3, page 15).
- One signature each for methods and results.
- Documentation of all method and result modifications (see Chapter 4.5.2.13, page 187).
- Traceability thanks to detailed Audit Trail (see Chapter 6.4.1.1, page 337).

1.8 Versions

1.8 Versions

Introduction

StabNet is available in **two sales versions** which differ with regard to the scope and functions. An **upgrade** is possible at any time.

	StabNet 1.1 Full	StabNet 1.1 Multi
Product	6.6068.112	6.6068.113
Maximum number of instruments per PC	4	4
Conformity functions	•	•
User administration	•	•
Security settings	•	•
Traceability ("Audit Trail")	•	•
Client/server support		•
Number of licenses	1	3
Additional licenses as an option		•
XML data export to LIMS	•	•
Upgrade possible	•	

1.9 Online help

Introduction

Calling up the help

StabNet has a very extensive and detailed online help that can be accessed in two ways:

- General call The Help ➤ StabNet Help menu item or the symbol is used to open the online help with the topic Welcome to StabNet.

 From there you can jump to the desired topic via Contents, Index, Search or personal Favorites.
- **Context-sensitive call** With the **[F1]** function key on the keyboard you can jump directly to the topic which will show information on the active element in **StabNet** (dialog window, tab).

Symbols and conventions

The following symbols and formatting are used in this documentation:

1 Introduction

6.5.2Device table	Link to another help topic in which information is shown for the marked term.	
Method	Dialog text	
	Designation for names of parameters, menu items, tabs and dialog windows in the software.	
100	Designation for parameter values in input fields.	
File ► New	Menu or menu item; Path needed to reach a certain point in the program.	
[Next]	Button	
[÷]	Formula editor	
	Formulae can be entered in fields with this symbol, and the formula editor opens when you click on the symbol (see Chapter 2.4, page 20).	
1	Instruction step	
	Carry out these steps in the sequence shown.	
	Caution	
	This symbol draws attention to possible damage to instruments or instrument parts.	
4	Note	
	This symbol marks additional information and tips.	

1.10 What is new in StabNet?

Introduction

This chapter describes the changes that were made from StabNet 1.0 to StabNet 1.1.

1.10 What is new in StabNet?

1.10.1 New features

New instrument firmware

Instruments	Firmware version	Comment
892 Professional Rancimat	5.893.0014	The new firmware can only be
893 Professional Biodiesel Rancimat	5.893.0014	installed if version 5.893.0012 is already running on the
895 Professional PVC Thermomat	5.893.0014	instrument.
		If the instrument still uses an older firmware version, please contact Metrohm Service.

Operating systems

With version 1.1 and higher, StabNet runs on the following operating systems:

32-bit version of

- Windows 8/8.1 Professional/Enterprise
- Windows Server 2012 R2

64-bit version of

- Windows 8/8.1 Professional/Enterprise
- Windows Server 2012 R2

2 General program functions

2.1 Program parts

2.1.1 Program parts

General program functions

StabNet has four different program parts which can be opened by clicking on the corresponding symbol in the vertical bar on the left. The symbol for the opened program part is shown in color, the symbols for the other program parts in black and white. The menus, symbol bars and content of the main window depend on the program part currently opened.

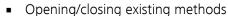
Workplace program part

- Opening/closing workplaces
- Start of single and multiple determinations
- Determination of temperature correction and cell constant

Database program part

- Opening/Closing databases
- Managing databases
- Reprocessing
- Creating report templates

Method program part



- Creating new methods
- Managing methods



Configuration program part

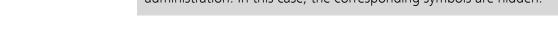
- Configuration of devices, sensors and temperature coefficients
- Security settings
- User administration
- Program administration
- Audit Trail



NOTE

Access to the individual program parts can be deactivated in the user administration. In this case, the corresponding symbols are hidden.







2.1 Program parts

2.1.2 Workplace - User interface

Program part: Workplace

Workplace symbol



Clicking on the workplace symbol in the vertical bar on the left opens the program part **Workplace** while at the same time the workplace symbol is shown in color. The upper left corner of the symbol contains a black field displaying the number of workplaces currently opened (see Chapter 3.2.2, page 69).

Elements

The user interface of the **Workplace** program part comprises the following elements:

- Main window
- Workplace-specific menu bar
- Workplace-specific toolbar
- Status bar

Status bar

A point in the color of the workplace appears at the lower right in the status bar for each opened workplace. Ongoing determinations are symbolized by a rotating wing.

2.1.3 Database - User interface

Program part: **Database**

Database symbol



Clicking on the database symbol in the vertical bar on the left opens the program part **Database** while at the same time the database symbol is shown in color. The upper left corner of the symbol contains a black field displaying the number of databases currently opened (see Chapter 4.2.2, page 106).

Elements

The user interface of the **Database** program part comprises the following elements:

- Database-specific menu bar.
- Database-specific toolbar.
- Main window in which up to 4 subwindows can be displayed.

2.1.4 Method - User interface

Program part: Method

Method symbol



Clicking on the method symbol in the vertical bar on the left opens the program part **Method** while at the same time the method symbol is shown in color. The upper left corner of the symbol contains a black field displaying the number of methods currently opened (see Chapter 5.2.3, page 249).

Elements

The user interface of the **Method** program part comprises the following elements:

- Method-specific menu bar.
- Method-specific toolbar.
- Main window, in which one method can be opened and shown.

2.1.5 Configuration - User interface

Program part: Configuration

Configuration symbol



Clicking on the configuration symbol in the vertical bar at the left opens the **Configuration** program part while, at the same time, the configuration symbol is shown in color.

Elements

The user interface of the **Configuration** program part comprises the following elements:

- Configuration-specific menu bar.
- Configuration-specific toolbar.
- Main window in which up to 3 subwindows can be displayed.

2.2 Login/password protection

2.2.1 General information on Login/password protection

Program parts: Workplace / Database / Method / Configuration

Login into StabNet

StabNet can be configured so that all users have to log in with their **user name** and **password** and this data is automatically checked. This requires a **User administration** to be set up and the corresponding **Security settings** to be made. This data is saved in the configuration database. In the case of client/server systems, this is on the server and applies globally for all clients (central user administration).

FDA-compliant settings

If you are to be in compliance with the FDA, the **Settings according to 21 CFR Part 11** in the **Security settings** dialog window must be activated according to 21 CFR Part 11 by activating the check box **Settings according to 21 CFR Part 11**. The following conditions will then be complied with:

- A **login with user name and password** is required each time the program is started.
- **User names** must be **unique**. Users entered once cannot be deleted.
- Password administration is carried out in StabNet.
- **User names** must be **unique**. Users entered once cannot be deleted.
- Passwords must be unique per user. None of the expired passwords already used once by the user may be reused.
- Passwords must comprise a **minimum number of characters**.
- Passwords must be changed according to a defined **validity period**.
- The number of login attempts for entering the password is limited.
 If this number is exceeded, the user will automatically be set to the status inactive. An e-mail can be sent automatically at the same time to the administrator.

Actions

If the login is activated, the following actions can be performed:

- Log in at program start
- Manual logout
- Automatic logout
- Change password

2.2.2 Logging in

Program parts: Workplace / Database / Method / Configuration

If both the options **Enforce login with user name** and **Enforce login with password** are activated in the **security settings**, the **Login** dialog window will appear every time the program is started and after each time the user logs out.

User

Entry of the short name of the user.

Entry **24 characters**

Password

Entry of the password.

Entry **24 characters**



NOTE

Users who log in for the first time or users whose status has been reset from **disabled** or **removed** back to **enabled**, must log in with the **Start password** (see Chapter 6.2.1.3.1, page 311) assigned by the administrator. Afterwards, the window **Change password** will automatically be opened, in which a new password needs to be entered.

[Change password]

Opens the window **Change password**, in which the new password needs to be entered and confirmed.

[Cancel]

The login is canceled, the program is terminated.

2.2.3 Logging out manually

Program parts: Workplace / Database / Method / Configuration ▶ File ▶ Logout...

A logged in user can logout at any time with the menu item **File ► Log-out...**. The logout options defined in the **Security settings** apply. After the logout the **Login** window appears, allowing a new user to log in.

2.2.4 Logging out automatically

Program part: **Configuration**

If the automatic logout is activated in the **Security settings**, the user will then be logged out automatically after a definite waiting time if he does not perform any operating functions via the keyboard or mouse. Afterwards the **Login** window opens, in which however only the same user can log in again.

2.2.5 Changing the password

Dialog window: Login ► [Change password] ► Change password



NOTE

The password can be changed in **StabNet** only if the **Password monitoring by StabNet** option is set in the security settings.

[Change password]

This button in the **Login** dialog window opens the **Change password** window in which the new password needs to be entered and confirmed.



NOTE

The password always needs to be changed before the **Passwords expire every** of the password expires. For users who are logging in for the first time or users whose status has been reset from **disabled** or **removed** back to **enabled**, this window is automatically opened after logging in with the **Start password**. Here you also need to enter the **Start password** assigned by the Administrator for **Old password**.

Old password

Entry of the previous password.

Entry	24 characters

New password

Entry of the new password. The password options are defined in the **Security settings** on the **Login/Password protection** tab.

Entry	24 characters
EIIII y	24 Characters

Confirm password

Confirmation of the new password.

Entry	24 characters	

2.3 Electronic signatures

2.3.1 Rules for electronic signatures

Program parts: Method / Database

In StabNet, methods and determination can be **electronically signed** at two levels. The following rules apply for this:

Signature levels

Methods and determinations can be signed at two levels (Signature Level 1 and Signature Level 2) by entering the user name and password.

Multiple signing

Methods and determinations can be signed several times at each level. All signatures are saved and documented in the Audit Trail.

Signing at Level 1

If Level 2 has been signed then no more signatures are possible at Level 1.

Signing at Level 2

Level 2 can only be signed if signatures already exist at Level 1.

Different users

The same user may sign only on either Level 1 or Level 2.

Reason and comment

Each signature must be accompanied by a reason selected from predefined default reasons. Additionally, a further comment can be entered.

Saved data

For each signature, signature date, user name, full name, reason and comments are saved.

Deleting signatures 1

Signatures at Level 1 are automatically deleted again when creating a new version.

Deleting signatures 2

Signatures at Level 2 can only be deleted by users who have the appropriate rights.

Signing methods

Methods can only be signed individually.

Signature options

The options for electronic signatures are set in the **Signatures** tab in the **Security settings** dialog window.

2.3 Electronic signatures

2.3.2 Procedure for electronic signatures

Program parts: Database / Method

Methods and determinations exhibit one of the following three statuses in relation to signatures (see flow diagram):

Not signed

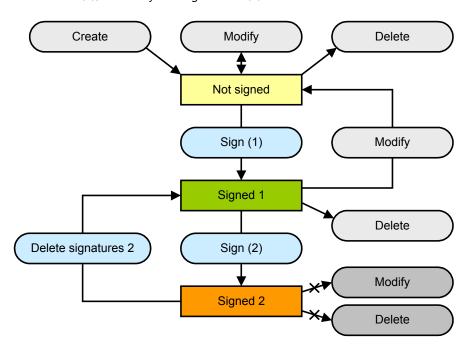
Methods and determinations which are not signed can be deleted and changed, a new version being created at each change.

Signed (1)

When signing methods and determinations at Level 1, no new versions are generated. If methods and determinations signed at Level 1 are changed, a new version is generated, which no longer contains any signatures. Methods and determinations signed at Level 1 can be deleted.

Signed (2)

When signing methods and determinations at Level 2, no new versions are generated. Methods and determinations signed at Level 2 can neither be changed nor deleted. However, it is possible to delete the signatures (2), whereby the signatures (1) are retained.



2.3.3 Signature Level 1

Dialog window: Database ► Determinations ► Sign ► Signature 1... ► Signature Level 1

Dialog window: Method ▶ File ▶ Method manager... ▶ Method manager ▶ [Sign] ▶ Signature 1... ▶ Signature Level 1

Methods or determinations can be signed at level 1 in the **Signature Level 1** window.

2 General program functions



NOTE

Methods or determinations which have been signed at level 1 can be modified and deleted. If the modified method or determination is saved as a new version, then all existing signatures will be deleted automatically, i.e. the method or determination must be signed again.

Info

Display of information for signing and deleting signatures. The following messages are possible:

Selection	Signature possible Signature 1 not possible
	(signature 2 exists) Signature not possible
	(accessed by other client)

Signature possible

The selected method or determination can be signed.

Signature 1 not possible (signature 2 exists)

The selected method or determination can no longer be signed at level 1 as it has already been signed at level 2.

Signature not possible (accessed by other client)

The selected method or determination cannot be signed as it is already marked to be signed on a different client.

User

Entry of the user name (short name).

Entry	24 characters

Password

Entry of the password.

Entry	24 characters

Reason

Selection from the **Default reasons** defined in the **Security settings** dialog window for the **Signature level 1** category.

Selection	'Selection from the default reasons'
JCICCLIOII	Sciection nomitale actualt reasons

Comment

Entry of a comment on the signature.

Entry	1000 characters	
-------	-----------------	--

[Sign]

Sign the method or determination. The window remains open.

2.3 Electronic signatures



NOTE

Methods or determinations can be signed at level 1 only if the user belongs to a user group with the corresponding permission.

2.3.4 Signature Level 2

Dialog window: **Database** ► **Determinations** ► **Sign** ► **Signature 2...** ► **Signature Level 2**

Dialog window: Method ▶ File ▶ Method manager... ▶ Method manager ▶ [Sign] ▶ Signature 2... ▶ Signature Level 2

Methods or determinations can be signed at level 2 in the **Signature Level 2** window.



NOTE

Methods or determinations signed at level 2 are **locked**, i.e. they can neither be modified nor deleted. In order to be able to edit such methods or determinations again, the signatures on level 2 must first be deleted.

Info

Information for signing and deleting signatures is displayed in this box. The following messages are possible:

Selection	Signature possible Signature 2 not possible
	(signature 1 missing) Signature not possible
	(accessed by other client)

Signature possible

The selected method or determination can be signed.

Signature 2 not possible (signature 1 missing)

The selected method or determination cannot be signed at level 2 as it has not yet been signed at level 1.

Signature not possible (accessed by other client)

The selected method or determination cannot be signed as it is already marked to be signed on a different client.

User

Entry of the user name (short name).

Entry	24 characters	
-------	---------------	--

Password

Entry of the password.

characters

Reason

Selection from the **Default reasons** defined in the **Security settings** dialog window for the **Signature level 2** category.

Selection 'Selection from the default reasons'

Comment

Entry of a comment on the signature.

Entry **1000 characters**

[Sign]

Sign the method or determination. The window remains open.



NOTE

Methods or determinations can only be signed at level 2 if the user belongs to a user group with the corresponding permission.

2.3.5 Deleting signatures level 2

Dialog window: **Database** ► **Determinations** ► **Sign** ► **Delete signatures** 2... ► **Delete Signatures** Level 2

Dialog window: Method ▶ File ▶ Method manager... ▶ Method manager ▶ [Sign] ▶ Delete signatures 2... ▶ Delete Signatures Level 2

All signatures on level 2 for the selected method or determination can be deleted in the **Delete Signatures Level 2** window.

User

Entry of the user name (short name).

Entry **24 characters**

Password

Entry of the password.

Entry **24 characters**

Reason

Selection from the **Default reasons** defined in the **Security settings** dialog window for the **Signature level 2** category.

Selection 'Selection from the default reasons'

2.4 Formula editor

Comment

Entry of a comment on the signature.

Entry

1000 characters

[Delete]

Delete signatures 2.



NOTE

Signatures 2 can only be deleted if the user belongs to a user group with the corresponding permission.

2.4 Formula editor

The formula editor serves as a support when entering formulas for result calculation. It has an automatic **Syntax check** which is activated when the formula is applied. The general rules of priority apply for the calculation operations.

The **Formula editor** dialog window contains the following elements:

Input field

Entry of the calculation formula (see Chapter 2.4.1, page 20).

Function buttons

Buttons for the rapid entry of operators and parentheses (see Chapter 2.4.2, page 21).

Variables

Selection of the variables available for the calculation formula (see Chapter 2.4.3, page 23).

Operators/Functions

Selection of the operators and functions available for the calculation formula (see Chapter 2.4.4, page 26).

Description

Description of the selected variables, operators or functions.

2.4.1 Input field

Dialog window: Formula editor

The calculation formula is entered in the input field of the formula editor. The following options are available for the entry:

Entry via keyboard

Numbers

Numbers as well as mathematical functions can be entered directly via the keyboard.

20 ----- StabNet 1.1

Text

Text must be enclosed in quotation marks " (e.g. "my text").

Variables

Variables must be entered and ended with an apostrophe ' (e.g. 'RS.IND').

Time

Time indications must always be made with the aid of the **Time()** function.

Entry using the function buttons

Mathematical operators and parentheses can simply be added to the formula using the corresponding buttons. A space is automatically inserted before and after the sign.

+	Addition	=	Equal to	AND	AND
-	Subtraction	>	Greater than	OR	OR
×	Multiplication	<	Less than		Round parentheses
1	Division	< >	Not equal to	{ }	Curly brackets: Request values of variables with index, the Index is in curly brackets
^	Potentiation	<=	Less than or equal to		Undo last action
		*	Greater than or equal to		Redo last action

Entry via selection

The element selected in the **Variables** or **Operators** fields can be added to the formula by double clicking or **[Insert]**.

2.4.2 Calculation algorithms

Dialog window: Formula editor

Numerical format

The standard IEEE 754 (1985) for binary floating point arithmetic is implemented in "double precision" (64 Bit) in the software.

Rounding-off process

Measured values and results are rounded off symmetrically (commercial rounding). I.e., **1**, **2**, **3**, **4** are always rounded down whereas **5**, **6**, **7**, **8**, **9** are always rounded up.

Examples

2.33 yields **2.3**

2.4 Formula editor

2.35 yields 2.4

2.47 yields **2.5**

-2.38 yields -2.4

-2.45 yields **-2.5**

Statistics

The mean value, absolute and relative standard deviation of results *R* are calculated using the following formulas:

Mean value

$$\bar{x}_k = \frac{1}{n} \cdot \sum_{i=1}^n R_{k,i}$$

Absolute standard deviation

$$Sabs_{k} = +\sqrt{\frac{\sum_{i=1}^{n} \left(R_{k,i} - \bar{x}_{k}\right)^{2}}{n-1}}$$

Relative standard deviation (in %)

$$Srel_k = 100 \cdot \frac{Sabs_k}{\overline{x}_k}$$

The statistical calculations of the software have been implemented so that they can be checked to as great a degree as possible by the user. The individual values are therefore incorporated in the statistics with full accuracy.

It is not the number of decimal places which is decisive for the accuracy of the calculations, but rather the number of significant digits of the decimal numbers displayed. As a result of the binary 64-bit numerical format implemented on the basis of the IEEE 754 standard, the resulting decimal numbers have 15 reliable significant decimal places.

You can influence the number of significant digits by selecting the unit and the number of decimal places. As the result unit to be set sometimes contains the prefix "milli" as well as the actual physical unit, the number of significant places changes accordingly by three places during such a conversion.

Example

The result displayed **1234.56789158763 mg/L** has 15 reliable digits. It should be rounded off to three decimal places according to the above rounding-off process:

1234.568 mg/L (7 significant places, 3 of them decimal places)

The unit "g/L" means that the same result 1.23456789158763 g/L is also rounded off to three decimal places:

1.235 g/L (4 significant places, 3 of them decimal places)

The number of significant digits has now been reduced by three to four digits by omitting the prefix "milli".



NOTE

The above losses of accuracy by rounding off in the area of the maximum certain places are only relevant theoretically. Most of the time they are lower by several orders of magnitude than – as an example – the uncertainties resulting from sample size.

2.4.3 Variables

2.4.3.1 Variables - Overview

Dialog window: Formula editor

Variables are automatically generated by the program during or at the end of the determination. You can use the formula editor to access these and either use the values for further calculations or output them i reports as a result.

Variable types

The following types of variables are differentiated:

Name	Syntax	Description
Sample data varia- bles	'SD.Variable name'	Sample data variables contain all of the sample data of the determination.
Result vari- ables	'RS.Result name'	Result variables are automatically generated during the evaluation either by the program or from the results defined by the user.
Determina- tion varia- bles	'DV.Variable name'	Determination variables are general variables that are generated during the determination.
System vari- ables	'SV.Variable name'	System variables are general variables which are adopted in the determination at the start of the determination.

2.4 Formula editor

Entering variables

Variables must always be entered and ended with an apostrophe ' (e.g. **'SD.IDENT'**).



NOTE

When using variables, always observe their data type (**Number**, **Text** or **Date/Time**).

2.4.3.2 Sample data variables

Dialog window: **Formula editor ► Variables**

Sample data variables are variables that contain the sample data of the determination. The **Variables** field of the formula editor lists all of the **Sample data variables** which are available for the current method.

Syntax

'SD.Variable name'

Examples: 'SD.IDENT', 'SD.INFO3'

Method variables can be selected directly in the formula editor under **Variables** ► **Sample data variables** so as to avoid syntax errors.

Sample data variables

Variable name	Description	
METHOD	Method for the sample determination (Text).	
IDENT	Identification of the sample (Text , Number , Date).	
INFO1	Sample identification 1 (Text , Number , Date).	
INFO2	Sample identification 2 (Text , Number , Date).	
INFO3	Sample identification 3 (Text , Number , Date).	

2.4.3.3 Result variables

Dialog window: **Formula editor ► Variables**

Some result variables are automatically generated by the program. In addition, the user can also define the result variables (user-defined results) that can then also be used in the Formula editor for further calculations.

Syntax

'RS.Result name'

Examples: 'RS.IND', 'RS.RS07'

Method variables can be selected directly in the formula editor under **Variables** ▶ **Results** so as to avoid syntax errors.

Result variables

Result name	Description
IND	Induction time
STAB	Stability time
STD	Standard time
RS01	Result 1 (user-defined).
RS02	Result 2 (user-defined).
RS03	Result 3 (user-defined).
RS25	Result 25 (user-defined).

2.4.3.4 Determination variables

Dialog window: **Formula editor ► Variables**

Determination variables are general variables that are generated in the method run. The **Variables** field of the formula editor lists the **Determination variables** which are available for the current method, sorted according to name.

Syntax

'DV.Variable name'

Examples: 'DV.DUR', 'DV.STT'

Determination variables can be selected directly in the formula editor under **Variables** ▶ **Determination variables** so as to avoid syntax errors.

Available determination variables

Variable name	Description
DUR	Duration of the determination in s (Number).
STT	Moment at which the determination was started (Date).
CONDSTART	Conductivity in µS/cm at the time of the start of the determination (Number).
CONDEND	Conductivity in μ S/cm at the time of the end of the determination (Number).

2.4.3.5 System variables

Dialog window: **Formula editor ► Variables**

System variables are general variables which are adopted in the determination at the start of the determination. The **Variables** field of the formula editor lists all of the **System variables** which are available for the current method.

Syntax

'SV.Variable name'

Examples: 'SV.USN', 'SV.FUN'

System variables can be selected directly in the formula editor under **Variables** ► **System variables** so as to avoid syntax errors.

Available system variables

Variable name	Description			
USN	Short name of the logged-in user (Text).			
FUN	Full name of the logged-in user (Text).			

2.4.4 Operators/Functions

2.4.4.1 Operators/Functions - Overview

Dialog window: **Formula editor ▶ Operators/Functions**

Overview of the operators and functions

Operators	Functions
Arithmetic:	Arithmetic:
 Addition (+) Subtraction (-) Multiplication (*) Division (/) Potentiation (^) 	 Exponential function (Exp) Natural logarithm (Ln) Common logarithm (Log) Square root (Sqrt) Absolute value (Abs) Fraction (Frac) Integer (Int) Round integer (Round) Sign (Sign) Quantiles of the Student's t-distribution (Tinv)
Logic: AND OR	Date/Time: Time() Time(Date)
Comparison:	Time(Date+Time) Type conversion:
 Equal to (=) Greater than (>) Greater than or equal to (>=) Less than (<) Less than or equal to (<=) Not equal to (<>) 	 NumberToText NumberToTime TextToNumber TextToTime TimeToNumber TimeToText
	Text:
	TextPositionSubTextTrim
	Miscellaneous:
	CaseError

Priority rules of the operators

The operators are evaluated in the order in which they are listed in the table below. In order to attain the required order, it may be necessary to place operands in parentheses.

	Operators	
Arithmetic	٨	
	*, /	
	+, -	
Comparison	<, <=, >, >=	
Logic	AND, OR	

2.4.4.2 Arithmetical operators

2.4.4.2.1 Addition

Dialog window: **Formula editor ► Operators/Functions**

Syntax

Operand1 + Operand2

The operands can be entered either directly or as a variable and can be of the **Text**, **Number** or **Date/Time** type.

Examples

Operand1	Operand2	Result	Example	Remark	
both opera	both operands of the same type:				
Number	Number	Number	1.2 + 3 = 4.2	-	
Text	Text	Text	"Metrohm" + "AG" = "Metrohm AG"	If the maximum permissible length (65,536 characters) of the character string is exceeded by addition of the operands, the surplus characters will be removed from the second operand.	
Time	Time	Number	Time(1998;04;06) + Time(1964;02;03) = 59300.875 (for UTC+1)	Result: Number of days calculated from December 1899, dependent on the system time	
	of a different ope before the		pperand which does not correspond to the r	result type is converted to the rele-	
Number	Text	Text	1.2 + "Metrohm" = "1.2Metrohm"	-	
Text	Number	Text	"Metrohm" + 1.2 = "Metrohm1.2"	-	
Number	Time	Number	2.0 + Time(1999;11;7) = 36472.96 (for UTC+1)	Result: Number of days calculated from December 1899, dependent on the system time	
Time	Number	Number	Time(1999;10;7) + 2.0 = 36441.92 (for UTC+2)	Result: Number of days calculated from December 1899, dependent on the system time	
Text	Time	Text	"Metrohm" + Time(1999;10;7) = "Metrohm1999-10-07 00:00:00 UTC+2"	Before the operation, the operand of the Date/Time type is converted to Text .	
Time	Text	Text	Time(1999;01;7) + "Metrohm" = "1999-01-07 00:00:00 UTC +1Metrohm"	The same rules apply here as for the previous operation.	

2.4.4.2.2 Subtraction

Dialog window: **Formula editor ▶ Operators/Functions**

Syntax

Operand1 - Operand2

The operands can be entered either directly or as a variable and can be of the **Text**, **Number** or **Date/Time** type.

Examples

Operand1	Operand2	Result	Example	Remark		
both opera	both operands of the same type:					
Number	Number	Number	1.2 - 3 = -1.8	-		
Text	Text	Text	"Metrohm" – "AG" = invalid	This operation is not allowed.		
Time	Time	Number	Time(1998;01;06) – Time(1964;12;03) = 12087.00 (for UTC+1)	Result: Number of days calculated from December 1899, dependent on the system time		
	of a different pe before the		pperand which does not correspond to the r	esult type is converted to the rele-		
Number	Text	Text	1.2 – "Metrohm" = invalid	This operation is not allowed.		
Text	Number	Text	"Metrohm" – 1.2 = invalid	This operation is not allowed.		
Number	Time	Number	2.0 - Time(1999;10;7) = - 36437.917 (for UTC+2)	Result: Number of days calculated from December 1899, dependent on the system time		
Time	Number	Number	Time(1999;10;7) – 2.5 = 36437.917 (for UTC+2)	Result: Number of days calculated from December 1899, dependent on the system time		
Text	Time	Text	"Metrohm" – Time(1999;10;7) = invalid	This operation is not allowed.		
Time	Text	Text	Time(1999;10;7) - "Metrohm" = invalid	This operation is not allowed.		

2.4.4.2.3 Multiplication

Dialog window: **Formula editor ► Operators/Functions**

Syntax

Operand1 * Operand2

The operands can be entered either directly or as a variable and can be of the **Text**, **Number** or **Date/Time** type.

Examples

Operand1	Operand2	Result	Example	Remark	
Operands o	Operands of the same type:				
Number	Number	Number	1.2 * 3 = 3.6	-	
Text	Text	Text	"Metrohm" * "AG" = invalid	This operation is not allowed.	
Time	Time	Number	Time(1998;05;06) * Time(1902;02;03) = 27478004.545 (for UTC+1 or +2 in the summer time)	Result: Number of days calcu- lated from December 1899, dependent on the system time	
1 '	of a different ope before the	• •	pperand which does not correspond to the res	ult type is converted to the rele-	
Number	Text	Text	2 * "Metrohm" = "MetrohmMe- trohm"	_	
Text	Number	Text	"Metrohm" * 2 = "MetrohmMe- trohm"	-	
Number	Time	Number	2.0 * Time(1999;10;7) = 72879.833 (for UTC+2)	Result: Number of days calcu- lated from December 1899, dependent on the system time	
Time	Number	Number	Time(1999;10;7) * 2.0 = 72879.833 (for UTC+2)	Result: Number of days calcu- lated from December 1899, dependent on the system time	
Text	Time	Text	"Metrohm" * Time(1999;10;7) = invalid	This operation is not allowed.	
Time	Text	Text	Time(1999;10;7) * "Metrohm" = invalid	This operation is not allowed.	

2.4.4.2.4 **Division**

Dialog window: **Formula editor ► Operators/Functions**

Syntax

Operand1 / Operand2

The operands can be entered either directly or as a variable and can be of the **Text**, **Number** or **Date/Time** type.

Examples

Operand1	Operand2	Result	Example	Remark
Operands o	Operands of the same type:			
Number	Number	Number	1.2 / 3 = 0.4	Operand2 must not be zero!
Text	Text	Text	"Metrohm" / "AG" = invalid	This operation is not allowed.

Operand1	Operand2	Result	Example	Remark
Time	Time	Number	Time(1998;04;06) / Time(1964;02;03) = 1.533 (for UTC +1 or +2 in the summer time)	Result: Number of days calculated from December 1899, dependent on the system time
1 -	of a different pe before the		operand which does not correspond to the r	esult type is converted to the rele-
Number	Text	Text	1.2 / "Metrohm" = invalid	This operation is not allowed.
Text	Number	Text	"Metrohm" / 1.2 = invalid	This operation is not allowed.
Number	Time	Number	10000 / Time(1999;10;7) = 0.274 (for UTC+2)	Result: Number of days calculated from December 1899, dependent on the system time
Time	Number	Number	Time(1999;02;17) / 10000 = 3.621 (for UTC+1)	Result: Number of days calculated from December 1899, dependent on the system time
Text	Time	Text	"Metrohm" / Time(1999;10;7) = invalid	This operation is not allowed.
Time	Text	Text	Time(1999;10;7) / "Metrohm" = invalid	This operation is not allowed.

2.4.4.2.5 Potentiation

Dialog window: **Formula editor ▶ Operators/Functions**

Syntax

Operand1 ^ Operand2

The operands can be entered either directly or as a variable and can be of the **Text**, **Number** or **Date/Time** type.

Examples

Operand1	Operand2	Result	Example	Remark	
Operands o	f the same ty	/pe:			
Number	Number	Number	1.2 ^ 3 = 1.728	Complex results (which comprise +bi, i.e. a real and an imaginary component) are displayed as an error.	
Text	Text	Text	"Metrohm" ^ "AG" = invalid	This operation is not allowed.	
Time	Time	Number	Time(1900;01;05) ^ Time(1900;01;02) = 196.371 (for UTC +1)	Result: Number of days calcu- lated from December 1899, dependent on the system time	
1 -	Operands of a different type: The operand which does not correspond to the result type is converted to the relevant result type before the operation.				
Number	Text	Text	1.2 ^ "Metrohm" = invalid	This operation is not allowed.	

Operand1	Operand2	Result	Example	Remark
Text	Number	Text	"Metrohm" ^ 1.2 = invalid	This operation is not allowed.
Number	Time	Number	1.2 ^ Time(1900;02;03) = 586.198 (for UTC+1)	_
Time	Number	Number	Time(1999;10;7) ^ 2.5 = 253479847878.04 (for UTC+2)	-
Text	Time	Text	"Metrohm" ^ Time(1999;10;7) = invalid	This operation is not allowed.
Time	Text	Text	Time(1999;10;7) ^ "Metrohm" = invalid	This operation is not allowed.

2.4.4.3 Logical operators

2.4.4.3.1 AND

Dialog window: **Formula editor ► Operators/Functions**

Syntax

Operand1 AND Operand2

The operands can be entered either directly or as a variable and can be of the **Text**, **Number** or **Date/Time** type. The result type is always a number ($\mathbf{1} = \text{true}$, $\mathbf{0} = \text{false}$). The following cases are possible:

Operand1	Operand2	Result
1	1	1
0	1	0
1	0	0
0	0	0

Examples

Oper- and1	Oper- and2	Result	Example	Remark	
Operands	Operands of the same type:				
Number	Number	Number	5 AND 4> 1	Numbers greater than 0 are interpreted as	
			4 AND 0> 0	1 (true).	
Text	Text	Number	"Metrohm" AND "AG"> 1	An empty character string ("") is interpre-	
			"" AND "AG"> 0	ted as 0 (false), everything else as 1 (true). The first operation therefore corresponds	
				to 1 AND 1> 1 .	
Time	Time	Number	Time(1999;10;07) AND Time(1999;10;07)> 1	Time(): Time(Date)	
Operands	Operands of a different type:				

Oper- and1	Oper- and2	Result	Example	Remark
Number	Text	Number	1.2 AND "1.2"> 1 0 AND "1"> 1 0 AND "0"> 1 0 AND ""> 0	Before the operation, the operand of the Number type is converted to the Text type, as a conversion from Text to Number is not useful. During the second operation, the 0 is therefore converted to "0", which corresponds to the logical value 1 (true), as every character string that is not empty is interpreted as 1.
Text	Number	Number	"Metrohm" AND 1.2> 1	The same rules apply here as for the previous operation.
Number	Time	Number	2.0 AND Time(1999;10;7)> 1 0 AND Time(1999;10;07)> 0	Before the operation, the operand of the Date/Time type is converted to Number and all dates since December 30, 1899 are interpreted as 1 (true).
Time	Number	Number	Time(1999;10;7) AND 2.5>	The same rules apply here as for the previous operation.
Text	Time	Number	"Metrohm" AND Time(1999;10;7)> 1 "" AND Time(1999;10;07)> 0	Before the operation is carried out, the operand of the Date/Time type is converted to the Text type, and every nonempty character string is interpreted as 1 (true).
Time	Text	Number	Time(1999;10;7) AND "Metrohm"> 1	The same rules apply here as for the previous operation.

2.4.4.3.2 OR

Dialog window: **Formula editor ► Operators/Functions**

Syntax

Operand1 OR Operand2

The operands can be entered either directly or as a variable and can be of the **Text**, **Number** or **Date/Time** type. The result type is always a number ($\mathbf{1} = \text{true}$, $\mathbf{0} = \text{false}$). The following cases are possible:

Operand1	Operand2	Result
1	1	1
0	1	1
1	0	1
0	0	0

Examples

Operand1	Operand2	Result	Example	Remark
Operands o	Operands of the same type:			

Operand1	Operand2	Result	Example	Remark
Number	Number	Number	5 OR 4> 1 4 OR 0> 1	Numbers greater than 1 are automatically interpreted as 1 (true)
Text	Text	Number	"Metrohm" OR "AG"> 1 "" OR "Metrohm"> 1 "" OR ""> 0	An empty character string ("") is interpreted as 0 (false), everything else as 1 (true). The first operation therefore corresponds to 1 OR 1> 1
Time	Time	Number	Time(1999;10;07) OR Time(1964;02;03)> 1	Time(): see Time(Date)
-	of a different of pe before the		pperand which does not correspond to	o the result type is converted to the rele-
Number	Text	Number	1.2 OR "1.2"> 1 0 OR ""> 1	Before the operation, the operand of the Number type is converted to the Text type, as a conversion from Text to Number is not useful. During the second operation, the 0 is therefore converted to "0", which corresponds to the logical value 1 (true), as every character string that is not empty is interpreted as 1.
Text	Number	Number	"Metrohm" OR 1.2> 1	The same rules apply here as for the previous operation.
Number	Time	Number	2.0 OR Time(1999;10;7)> 1 0 OR Time(1964;02;03)> 1	Before the operation, the operand of the Date/Time type is converted to Number and all dates since December 30, 1899 are interpreted as 1 (true).
Time	Number	Number	Time(1999;10;7) OR 2.5> 1	The same rules apply here as for the previous operation.
Text	Time	Number	"Metrohm" OR Time(1999;10;7)> 1	Before the operation is carried out, the operand of the Date/Time type is converted to the Text type, and every nonempty character string is interpreted as 1 (true).
Time	Text	Number	Time(1999;10;7) OR "Metrohm"> 1	The same rules apply here as for the previous operation.

2.4.4.4 Relational operators

2.4.4.4.1 Equal to

Dialog window: **Formula editor ► Operators/Functions**

Syntax

Operand1 = Operand2

The operands can be entered either directly or as a variable and can be of the **Text**, **Number** or **Date/Time** type. The result type is always a number (1 = true, 0 = false).

Examples

	Examples				
Oper- and1	Oper- and2	Result	Example	Remark	
Operands	of the same	type:			
Number	Number	Number	5 = 5> 1	-	
			4 = 5> 0		
Text	Text	Number	"Metrohm" = "AG"> 0	When making a comparison between two	
			"aG" = "AG"> 0	texts, the ASCII value of the character string is compared (see Chapter 2.4.4.10, page 59). Attention: Uppercase and lowercase	
				letters have different values!	
Time	Time	Number	Time(1998;04;06) = Time(1964;02;03)> 0	(see Chapter 2.4.4.6.2, page 47)	
Operands	of a differer	nt type:			
Number	Text	Number	1.2 = "1.2"> 11.2 = "Metrohm"> 0	Before the relational operation, the Number is converted to Text , afterwards the texts are compared according to ASCII value (see Chapter 2.4.4.10, page 59).	
Text	Number	Number	"Metrohm" = 1.2> 0	The same rules apply here as for the previous operation.	
Number	Time	Number	2.0 = Time(1999;10;07)> 0	Before the relational operation, the operand of the Date/Time type is converted to Number . During execution of the operation, the exact value is always used after this conversion, even if maximum 5 places after the comma can be displayed (see Chapter 2.4.4.7.5, page 52).	
Time	Number	Number	Time(1999;10;7) = 2.0> 0	The same rules apply here as for the previous operation.	
Text	Time	Number	"Metrohm" = Time(1999;10;07)> 0	Before the operation, the operand is converted from Date/Time to Text (in this example: "1999-10-07 00:00:00 UTC +2"), afterwards the texts are compared according to ASCII value (see Chapter 2.4.4.10, page 59).	
Time	Text	Number	Time(1999;10;07) = "Metrohm"> 0	The same rules apply here as for the previous operation.	

2.4.4.4.2 Greater than

Dialog window: **Formula editor ► Operators/Functions**

Syntax

Operand1 > Operand2

The operands can be entered either directly or as a variable and can be of the **Text**, **Number** or **Date/Time** type. The result type is always a number (1 = true, 0 = false).

Examples

Oper- and1	Oper- and2	Result	Example	Remark				
Operands	Operands of the same type:							
Number	Number	Number	5 > 4> 1	-				
			4 > 5> 0					
Text	Text	Number	"Metrohm" > "AG"> 1	When making a comparison between two				
			"Aarau" > "Zug"> 0	texts, the ASCII value of the character string is compared (see Chapter 2.4.4.10, page 59). Attention: Uppercase and lowercase letters have different values!				
Time	Time	Number	Time(1998;04;06) > Time(1964;02;03)> 1	(see Chapter 2.4.4.6.2, page 47)				
Operands	of a differen	t type:						
Number	Text	Number	1.2 > "Metrohm"> 01.23 > "1.2"> 1	Before the relational operation, the Number is converted to Text , afterwards the texts are compared according to ASCII value (see Chapter 2.4.4.10, page 59).				
Text	Number	Number	"Metrohm" > 1.2> 1	The same rules apply here as for the previous operation.				
Number	Time	Number	2.0 > Time(1999;10;07)> 0	Before the comparison, the operand is converted from Date/Time to a Number .				
Time	Number	Number	Time(1999;10;07) > 2.0> 1	The same rules apply here as for the previous operation.				
Text	Time	Number	"Metrohm" > Time(1999;10;07)> 1	Before the operation, the operand is converted from Date/Time to Text (in this example: "1999-10-07 00:00:00 UTC +2"), afterwards the texts are compared according to ASCII value (see Chapter 2.4.4.10, page 59).				
Time	Text	Number	Time(1999;10;7) > "Metrohm"> 0	The same rules apply here as for the previous operation.				

2.4.4.4.3 Greater than or equal to

Dialog window: Formula editor ► Operators/Functions

Syntax

Operand1 >= Operand2

The operands can be entered either directly or as a variable and can be of the **Text**, **Number** or **Date/Time** type. The result type is always a number (1 = true, 0 = false).

Examples

Oper- and1	Oper- and2	Result	Example	Remark
Operands	of the same	type:		
Number	Number	Number	5 >= 4> 1	-
			4 >= 5> 0	
Text	Text	Number	"Metrohm" >= "AG"> 1	When making a comparison between two texts, the ASCII value of the character string is compared (see Chapter 2.4.4.10, page 59). Attention: Uppercase and lowercase letters have different values!
Time	Time	Number	Time(1998;04;06) >= Time(1964;02;03)> 1	(see Chapter 2.4.4.6.2, page 47)
Operands	of a differen	t type:		
Number	Text	Number	1.2 >= "1.2"> 11.2 >= "Metrohm"> 0	Before the relational operation, the Number is converted to Text , afterwards the texts are compared according to ASCII value (see Chapter 2.4.4.10, page 59).
Text	Number	Number	"Metrohm" >= 1.2> 1	The same rules apply here as for the previous operation.
Number	Time	Number	2.0 >= Time(1999;10;07)> 0	Before the comparison, the operand is converted from Date/Time to a Number .
Time	Number	Number	Time(1999;10;07) >= 2.0> 1	The same rules apply here as for the previous operation.
Text	Time	Number	"Metrohm" >= Time(1999;10;07)> 1	Before the operation, the operand is converted from Date/Time to Text (in this example: "1999-10-07 00:00:00 UTC +2"), afterwards the texts are compared according to ASCII value (see Chapter 2.4.4.10, page 59).
Time	Text	Number	Time(1999;10;7) >= "Metrohm"> 0	The same rules apply here as for the previous operation.

2.4.4.4.4 Less than

Dialog window: **Formula editor ► Operators/Functions**

Syntax

Operand1 < Operand2

The operands can be entered either directly or as a variable and can be of the **Text**, **Number** or **Date/Time** type. The result type is always a number (1 = true, 0 = false).

Examples

Oper- and1	Oper- and2	Result	Example	Remark				
Operands	Operands of the same type:							
Number	Number	Number	5 < 4> 0	-				
			4 < 5> 1					
Text	Text	Number	"Metrohm" < "AG"> 0	When making a comparison between two texts, the ASCII value of the character string is compared (see Chapter 2.4.4.10, page 59). Attention: Uppercase and lowercase letters have different values!				
Time	Time	Number	Time(1998;04;06) < Time(1964;02;03)> 0	(see Chapter 2.4.4.6.2, page 47)				
Operands	of a differen	t type:						
Number	Text	Number	1.2 < "Metrohm"> 11.2 < "1"> 0	Before the relational operation, the Number is converted to Text , afterwards the texts are compared according to ASCII value (see Chapter 2.4.4.10, page 59).				
Text	Number	Number	"Metrohm" < 1.2> 0	The same rules apply here as for the previous operation.				
Number	Time	Number	2.0 < Time(1999;10;07)>	Before the comparison, the operand is converted from Date/Time to a Number .				
Time	Number	Number	Time(1999;10;07) < 2.0> 0	The same rules apply here as for the previous operation.				
Text	Time	Number	"Metrohm" < Time(1999;10;07)> 0	Before the operation, the operand is converted from Date/Time to Text (in this example: "1999-10-07 00:00:00 UTC +2"), afterwards the texts are compared according to ASCII value (see Chapter 2.4.4.10, page 59).				
Time	Text	Number	Time(1999;10;7) < "Metrohm"> 1	The same rules apply here as for the previous operation.				

2.4.4.4.5 Less than or equal to

Dialog window: **Formula editor ► Operators/Functions**

Syntax

Operand1 <= Operand2

The operands can be entered either directly or as variables and can be of the **Text**, **Number** or **Date/Time** type. The result type is always a number (1 = true, 0 = false).

Examples

Oper- and1	Oper- and2	Result	Example	Remark
Operands	of the same	type:		
Number	Number	Number	5 <= 4> 0	-
			4 <= 5> 1	
Text	Text	Number	"Metrohm" <= "AG"> 0	When making a comparison between two texts, the ASCII value of the character string is compared (see Chapter 2.4.4.10, page 59). Attention: Uppercase and lowercase letters have different values!
Time	Time	Number	Time(1998;04;06) <= Time(1964;02;03)> 0	(see Chapter 2.4.4.6.2, page 47)
Operands	of a differen	t type:		
Number	Text	Number	2 <= "1.2"> 01.2 <= "Metrohm"> 1	Before the relational operation, the Number is converted to Text , afterwards the texts are compared according to ASCII value (see Chapter 2.4.4.10, page 59).
Text	Number	Number	"Metrohm" <= 1.2> 0	The same rules apply here as for the previous operation.
Number	Time	Number	2.0 <= Time(1999;10;07)> 1	Before the comparison, the operand is converted from Date/Time to a Number .
Time	Number	Number	Time(1999;10;07) <= 2.0> 0	The same rules apply here as for the previous operation.
Text	Time	Number	"Metrohm" <= Time(1999;10;07)> 0	Before the operation, the operand is converted from Date/Time to Text (in this example: "1999.10.07"), afterwards the texts are compared according to ASCII value (see Chapter 2.4.4.10, page 59).
Time	Text	Number	Time(1999;10;7) <= "Metrohm"> 1	The same rules apply here as for the previous operation.

2.4.4.4.6 Not equal to

Dialog window: **Formula editor ▶ Operators/Functions**

Syntax

Operand1 <> Operand2

The operands can be entered either directly or as a variable and can be of the **Text**, **Number** or **Date/Time** type. The result type is always a number (1 = true, 0 = false).

Examples

Oper- and1	Oper- and2	Result	Example	Remark
Operands o	of the same	type:		
Number	Number	Number	5 <> 4> 1	-
			5 <> 5> 0	
Text	Text	Number	"Metrohm" <> "AG"> 1	When making a comparison between two texts, the ASCII value of the character string is compared (see Chapter 2.4.4.10, page 59). Attention: Uppercase and lowercase letters have different values!
Time	Time	Number	Time(1998;04;06) <> Time(1964;02;03)> 1	(see Chapter 2.4.4.10, page 59)
Operands (of a differen	t type:		
Number	Text	Number	1.2 <> "1.2"> 01.2 <> "Metrohm"> 1	Before the relational operation, the Number is converted to Text , afterwards the texts are compared according to ASCII value (see Chapter 2.4.4.10, page 59).
Text	Number	Number	"Metrohm" <> 1.2> 1	The same rules apply here as for the previous operation.
Number	Time	Number	2.0 <> Time(1999;10;07)> 1	Before the comparison, the operand is converted from Date/Time to a Number .
Time	Number	Number	Time(1999;10;07) <> 2.5>	The same rules apply here as for the previous operation.
Text	Time	Number	"Metrohm" <> Time(1999;10;07)> 1	Before the operation, the operand is converted from Date/Time to Text (in this example: "1999-10-07 00:00:00 UTC +2"), afterwards the texts are compared according to ASCII value (see Chapter 2.4.4.10, page 59).
Time	Text	Number	Time(1999;10;7) <> "Metrohm"> 1	The same rules apply here as for the previous operation.

2.4.4.5 Arithmetical functions

2.4.4.5.1 Exponential function

Dialog window: Formula editor ▶ Operators/Functions

Syntax

y = Exp(number)

Calculates e ^ number. Other notation for $y = e^{(number)}$, whereby e is the Euler number (e = 2.71828...).

Parameters

Number Exponent

The parameter can be indicated either directly as a number or as a variable of the **Number** type. If the parameter does not correspond to the expected type, it will automatically be converted to it. If this is not possible, the result of this operation is returned as **invalid**.

Examples

Exp(1.5) = 4.48169

Exp('CV.AverageTemp') = Power of the exponent (common variable **CV.AverageTemp**) for base e

2.4.4.5.2 Natural logarithm

Dialog window: **Formula editor ► Operators/Functions**

Syntax

y = Ln(number)

Returns the logarithm of the entered number for base e. Alternative notation for $y = log_e(number)$, whereby e is the Euler number (e = 2.71828...).

Parameters

Number > 0

The parameter can be indicated either directly as a number or as a variable of the **Number** type. If the parameter does not correspond to the expected type, it will automatically be converted to it. If this is not possible, the result of this operation is returned as **invalid**.

Examples

Ln(3) = 1.09861

Ln('CV.AverageTemp') = Natural logarithm of the value of the common variable **CV.AverageTemp** for base e

2.4.4.5.3 Common logarithm

Dialog window: **Formula editor ▶ Operators/Functions**

Syntax

y = Log(number)

Returns the logarithm of the entered number for base 10. Alternative notation for $y = log_{10}(number)$.

Parameters

Number > 0

The parameter can be indicated either directly as a number or as a variable of the **Number** type. If the parameter does not correspond to the expected type, it will automatically be converted to it. If this is not possible, the result of this operation is returned as **invalid**.

Examples

Log(10) = 1

Log('CV.AverageTemp') = Common logarithm of the value of the common variable **CV.AverageTemp**

2.4.4.5.4 Square root

Dialog window: Formula editor ▶ Operators/Functions

Syntax

y = Sqrt(number)

Returns the square root of the entered number. Alternative notation for $y = \sqrt{\text{number}}$ or $y = \sqrt[2]{\text{number}}$.

Parameters

Number ≥ 0

The parameter can be indicated either directly as a number or as a variable of the **Number** type. If the parameter does not correspond to the expected type, it will automatically be converted to it. If this is not possible, the result of this operation is returned as **invalid**.

Examples

Sqrt(33) = 5.745

Sqrt('CV.AverageTemp') = Square root of the value of the common variable **CV.AverageTemp**

2.4.4.5.5 Absolute value

Dialog window: Formula editor ▶ Operators/Functions

Syntax

y = Abs(number)

Returns the absolute value of the entered number, i.e. the value of the number irrespective of its sign.

Parameters

Number

The parameter can be indicated either directly as a number or as a variable of the **Number** type. If the parameter does not correspond to the expected type, it will automatically be converted to it. If this is not possible, the result of this operation is returned as **invalid**.

Examples

Abs(-55.3) = 55.3

Abs('CV.AverageTemp') = Value of the common variables **CV.AverageTemp** without signs

2.4.4.5.6 Fraction

Dialog window: Formula editor ▶ Operators/Functions

Syntax

y = Frac(number)

Returns the fraction of the entered number.



NOTE

In the results properties, the number of **Decimal places** of the result must always be given, as otherwise the fraction cannot be displayed.

Parameters

Number

The parameter can be indicated either directly as a number or as a variable of the **Number** type. If the parameter does not correspond to the expected type, it will automatically be converted to it. If this is not possible, the result of this operation is returned as **invalid**.

Examples

Frac(-55.325) = 0.325

Frac('CV.AverageTemp') = Value of the common variable **CV.AverageTemp** without sign

StabNet 1.1 ------43

2.4.4.5.7 Integer

Dialog window: **Formula editor ▶ Operators/Functions**

Syntax

y = Int(number)

Returns the integer of the entered number.

Parameters

Number

The parameter can be indicated either directly as a number or as a variable of the **Number** type. If the parameter does not correspond to the expected type, it will automatically be converted to it. If this is not possible, the result of this operation is returned as **invalid**.

Examples

Int(-55.325) = -55

Int('CV.AverageTemp') = Integer of the value of the common variable
CV.AverageTemp

2.4.4.5.8 Rounding integer

Dialog window: Formula editor ▶ Operators/Functions

Syntax

y = Round(number)

Returns the rounded value of the entered number as a whole number.



NOTE

If the first decimal place is 5 or greater, the number is rounded up to the next whole number (commercial rounding).

Parameters

Number

The parameter can be indicated either directly as a number or as a variable of the **Number** type. If the parameter does not correspond to the expected type, it will automatically be converted to it. If this is not possible, the result of this operation is returned as **invalid**.

Examples

Round(-55.5259) = -56

Round('CV.AverageTemp') = Rounded value of the common variable **CV.AverageTemp**

2.4.4.5.9 Sign

Dialog window: Formula editor ▶ Operators/Functions

Syntax

y = Sign(number)

Returns the sign of the entered number: $\mathbf{1}$ for a positive number, $-\mathbf{1}$ for a negative number.

Parameters

Number

The parameter can be indicated either directly as a number or as a variable of the **Number** type. If the parameter does not correspond to the expected type, it will automatically be converted to it. If this is not possible, the result of this operation is returned as **invalid**.

Examples

Sign(-55.3) = -1

Sign(26.115) = 1

Sign('CV.AverageTemp') = Sign of the value of the common variable **CV.AverageTemp**

2.4.4.5.10 Quantiles of the Student's t-distribution

Dialog window: Formula editor ▶ Operators/Functions

Syntax

t_s = Tinv(Probability, Degrees of freedom)

Calculates the quantiles of the Student's t-distribution for two-sided intervals.

The result describes the half interval length as a multiple of the standard deviation of a sampling totality with given **degrees of freedom** within which, with the indicated **probability**, the mean value of the distribution lies, when the interval is centered on the mean value of the sampling totality.

Parameters

Probability

Number type, value range: 0 - 1. Direct entry as number or as formula providing a number. If the type of value is non-permitted, then the result will become **invalid**. This is to indicate the probability with which the unknown mean value of the t-distributed result is expected to lie within the two-sided interval.

Degrees of freedom

StabNet 1.1 ------45

Number type, value range: 1 - n. Direct entry as number or as formula providing a number. If the type of value is non-permitted, then the result will become **invalid**. The number of independent samplings for calculating the standard deviation, reduced by the number of adjusted parameters for the model to which the standard deviation refers, must be specified as degrees of freedom (Degrees of freedom = Number of samplings – Number of parameters).

Examples

Tinv(0.95; 9) = 2.26: With a 10-fold determination (e.g. of a titer) half the interval length corresponds to 2.26 times the standard deviation.

Calculation of the confidence interval for a mean value of sampling: A variance-homogenous sampling with a range n for a normally distributed quantity with an expected value μ has the mean value x_m , the standard deviation s and the freedom degrees v = n - 1. The half interval length $t_s \cdot s/\sqrt{n}$ then indicates how high the absolute difference between the mean value x_m and the expected value μ maximally is within the given probability. The **confidence interval** is the full interval length, centered to the mean value: $\mu = x_m \pm t_s \cdot s/\sqrt{n}$.

Titer determination: 0.991, 1.021, 0.995, 1.003, 1.007, 0.993, 0.998, 1.015, 1.003, 0.985

Mean value = 1.001

Standard deviation = 0.0111

Student's t-quantiles for a probability of 95% = 2.26

Confidence interval of the titer = 1.001 ± 0.008

2.4.4.6 Date/time functions

2.4.4.6.1 Time()

Dialog window: **Formula editor ▶ Operators/Functions**

Syntax

y = Time()

Returns the current date and the current time.

Parameters

none

Return value

Current date and current time in the **yyyy-mm-dd hh:mm:ss UTC ±xx** format

2 General program functions



NOTE

UTC = Coordinated Universal Time, from which the times in the various time zones of the earth are derived. CET (Central European Time) is equal to UTC plus 1 hour, in the summer time UTC plus 2 hours.

2.4.4.6.2 Time(Date)

Dialog window: Formula editor ▶ Operators/Functions

Syntax

y = Time(year; month; day)

Returns the entered figures in the **Date/Time** format.

Parameters

year 00 - 99 or 1000 - 9999 month 1 - 12 day 1 - 31

A parameter can be indicated either directly as a number or as a variable of the **Number** type. If the parameter does not correspond to the expected type, it will automatically be converted to it. If this is not possible, the result of this operation is returned as **invalid**.



NOTE

Only the integral part is used for all parameters.

A variable of the **Date/Time** type cannot be transferred as a parameter here.

Both for the automatic and explicit conversion of a **Time** to the **Number** type, the number of days are counted since **December 30, 1899** at **01 hours**.

Attention: December 30, 1899 01 hours = 0.00000 days, this number is **rounded** off to 5 decimal places, but a relational operation for example is carried out with the exact value!

Return value

Date/Time in the yyyy-mm-dd hh:mm:ss UTC ±xx format



NOTE

UTC = Coordinated Universal Time, from which the times in the various time zones of the earth are derived. CET (Central European Time) is equal to UTC plus 1 hour, in the summer time UTC plus 2 hours.

Examples

Time(2004;02;02) = 2004-02-02 00:00:00 UTC +1 (dependent on the system time)

Time('CV.TestYear';'CV.TestMonth';'CV.TestDay') = Date comprised of the common variables

2.4.4.6.3 Time(Date + Time)

Dialog window: **Formula editor ► Operators/Functions**

Syntax

y = Time(year; month; day; hour; minute; second)

Returns the entered numbers in the **Date/Time** format.

Parameters

year 00 - 99 or 1000 - 9999 month 1 - 12 day 1 - 31 hour 0 - 23 minute 0 - 59 second 0 - 59

A parameter can be indicated either directly as a number or as a variable of the **Number** type. If the parameter does not correspond to the expected type, it will automatically be converted to it. If this is not possible, the result of this operation is returned as **invalid**.



NOTE

Only the integral part is used for all parameters.

A variable of the **Date/Time** type cannot be transferred as a parameter here.

Both for the automatic and explicit conversion of a **Time** to the **Number** type, the number of days are counted since **December 30, 1899** at **01 hours**.

Attention: December 30, 1899 01 hours = 0.00000 days, this number is **rounded** off to 5 decimal places, but a relational operation for example is carried out with the exact value!

Return value

Date/Time in the yyyy-mm-dd hh:mm:ss UTC ±xx format



NOTE

UTC = Universal Time, from which the times in the various time zones of the earth are derived. CET (Central European Time) is equal to UTC plus 1 hour, in the summer time UTC plus 2 hours.

Examples

Time(2004;06;02;10;30;25) = 2004-06-02 10:30:25 UTC +2 (dependent on the system time)

Time('CV.TestYear';'CV.TestMonth';'CV.TestDay';'CV.TestHour';'CV.TestMin';'CV.TestSec') = Date comprised of the common variables

2.4.4.7 Type Conversion functions

2.4.4.7.1 NumberToText

Dialog window: Formula editor ▶ Operators/Functions

Syntax

y = NumberToText(number)

Returns the entered number as **Text**.

Parameters

Number

The parameter can be indicated either directly as a number or as a variable of the **Number** type.

StabNet 1.1 -----49

Examples

NumberToText(-55.3) = -55.3

NumberToText('CV.AverageTemp') = Value of the common variable (AverageTemp) as **Text**

2.4.4.7.2 NumberToTime

Dialog window: **Formula editor ▶ Operators/Functions**

Syntax

y = NumberToTime(number)

Returns the entered number as **Date/Time**, whereby the number is interpreted as the number of days since December 30, 1899 at 01 hours.

Parameters

Number

The parameter can be indicated either directly as a number or as a variable of the **Number** type.

Examples

NumberToTime(35545.526) = 1997-05-25 14:37:26 UTC+2 (dependent on the system time)

NumberToTime(35780.55) = **1997-12-16 14:12:00 UTC+1** (dependent on the system time)

NumberToTime('CV.TestDate') = Value of the common variable (Test-Date) as **Date/Time**

2.4.4.7.3 TextToNumber

Dialog window: **Formula editor ► Operators/Functions**

Syntax

y = TextToNumber(Text)

Returns the entered text as a **number**.

Parameters

Text

The parameter may only contain **numerical characters** or variables of the **Text** type, as otherwise a type conversion is not possible. The result of this conversion or the calculation would then be **invalid**. In addition, text must be marked by **quotation marks**.

Examples

TextToNumber("-55.3") = **-55.3**

TextToNumber('CV.AverageTemp') = Value of the variables (AverageTemp) as **Number**

TextToNumber('MV.ID1') = entered text of ID 1 as Number

2.4.4.7.4 **TextToTime**

Dialog window: Formula editor ▶ Operators/Functions

Syntax

y = TextToTime(Text;Format)

Returns the entered text as a **Date/Time**.

Parameters

Text

The parameter may only contain **numerical characters** or variables of the **Text** type, as otherwise a type conversion is not possible (Result = **invalid**). You can use the following characters as the **separator** between Year, Month etc.: slash (/), full stop (.), minus (-), semicolon (;), colon (:), space and comma. You can determine the **order** of the individual data yourself, but must indicate this in the **Format** parameter.

Format

Indicates in which format or order the text has been entered. This parameter must be highlighted by **quotation marks** and can comprise the following code characters:

Characters	Meaning	
у	Year	
М	Month	
d	Day	
н	Hour 0 - 23	
h	Hour AM/PM	
m	Minute	
s	Second	
a	AM/PM marking	



NOTE

If you indicate the time in the **AM/PM** format, it is necessary, in addition to the formatting character \mathbf{h} , to use the AM/PM marking \mathbf{a} (see first example below).

Examples

TextToTime("2004-12-3 5:22:01 PM";"yMdhmsa") = 2004-12-03 17:22:01 UTC+1 (dependent on the system time)

TextToTime("12-15-01 2001:3:5";"HmsyMd") = 2001-03-05 12:15:01 UTC+1 (dependent on the system time)

TextToTime('CV.TestDate';'CV.TestFormat') = Values of the common variables in the time format indicated

TextToTime('MV.ID1';'CV.TestFormat') = entered text of ID1 in the time format indicated

2.4.4.7.5 TimeToNumber

Dialog window: Formula editor ▶ Operators/Functions

Syntax

y = TimeToNumber(Time)

Returns the entered time as a **Number**.



NOTE

Both for the automatic and explicit conversion of a **Time** to the **Number** type, the number of days are counted since **December 30, 1899** at **01 hours**.

Attention: December 30, 1899 01 hours = 0.00000 days, this number is **rounded** off to 5 decimal places, but a relational operation for example is carried out with the exact value.

Parameters

Time

This parameter can be indicated either in the form of a time function or as a variable of the **Time** type.

Examples

TimeToNumber(Time()) = current date and current time represented as **Number** (in days since December 1899)

TimeToNumber(Time(1999;12;31;23;59;59)) = 36525.95832

TimeToNumber(Time('TestYear';'TestMonth';'TestDay')) = Value of the common variables as number of days as a **Number**

2.4.4.7.6 TimeToText

Dialog window: **Formula editor ► Operators/Functions**

Syntax

y = TimeToText(Time)

Returns the time entered as **Text**.

y = TimeToText(Time;Format)

Returns the time entered as **Text** in the required format.

Parameters

Time

This parameter can be indicated either in the form of a time function or as a variable of the **Date/Time** type.

Format

Indicates in which format or order the time is to be output as text. This parameter can comprise the following code characters and must be marked by **quotation marks**:

Characters	Meaning	Example	
у	two-digit year number	03	
уууу	four-digit year number	1999	
М	One or two-digit month number	4, 12	
ММ	Two-digit month number	04, 12	
МММ	Month name short form	Jul, Aug	
ММММ	Month name	July, August	
d	one or two-digit day number	2, 25	
dd	two-digit day number	02, 25	
h	one-digit or two-digit hour number (1 - 12 AM/PM)	5, 11	
hh	two-digit hour number (1 - 12 AM/ PM)	05, 11	
н	one-digit or two-digit hour number (0 - 23)	8, 17	
нн	two-digit hour number (0 - 23)	08, 17	
m	one or two-digit minute number	2, 25	
mm	two-digit minute number	02, 25	
s	one or two-digit second number	3, 55	
SS	two-digit second number	03, 55	

Characters	Meaning	Example	
E	Weekday short form	Mon, Tue, Wed	
EEEE	Weekday	Monday, Tuesday	
D	one, two or three-digit number of the day in the year	2, 35, 142	
DD	two or three-digit number of the day in the year	02, 35, 142	
DDD	three-digit number of the day in the year	002, 035, 142	
F	one-digit number of the weekday in the month, e.g. the 2 nd Monday in May	2	
w	one or two-digit number of the week in the year	5, 25	
ww	two-digit number of the week in the year	05, 25	
w	one-digit number of the week in the month	3	
a	Format AM/PM	AM, PM	
-	Quotation marks used for entering any text		
п	Entry of '	1	



NOTE

If you wish to indicate the time in the **AM/PM** format, it is necessary, in addition to the formatting character \mathbf{h} , to use the AM/PM marking \mathbf{a} (see last example below).

Examples

TimeToText(Time()) = current date and current time (system) as **Text**

TimeToText(Time(2004;05;04)) = 2004-05-04 00:00:00 UTC+2 (dependent on the system time)

TimeToText('CV.TestTime') = Value of the common variable (type **Time**) as **Text**

TimeToText(Time(2000;12;31);"EEEE', 'dd'.'MMMM' 'yyyy") = Sunday, December 31, 2000

TimeToText(Time(1997;05;22);"M'/'d'/'yyyy', 'ha") = 5/22/1997, 12PM

2.4.4.8 Text functions

2.4.4.8.1 TextPosition

Dialog window: Formula editor ▶ Operators/Functions

Syntax

y = TextPosition(Text; sample text)

Returns the **Index** which indicates at which point the **sample text** appears for the first time in the **Text**. The numbering of the index begins at **1**!

Parameters

Text

The parameter can be indicated either directly or as a variable of the **Text**, **Number** or **Date/Time** type.

Sample text

The parameter can be indicated either directly or as a variable of the **Text**, **Number** or **Date/Time** type. If the types of the two parameters do not coincide, the type is converted from **Sample text** to **Text**. If the **Sample text** is not included in the **Text**, the status **invalid** is returned.



NOTE

Entries of the **Number** type are always provided with a decimal place.

Example: **TextPosition("12345";3)** = **invalid**, as the 3 is converted to 3.0 before the operation and this is not included in the text.

Examples

TextPosition("Citric acid";"acid") = 8, the word "**acid**" occurs in the text from index number 8 onwards

TextPosition("Citric acid";"Acid") = invalid, the word "**Acid**" (capitalized) does not occur in the text

TextPosition("Citric acid"; "salt") = invalid, the word "**salt**" does not occur in the text

TextPosition(Time(2004;05;05);"5") = 7

TextPosition(3362.14;"6") = 3

TextPosition('MV.ID2';"Carbonate") = Index in which the word part "**Carbonate**" begins for the first time in the ID2

2.4.4.8.2 SubText

Dialog window: **Formula editor ▶ Operators/Functions**

Syntax

y = SubText(Text; Position; Length)

Returns that part of the text from **Text** which begins at the index **Position** and which has the length **Length**.

Parameters

Text

The parameter can be indicated either directly as text or as a variable of the **Text** type. If the parameter does not correspond to the expected type, it will automatically be converted to it. If this type conversion is not possible, the result of this operation is returned as **invalid**.

Position

The numbering of the **Position** begins at **1**. The parameter can be indicated either **directly as a number** or as a variable of the **Number** type. If the parameter does not correspond to the expected type, it will automatically be converted to it. If a type conversion is not possible or the position does not exist, the result of this operation is returned as **invalid**.

Length

The parameter can be indicated either directly as a number or as a variable of the **Number** type. If the parameter does not correspond to the expected type, it will automatically be converted to it. It a type conversion is not possible or the length indicated here is greater than the length of the subtext, **invalid** will be returned.

Examples

SubText("Citric acid";8;4) = acid

SubText("Citric acid";8;5) = **invalid**, only four characters exist from position 8 onwards

SubText('MV.ID2';1;3) = the first three characters of the identification 2

2.4.4.8.3 Trim

Dialog window: **Formula editor ► Operators/Functions**

Syntax

y = Trim(Text)

Returns the **Text** without spaces before and after.

y = Trim(Text ; sample text)

Returns the **Text** without **Sample text**.

Parameters

Text

The parameter can be indicated either directly or as a variable of the **Text**, **Number** or **Date/Time** type.

Sample text

The parameter can be indicated either directly or as a variable of the **Text**, **Number** or **Date/Time** type. If the types of the two parameters do not coincide, the type is converted from **Sample text** to the **Text** type.



NOTE

Entries of the **Number** type are always provided with a decimal place.

Example: Trim("12345";3) = 12345, as the 3 is converted to 3.0 before the operation and this is not included in the text.

Examples

Trim(" Citric acid ") = "Citric acid"

Trim("Citric acid"; "acid") = Lemons

Trim("Citric acid"; "salt") = Citric acid

2.4.4.9 Miscellaneous functions

2.4.4.9.1 Case

Dialog window: Formula editor ▶ Operators/Functions

Syntax

y = Case(Condition ; value_true ; value_false)

y = Case(Condition ; value_true ; value_false ; value_error)

Returns **value_true** if the condition is true. Otherwise **value_false** is given. If an error occurs in the condition (result **invalid**), **value_error** is given.

Parameters

Condition Number

Any variable (**Number** type) can be entered here, or a relational or logic operation can be performed whose operators can be transferred either directly or as a variable. These can be of the **Text**, **Number** or **Date/ Time** type.

Value_true

If **condition** <> **0**, this parameter is saved as a result of the function. This parameter can be transferred either directly or as a variable and can be of the **Text**, **Number** or **Date/Time** type. Entire operations can also be transferred here.

Value_false

If **condition = 0**, this parameter is saved as a result of the function. This parameter can be transferred either directly or as a variable and can be of the **Text**, **Number** or **Date/Time** type. Entire operations can also be transferred here.

Value error

If **condition = invalid**, this parameter is saved as a result of the function. This parameter can be transferred either directly or as a variable and can be of the **Text**, **Number** or **Date/Time** type. Entire operations can also be transferred here.

Examples

Case('MV.ID1' = "";"ID1 empty";"ID1 not empty") = if no entry has been made for ID1 in the run window, the text ID1 empty, otherwise ID1 not empty will be saved in the result.

Case('RS.IntermediateRes' > 5.5;"Intermediate result too high";'RS.IntermediateRes' * 26.5;"Error occurred") = If the result "IntermediateRes" is greater than 5.5, then the text "Intermediate result too high" will be written into the result, otherwise the intermediate result will be multiplied by 26.5. If an error occurs during the comparison ('RS.IntermediateRes' > 5.5) then "Error occurred" will be saved as a result of this operation.

2.4.4.9.2 Error

Dialog window: **Formula editor ▶ Operators/Functions**

Syntax

y = Error(value)

Returns **+1** if the **value is invalid** (error) or **0** if the **value is valid**. This function can be used e.g. to check variables for their existence or validity.

Parameters

Value

The variable to be tested.

Examples

Error('RS.IntermediateRes') = 0: the intermediate result was able to be calculated.

Error('RS.IntermediateRes') = 1: the intermediate result is invalid.

2.4.4.10 **ASCII table**

Dialog window: Formula editor

Only printable characters are listed in the table below:

ASCII value	Characters	ASCII value	Characters	ASCII value	Characters
(dec)		(dec)		(dec)	
32	Space	64	At sign (@)	96	Grave accent (`)
33	Exclamation mark (!)	65	А	97	а
34	Quotation mark (")	66	В	98	b
35	Hash mark (#)	67	С	99	С
36	Dollar (\$)	68	D	100	d
37	Percent (%)	69	E	101	е
38	Ampersand (&)	70	F	102	f
39	Apostrophe (')	71	G	103	g
40	Opening paren- theses (()	72	Н	104	h
41	Closing paren- theses ())	73	1	105	i
42	Multiplication sign (*)	74	J	106	j
43	Addition sign (+)	75	K	107	k
44	Comma (,)	76	L	108	I
45	Minus sign (-)	77	М	109	m
46	Period (.)	78	N	110	n
47	Slash mark (/)	79	0	111	0
48	0	80	Р	112	р
49	1	81	Q	113	q
50	2	82	R	114	r
51	3	83	S	115	S
52	4	84	Т	116	t
53	5	85	U	117	u
54	6	86	V	118	V
55	7	87	W	119	W
56	8	88	Х	120	Х

2.5 Editing

ASCII value	Characters	ASCII value	Characters	ASCII value	Characters
(dec)		(dec)		(dec)	
57	9	89	Υ	121	у
58	Colon (:)	90	Z	122	Z
59	Semicolon (;)	91	Square paren- theses ([)	123	Curly parenthe- ses ({)
60	Less than (<)	92	Backslash (\)	124	Vertical stroke (¦)
61	Equals (=)	93	Square paren- theses (])	125	Curly parenthe- ses (})
62	Greater than (>)	94	Circumflex (^)	126	Tilde (~)
63	Question mark (?)	95	Underscore (_)		

2.5 Editing

2.5.1 Selecting the date

Dialog window: **Select date**

The **Select date** dialog window serves for entering a date in a field and is opened with the button.

2.5.2 Text editor

Dialog window: **Text editor**

The text editor serves for entering formatted text in text fields and is opened with the button.

The toolbar of the text editor includes the following functions:



Cut selected text and copy it to the clipboard.



Copy selected text to the clipboard.



Insert text from the clipboard.



Open editor for entering a hyperlink (see Chapter 2.5.3, page 61).

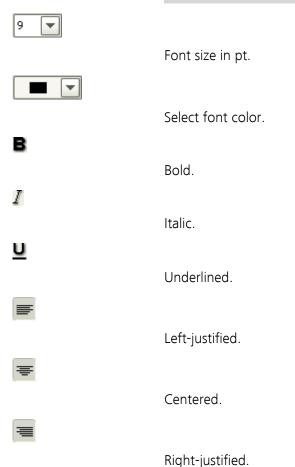


Open formula editor for entering calculation formulas (see Chapter 2.4, page 20).



NOTE

In order for results of formulas of the **Date** type to be output correctly, for text windows they must be converted to **Text** using the function **TimeToText** (see Chapter 2.4.4.7.6, page 53).



2.5.3 Hyperlink

Dialog window: **Hyperlink**

The **Hyperlink** dialog window serves for entering a hyperlink in a field and is opened with the button .

Displayed text

Designation of the hyperlink that is displayed.

2.5 Editing

Link target

Address of the link target to which the hyperlink refers (Web site, e-mail address, file,...).



The button opens a selection dialog for linking a file as a link target.

2.5.4 Selecting a color

Dialog window: Choose color

The **Choose color** dialog window opens with the button in the respective list box. It contains radio buttons for setting the hue, saturation and brightness.

Color selection

Clicking in the left color field allows you to select a color; the settings for the color are automatically transferred to the fields for the color setting at the same time.

Scroll bar

The scroll bar in the center of the dialog window is synchronized with the activated field of the color setting. **Hue**, **Saturation** and **Brightness** can thus be set very quickly.

Color setting

The hue, saturation and brightness of the color can be set independently of one another.

Selection	Hue Saturation Brightness
Default value	Hue

Hue

Hue entry.

Input range	0 - 359	
mparrange	0 555	

Saturation

Saturation entry.

Input range	0 - 100	

Brightness

Brightness entry.

Input range	0 - 100	

RGB values display

The RGB values for the selected color are displayed.

Red

Display of the red component.

Input range 0 - 255

Green

Display of the green component.

Input range 0 - 255

Blue

Display of the blue component.

Input range 0 - 255

Color sample

A sample with the color set is displayed in the lower part of the dialog window.

2.6 E-mail

2.6.1 Sending an e-mail

Dialog window: **[E-mail...]** ► **Send e-mail**

E-mail template

Selection of the template for sending E-mails.

Subject

Subject to describe the message.

Message

Text of the message which is sent to the address defined under [E-

mail...]. Clicking on the symbol opens the dialog window of the text editor (see Chapter 2.5.2, page 60).

2.6.2 Managing e-mail templates

Dialog window: Configuration ► Tools ► Templates ► E-mail templates... ► E-mail templates

The saved e-mail templates are displayed in a table in the **E-mail tem- plates** dialog window. The table cannot be edited, but with a click on the

2.6 E-mail

column title the table can be sorted according to the selected column in either ascending or descending order.

Name

Name of the e-mail template.

Recipient

E-mail address of the recipient.

The **[Edit]** menu below the list of e-mail templates or a right-click on the table opens a menu with the following menu items:

New	Create new template. The Edit e-mail template window opens in which a new template can be defined (see Chapter 2.6.3, page 64).
Properties	Edit the selected template. The Edit e-mail template window opens in which the template can be edited (see Chapter 2.6.3, page 64).
Сору	Copy the selected template and save it under the name Copy of 'Template name' .
Delete	Delete the selected template.
Send test E-mail	Send test e-mail with the selected e-mail template.

2.6.3 Editing e-mail templates

Dialog window: Configuration ► Tools ► Templates ► E-mail templates... ► E-mail templates ► New... / Properties... ► Edit e-mail template

E-mail template

Name of the e-mail template.

Entry	16 characters	

Recipient

E-mail address

E-mail address of the recipient.

Entry	200 characters	
FIIIIV	ZUU CHAFACTEIS	

Sender

E-mail address

E-mail address of the sender.

Entry 200 characters	
-----------------------------	--

2 General program functions

SMTP server

Address of the SMTP mail server.

Entry 200 characters	
-----------------------------	--

Port

Port number of the SMTP mail server.

Input range	1 - 65536	
Default value	25	

Authentication

on | off (Default value: off)

Check box for activating the authentication of the sender when sending the e-mail or selecting the authentication method.

Selection	SMTP SMTP after POP
Default value	SMTP

POP server

Address of the POP mail server.

Entry 3 - 200 characters	
---------------------------------	--

Port

Port number of the POP mail server.

Input range	1 - 65536
Default value	110

User

Name of the user for access to mail server. The name need not match the Windows user name.

Entry	2 - 50 characters

Password

Password for the access to the mail server. This password need not match the Windows password.

Entry 50 characters

3.1 Workplace - General

3 Workplace

3.1 Workplace - General

3.1.1 Workplace - Definition

Program part: Workplace

In **StabNet**, **Workplace** is defined as the program part in which up to 4 workplaces can be opened next to one another for the simultaneous, independent running of up to 8 single determinations per workplace. An instrument from the configuration must be assigned to each workplace; however, a particular instrument can be assigned to only one workplace.

3.1.2 Workplace - User interface

Program part: Workplace

Workplace symbol



Clicking on the workplace symbol in the vertical bar on the left opens the program part **Workplace** while at the same time the workplace symbol is shown in color. The upper left corner of the symbol contains a black field displaying the number of workplaces currently opened (see Chapter 3.2.2, page 69).

Elements

The user interface of the **Workplace** program part comprises the following elements:

- Main window
- Workplace-specific menu bar
- Workplace-specific toolbar
- Status bar

Status bar

A point in the color of the workplace appears at the lower right in the status bar for each opened workplace. Ongoing determinations are symbolized by a rotating wing.

3.1.3 Workplace - Menu bar

3.1.3.1 Workplace - File menu

Program part: Workplace

Workplace ▶	
🗅 New	Opens a new workplace (see Chapter 3.2.1, page 69).
Close	Closes the selected workplace (see Chapter 3.2.3, page 70).
🚱 Logout	Logs out user (see Chapter 2.2.3, page 13).
Exit	Closes the program.

3.1.3.2 Workplace - View menu

Program part: Workplace

☑ Toolbar	Switches the toolbar display on/off (see Chapter 3.3.2, page 71).

3.1.3.3 Workplace - Tools menu

Program part: Workplace

Actions at the end of the determination for •	
Block A	Define an action (switch off heater and/or reduce gas flow) at the end of the determination for block A (see Chapter 3.3.3, page 71).
Block B	Define an action (switch off heater and/or reduce gas flow) at the end of the determination for block B (see Chapter 3.3.3, page 71).
Modify stop crite- ria ►	
Block A	Change the stop criteria for block A during the measurement (see Chapter 3.3.13, page 80).
Block B	Change the stop criteria for block B during the measurement (see Chapter 3.3.13, page 80).
Determine tempera- ture correction ▶	

3.1 Workplace - General

Block A	Carry out a temperature correction determination with block A (see Chapter 3.4, page 81).
Block B	Carry out a temperature correction determination with block B (see Chapter 3.4, page 81).
Determine cell con- stant ▶	
Block A	Carry out a determination of the cell constant with Block A (see Chapter 3.5, page 86).
Block B	Carry out a determination of the cell constant with Block B (see Chapter 3.5, page 86).
☑ Timer	Define automatically executable actions (see Chapter 3.6, page 89).
Text templates	Create text templates for the sample data (see Chapter 3.7, page 92).

3.1.3.4 Help menu

Program part: Workplace / Database / Method / Configuration

StabNet Help	Opens StabNet Help.
About	Displays information about the program and the installation.

3.1.4 Workplace - Toolbar

Program part: Workplace

b	Creates a new workplace (see Chapter 3.2.1, page 69).
ចំ	Closes the workplace (see Chapter 3.2.3, page 70).
X	Defines automatically executable heater starts (see Chapter 3.6.1, page 89).
2.	Logs out user (see Chapter 2.2.3, page 13).
?	Opens StabNet Help.

3.1.5 Workplace - Functions

Program part: Workplace

The following functions can be carried out in the **Workplace** program part:

Workplaces

- Opening a new workplace
- Selecting a workplace
- Closing a workplace

Determination

- Selecting a method
- Switching on / switching off heater
- Switching on / switching off gas flow
- Carrying out determination
- Modifying sample data live

Tools

- Defining actions at the end of the determination
- Changing stop criteria
- Determining the temperature correction
- Determining the cell constant
- Defining the automatic heater start
- Defining text templates

3.2 Workplace management

3.2.1 Opening a new workplace

Dialog window: Workplace ► File ► Workplace ► New... ► New workplace

Device name

Selection of an instrument from the configuration. This instrument will be assigned to the workplace that is to be newly opened. Each Instrument can be assigned only once.

Selection 'Device name'

Color

Selection of the color for the title bar of the subwindow and the status symbol for the newly opened workplace in the status bar.

Selection	green ochre blue brown
Default value	green

3.2.2 Selecting workplace

Program part: Workplace

The number of currently opened workplaces is displayed in the upper lefthand corner of the workplace symbol. If 2 or more workplaces are opened, then the workplace that is to be displayed in the main window can be selected by means of the workplace symbol.



One workplace is opened and is displayed in the main window.



Two workplaces are opened but only one workplace is displayed in the main window.



A menu with the names of the currently opened workplaces is displayed by clicking with either the left or right mouse button on the workplace symbol. The workplace displayed in the main window is marked with a checkmark. Clicking on the desired workplace will cause it to be displayed in the main window in place of the previously selected one.

3.2.3 Closing a workplace

Menu item: Workplace ► File ► Workplace ► Close

The selected workplace is closed with this menu item.

3.3 Measuring position display

3.3.1 Measuring position display - General

Main window: Workplace

The workplace main window contains the measuring position display. This display is divided into an area for **Block A** and an area for **Block B**. The following elements are displayed in both areas:

- 3.3.2Toolbar Block-specific toolbar.
- 3.3.4Selecting the method
 Selection of the method with which the determination is to be carried out.
- 3.3.5Switching on / switching off heater
 Switching on / switching off the heater with the current heating block temperature being displayed.
- 3.3.6Switching on / switching off gas flow
 Switching on / switching off the gas flow with the current gas flow being displayed.
- 3.3.7Sample data
 Entering of sample data and additional information.
- 3.3.8Selecting a sensor
 Assigning the conductivity sensor to the measuring position.

70 ------ StabNet 1.1

3.3.9Carrying out a determination
 Starting/stopping determinations, status display, recording of the measurement curve.

3.3.10Live curve
 Display of the measurement curve, induction time line, stability time line, conductivity, measuring time and the current measured value.

3.3.2 Toolbar

Main window: Workplace ► Block A/Block B

	Shows the application note of the loaded method for Block A or Block B (see Chapter 3.3.14, page 81).
₩.	Change the stop criteria during a determination (see Chapter 3.3.13, page 80).
Y 8	Starts the temperature correction determination (see Chapter 3.4, page 81).
<u>P</u>	Starts the cell constant determination (see Chapter 3.5, page 86).

3.3.3 Actions at the end of the determination

Dialog window: Workplace ► Tools ► Actions at the end of the determination for ► Block A / Block B ► Actions at the end of the determination - Block #

The Actions at the end of the determination - Block # window is opened with the Tools ► Actions at the end of the determination for ► Block A / Block B menu item. In this dialog window, the following actions for the end of the determination can be defined before a determination is started or while a determination is running:

Switch off heater

on | off (Default value: off)

Automatic deactivation of the heater at the end of the determination.

Reduce gas flow

on | off (Default value: on)

Automatic reduction of the gas flow at the end of the determination.

3.3.4 Selecting the method

Main window: Workplace ▶ Block A/Block B

Method

Selection of the method from the current method group with which the determination is to be carried out in the block. If one remains in this field

StabNet 1.1 ----- 71

with the cursor, then the name of the current method group will appear as the **Group: 'Group name'** tooltip in the event that other groups exist besides the main group.

Selection 'Method name'

...

Open the **Open method** dialog window for the extended method selection (see Chapter 5.2.2, page 247). If a method is selected in this window from a method group other than the current one, then this group will henceforth be the current method group for the quick selection of methods in the **Method** field.

After a method has been selected, it is loaded for the selected heating block. In the process, the following parameters and surface elements of the measuring position display are refreshed:

- Target temperature (sample temperature + temperature correction)
- Gas flow
- Single determination / multiple determination (display of a frame for double or quadruple determinations)
- Sample data fields
- Sensor field
- Graph display



NOTE

If the method loaded for the heating block is changed and then saved anew in the method editor, it will be automatically reloaded as soon as no determination is running on any measuring position of the heating block.

3.3.5 Switching on / switching off heater

Main window: Workplace ► Block A/Block B

The heater of the two blocks A and B can be switched on and off individually for each block. The heater stays on until the **target temperature** (= **sample temperature** + **temperature correction**) defined in the loaded method has been reached; this temperature is displayed to the left of the Start/Stop button. To the right of this button, the current heating block temperature is displayed graphically (as the deviation of the current heating block temperature from the target temperature) and digitally.

Before switching on the heater



The current heating block temperature is indicated by a gray progress bar.

The heating of the block is switched on by clicking on

| Start |

During the heating phase



After the heating has been switched on, the current heating block temperature is indicated by a red progress bar. The heating phase is stopped and the heater is switched off by clicking on ______ 5top___. The current heating block temperature is then again indicated by a gray progress bar.

After the temperature has been reached



The temperature is indicated by a green progress bar once the selected heating block temperature has been reached and is stable. As long as no determination is running on the selected block, the heater can be

switched off again by clicking on _______. The current heating block temperature is once again indicated by a gray progress bar.

3.3.6 Switching on / switching off gas flow

Main window: Workplace ▶ Block A/Block B

892 Professional Rancimat / 893 Professional Biodiesel Rancimat

In the case of these instruments, the gas flow for the two blocks A and B cannot be switched on and off individually for each block but only collectively. If methods with different gas flows are loaded on the two blocks, then the value from the block in which the gas flow is switched on is used. The gas flow is set according to the **gas flow** defined in the loaded method; this gas flow is shown to the left of the Start/Stop button. The current gas flow is shown digitally to the right of this button. The following displays are possible:



The gas flow is not switched on. The gas flow is switched on for both blocks by clicking on Start.



The gas flow is switched on and corresponds to the setpoint value from the method loaded for this block. The gas flow is switched off for both

StabNet 1.1 ----- 73

blocks by clicking on _____ Stop__. The gas flow can be switched off only if no determination is running on either **Block A** or **Block B**.



The gas flow is switched on but does not correspond to the setpoint value from the method loaded for this block. The gas flow is switched off for both blocks by clicking on ______ 5top___. The gas flow can be switched off only if no determination is running on either **Block A** or **Block B**.



NOTE

If the **Internal pump** is switched off for an instrument in the configuration, then the gas flow can no longer be switched on and off, and the Start and stop buttons remain inactive. The gas flow provided by an external gas supply is, however, also shown in the display.

895 Professional PVC Thermomat

In the case of this instrument, the gas flow for the two blocks A and B can be switched on and off individually for each block. The gas flow is set according to the **gas flow** defined in the loaded method; this gas flow is shown to the left of the Start/Stop button. The current gas flow is shown digitally to the right of this button. The following displays are possible:



The gas flow is not switched on. The gas flow is switched on for the selected block by clicking on <u>Start</u>.



The gas flow is switched on and corresponds to the setpoint value from the method. The gas flow is switched off for the selected block by clicking

on ______. The gas flow cannot be switched off until there are no longer any determinations running on the selected block.



NOTE

If the gas flow is switched off manually after a determination, then the reaction vessels must be removed from the PVC Thermomat within 1 h after the end of the determination. An underpressure could develop over time if the vessels are not removed because the HCl that is still being produced is absorbed in the condensed water vapor from the measuring vessel. This underpressure could result in back suction of the measuring solution into the hot reaction vessel.

3.3.7 Sample data

Main window: Workplace ► Block A/Block B

Ident

Entry of a designation or selection of a defined text template for the sample.

Editable only if no determination is running, otherwise inactive.

Entry	100 characters
Selection	'Text template'

Info 1

Entry of additional information about the sample. If text templates have been defined for this parameter, you can select them here.

The **Info 1** field is displayed only if it has been activated in the method (see Chapter 5.7.2.2, page 286). The information fields can neither be removed nor added in the main window of the **Workplace** program part.

Editable only if no determination is running, otherwise inactive.

Entry	100 characters	
Selection	'Text template'	

Info 2

Entry of additional information about the sample. If text templates have been defined for this parameter, you can select them here.

The **Info 2** field is displayed only if it has been activated in the method (see Chapter 5.7.2.2, page 286). The information fields can neither be removed nor added in the main window of the **Workplace** program part.

Editable only if no determination is running, otherwise inactive.

Entry	100 characters	
Selection	'Text template'	

StabNet 1.1 ------ 75

Info 3

Entry of additional information about the sample. If text templates have been defined for this parameter, you can select them here.

The **Info 3** field is displayed only if it has been activated in the method (see Chapter 5.7.2.2, page 286). The information fields can neither be removed nor added in the main window of the **Workplace** program part.

Editable only if no determination is running, otherwise inactive.

Entry	100 characters
Selection	'Text template'

3.3.8 Selecting a sensor

Main window: Workplace ► Block A/Block B

Sensor

Selection from the configuration of the conductivity sensor to be used for the determination.

The **Sensor** field is displayed only if the **Conductivity sensor assignment** check box has been activated in the method (see Chapter 5.5.1, page 267). The **Sensor** field can be neither removed nor added in the main window of the **Workplace** program part.

Editable only if no determination is running, otherwise inactive.

School name	Selection	'Sensor name'	
-------------	-----------	---------------	--

3.3.9 Carrying out a determination

Main window: Workplace ► Block A/Block B

Starting a determination



Starts a determination on the selected measuring position. Alternatively, the determination can also be started directly with the start key on the instrument.

Stopping a determination



Stops the determination on the selected measuring position.

Measuring position display during the determination





Measuring position number is pulsating during the determination. The background of the live curve is displayed in the color defined in the method (see Chapter 5.7.3.2, page 291).

Carrying out a single determination

A single determination can be carried out if the **none** setting is selected for **Statistical link** in the method (see Chapter 5.5.1, page 267).

Carrying out a double determination

A double determination can be carried out if the **2 positions** setting is selected in the method for **Statistical link** (see Chapter 5.5.1, page 267). This is indicated on the user interface by a colored frame around the positions 1 and 2 or 3 and 4. Determinations which are started on positions 1 and 2 or 3 and 4 are statistically linked to one other.

Carrying out a quadruple determination

A quadruple determination can be carried out if the **4 positions** setting is selected for **Statistical link** in the method (see Chapter 5.5.1, page 267). This is indicated on the user interface by a colored frame around the positions 1 to 4. Determinations which are started on positions 1 to 4 will be statistically linked to one other.

3.3.10 Live curve

Main window: Workplace ▶ Block A/Block B

Live curve display

The live curve of a determination that has been started is displayed next to the Start button for each position in the main window of the **Workplace** program part. Before a determination is started, the live curve is displayed with a gray background; after the start, the background is displayed in the color defined in the method (see Chapter 5.7.3.2, page 291). The background is displayed in gray once again after the determination has been completed.

The following information is displayed in the eight live curves during and after the measurement: measurement curve, induction time line and stability time line. The current measured conductivity value and the measuring time are displayed above the curve. Please note that measured conductivity values of > 400 μ S/cm imply a greater inexactitude.

 Additional information which can be defined only in the **Method** program part (but not in the workplace!) (see Chapter 5.7.3, page 289) is displayed only in the **Curve** subwindow in the **Database** program part (see Chapter 4.8.7, page 242).



NOTE

If no conductivity sensor is connected or if the sensor is not immersed in the solution, then '- µS/cm' is displayed as the conductivity value (in the workplace and on the instrument display).

If a conductivity sensor is connected and the sensor is immersed in the solution, the conductivity is displayed on the instrument display and above the conductivity curve already before the determination is started.

Changing the conductivity display

If the **Conductivity sensor assignment** is activated in the method loaded at the workplace, then the conductivity displayed above the curve and on the instrument display may change when a determination is started, the reason being that a cell constant of the conductivity sensor that has been changed in the meantime is not sent to the instrument until the determination is started. The conductivity is recalculated in the instrument and displayed on the monitor and in the software.

If the **Conductivity sensor assignment** is not activated, the default value of the cell constant **1.1 /cm** is always used to calculate the conductivity.

Context-sensitive menu

Clicking on the live curve with the right mouse button will cause a context-sensitive menu to appear with the following menu items:

Show all	Shows the entire curve. This menu item is always enabled.
Zoom Opens the dialog for entering a zoom range (see Chapter 4.8.5.2, page 2	
Unzoom Undoes the last zoom action (as often as required).	
Сору	Copies the live curve displayed to the clipboard.

3.3.11 Modifying sample data live

Dialog window: Workplace ▶ Block A/Block B ▶ Modifying sample data live

The sample data **Ident**, **Info 1**, **Info 2** and **Info 3** can be entered into the respective fields before or after the determination has been started. While a determination is running, you can right click in one of the fields (**Ident**, **Info 1**, **Info 2** or **Info 3**) to open the context-sensitive **Modifying sample data live** menu item and thus the **Modifying sample data live** window. Only the sample data fields that have been activated in the method are available. Sample data fields can neither be removed nor added in the main window of the **Workplace** program part.

Ident

Entry of a designation or selection of a defined text template for the sample.

The field Ident is always used in a method (see Chapter 5.7.2.2, page 286).

Entry	100 characters
Selection	'Text template'

Info 1

Entry of additional information about the sample. Text templates can be selected here if they have been defined for this parameter.

The info field is displayed only if it has been activated in the method (see Chapter 5.7.2.2, page 286).

Entry	100 characters
Selection	'Text template'

Info 2

Entry of additional information about the sample. Text templates can be selected here if they have been defined for this parameter.

The info field is displayed only if it has been activated in the method (see Chapter 5.7.2.2, page 286).

Entry	100 characters	
Selection	'Text template'	

Info 3

Entry of additional information about the sample. Text templates can be selected here if they have been defined for this parameter.

The info field is displayed only if it has been activated in the method (see Chapter 5.7.2.2, page 286).

Entry	100 characters

StabNet 1.1 ----- 79

Selection

'Text template'

3.3.12 Sample data modification comment

Dialog window: Workplace ► Block A/Block B ► Modifying sample data live ► [OK] ► Modification comment sample data

If the **Comment on modification of sample data (live)** option is enabled in the security settings (see page 319), then the **Modification comment sample data** dialog window is opened before saving.

Reason

Selection from the default reasons defined in the security settings for the **Modification of sample data** category (see Chapter 6.2.2.6, page 320).

Selection	Selection from default reasons	
-----------	--------------------------------	--

Comment

Entry of a comment on modifying the method.

Entry	1 - 1,000 characters	
-------	----------------------	--

3.3.13 Changing stop criteria

Dialog window: Workplace ➤ Tools ➤ Modify stop criteria ➤ Block A / Block B

The Change stop criteria - Block A / Block B dialog window, in which the stop criteria for block A or block B can be changed, is opened with the Tools ► Modify stop criteria ► Block A / Block B menu item or the symbol from the block-specific toolbar.

Stop criteria

Time

Time until the automatic stop of the determination.

Input range	0.1 - 99,999.9 h (Increment: 0.1)
Default value	0.0 h

Conductivity

Conductivity limit value. The determination is ended automatically when this value is reached.

Input range	1 - 400 μS/cm (Increment: 1)
Default value	400 μS/cm

Endpoint(s)

Automatic stop of the determination as soon as all of the endpoints defined in the method (induction time and stability time) have been reached.

Stop once one criterion has been fulfilled

The determination is stopped as soon as one stop criterion has been met. This option can only be selected if more than one stop criterion has been activated, otherwise it is inactive.

Stop once all the criteria have been fulfilled

If this option is selected, then the determination is ended as soon as all selected stop criteria have been met.

If stop criteria are changed in the workplace before or during a determina-

- then all stop criteria settings and values are applied from the method that is running.
- then an entry is saved in the Audit Trail for each parameter that is changed.
- then modified (stop criteria) is indicated in the database under
 Method status on the Method tab in the Information subwindow.
- then the changes are **not** adopted in the method.
- then the stop criteria set for each block remain valid until a new method is loaded or the program is shut down.

3.3.14 Displaying an application note

Main window: Workplace ► Block A/Block B

The **Application note - Block #** dialog window that displays the application note of the method that is loaded in the block can be opened with the symbol in the block-specific toolbar.

3.4 Determining the temperature correction

3.4.1 Determining the temperature correction - General

Wizard: Workplace ► Tools ► Determine temperature correction... ► Block A/
Block B

The **Temperature correction** parameter defined in the method indicates by how much the heating block temperature needs to be increased in order for the sample to reach the setpoint temperature. This value can be determined by measuring the deviation of the current temperature in the sample from the heating block temperature by means of a calibrated, external temperature sensor. **StabNet** offers a wizard for this purpose; you can start it with the **Tools ➤ Determine temperature correc**-

tion... ▶ Block A/Block B menu item or with the symbol from the block-specific toolbar. This wizard leads you through the determination of the temperature correction in 5 steps.

 The determination of the temperature correction on the selected block is carried out with the current values for **Gas flow**, **Sample temperature** and **Temperature correction** of the method which is loaded on the block. In the process, the heating block is heated to the **target temperature** (**Sample temperature + Temperature correction**) and the current temperature in the sample is measured. The new **Temperature correction** is calculated from the difference between these two temperatures and saved in the **Configuration** of the instrument in use.

The determination of the temperature correction can only be started if no determination is running on the selected block. No other program action can be performed while the temperature correction is being determined, including a change to another workplace.

3.4.2 Step 1 - Selecting an external temperature sensor

Wizard: Workplace ► Tools ► Determine temperature correction... ► Block A/ Block B

An external temperature sensor must be selected in this step.

Method parameters

Sample temperature

Display of the setpoint temperature for the sample from the currently loaded method.

Temperature correction

Display of the temperature correction value from the currently loaded method. This parameter can be edited if **Temperature correction** = **auto** is set in the method but no corresponding value is available yet in the temperature correction table.

Input range	-9.9 - 9.9 °C (Increment: 0.1)
Default value	0.0 °C

Gas flow

Display of the gas flow from the currently loaded method.

External temperature sensor

Temperature sensor

Selection of a temperature sensor from the sensor table (see Chapter 6.6.2.1, page 356).

Selection	'Temperature sensor' 'empty'
Default value	'empty'

[Cancel]

Cancels the determination of the temperature correction.

[Next]

Continues to the next step.

3.4.3 Step 2 - Connecting a temperature sensor

Wizard: Workplace ► Tools ► Determine temperature correction... ► Block A/ Block B

In this step, the external temperature sensor must be inserted into the reaction vessel and connected to the instrument.

[Cancel]

Cancels the determination of the temperature correction.

[Next]

Continues to the next step.

3.4.4 Step 3 - Starting the measurement

Wizard: Workplace ► Tools ► Determine temperature correction... ► Block A/ Block B

In this step, the external temperature sensor must be positioned in the heating block and the measurement must be started.

[Cancel]

Cancels the determination of the temperature correction.

[Next]

Starts the measurement and continues to the next step.

3.4.5 Step 4 - Measurement

Wizard: Workplace ► Tools ► Determine temperature correction... ► Block A/ Block B

The measurement is performed in this step. The current measured values for the heating block temperature, the external temperature sensor and the temperature correction calculated from them are displayed during this process.

Heating block

Temperature

Display of the current heating block temperature.

Target temperature

Display of the current target temperature (**Sample temperature** + **Temperature correction** from the method).

A progress display appears beneath this parameter showing the deviation of the current temperature of the heating block from the target tempera-

ture in the form of a **red** progress bar. If the heating phase has not been started before, it will be initiated automatically. Once the selected target temperature has been reached, the progress bar in the progress display changes its color to **green**.

External temperature sensor

Temperature

Display of the current temperature of the external temperature sensor in the silicone oil or in the sample.

A progress display appears beneath this parameter showing the currently measured temperature of the external temperature sensor in the form of a **red** progress bar. The scaling corresponds to the one in the temperature display above. The progress bar in the progress display changes its color to **green** once the measured temperature is stable.

Temperature correction

Temperature correction

Display of the current value of the temperature correction. The current value is displayed in red lettering with the additional information **Waiting...** for as long as the temperature measured with the external temperature sensor has not yet become stable. Once the temperature is stable, the current value is displayed in green lettering with the additional information **stable**.



NOTE

The measured values are no longer updated once the heating block and the internal temperature sensor are in a stable status.

[Next]

Exits the measurement and continues to the next step. This button does not become active again until the temperature measured with the external temperature sensor is stable.

[Cancel]

Cancels the determination of the temperature correction.

3.4.6 Step 5 - Saving the temperature correction

Wizard: Workplace ► Tools ► Determine temperature correction... ► Block A/ Block B

Results

Temperature sensor

Display of the selected external temperature sensor.

Sample temperature

Display of the sample temperature defined in the method.

Gas flow

Display of the gas flow defined in the method.

Heating block temperature

Display of the measured heating block temperature.

Measured sample temperature

Display of the temperature measured in the sample with the external temperature sensor.

Temperature correction

Display of the determined temperature correction.

Comment

Comment on the determination of the temperature correction.

Entry	0 - 1,000 characters	

[Save]

Saves temperature correction. The determined value is saved in the configuration on the **Temperature correction** tab of the instrument used (*see Chapter 7.1.1.3*, page 377). Afterwards, the wizard is closed automatically.

[Cancel]

Cancels the determination of the temperature correction.

3.5 Determining the cell constant

3.5.1 Determining the cell constant - General

Wizard: Workplace ► Tools ► Determine cell constant... ► Block A/Block B

The cell constants of the conductivity measuring cells used in the Rancimat can be automatically determined by means of a defined standard solution.

StabNet offers a wizard for this purpose that can be started with the

Tools > Determine cell constant... > Block A/Block B menu item or

with the symbol from the block-specific toolbar. This wizard leads you through the determination of the cell constant in 3 steps. The cell constant can be entered manually in the **Configuration** program part (see Chapter 6.6.3.3, page 361).

As only the change in conductivity is measured and evaluated during the Rancimat measurement, the cell constants of the conductivity measuring cells used in the Rancimat, which are normally in the range of **1.00** - **1.20**, only need to be entered exactly if the absolute conductivity measured value is to be displayed correctly.

No other program action can be performed while the cell constant is being determined, including changing to another workplace.

3.5.2 Step 1 - Preparing the determination

Wizard: Workplace ► Tools ► Determine cell constant... ► Block A/Block B ► Preparing the determination

In this step, the user is prompted to fill a standard solution into a measuring vessel, select the sensor parameters and define the conductivity standard.

Sensor parameters

Measuring position

Selection of the position at which the measurement is to be carried out.

Conductivity sensor

Selection of the conductivity sensor whose cell constant is to be determined. The sensor must be defined in the sensor table in the **Configuration** program part.

Define the conductivity standard

Temperature of standard solution

Measured temperature of the conductivity standard. The temperature has no influence on the calculation of the cell constant!

Input range	0 - 100 °C (Increment: 0.1)
Default value	25 °C

Conductivity of standard solution

Enter the conductivity value of the conductivity standard solution at the measured temperature. When using the 6.2324.010 conductivity standard (100 μ S/cm 250 mL), the respective values can be obtained from the table on the standard solution or from the value table (see Chapter 3.5.5, page 88).

Input range	10 - 400 μS/cm (Increment: 0.1)
Default value	100 μS/cm

[Cancel]

Cancels the determination of the cell constant.

[Next]

The **[Next]** button is activated when values have been entered for temperature and conductivity. The next wizard window is opened by clicking on the **[Next]** button.

3.5.3 Step 2 - Carrying out the determination

Wizard: Workplace ► Tools ► Determine cell constant... ► Block A/Block B ► Carrying out the determination

In this step, the user is prompted to place the measuring vessel in the selected position and start the measurement.

[Cancel]

Cancels the cell constant determination.

[Next]

After the user has placed the measuring vessel with the defined conductivity sensor in the indicated position, the sensor's conductivity is measured by clicking on **[Next]**. The next wizard window opens after the measurement has been completed.

3.5.4 Step 3 - Saving cell constants

Wizard: Workplace ➤ Tools ➤ Determine cell constant... ➤ Block A/Block B ➤ Saving the cell constant

The results are displayed in this step.

Results

Display of the calculated cell constant and the associated measuring parameters.

Conductivity sensor

Name of the conductivity sensor whose cell constant was determined.

Measuring position

Position at which the measurement was carried out.

Temperature of standard solution

Measured temperature of the conductivity standard.

Conductivity of standard solution

Conductivity corresponding to the measured temperature.

Cell constant

Display of the measured cell constant value. If the cell constant monitoring has been activated (see Chapter 6.6.3.5, page 365), then the cell constant value is displayed in **red** once the defined limit values are exceeded. If this value is within the defined limits, it is displayed in **green**.

[Save]

The newly determined cell constant is written and saved in the sensor table in the configuration (see Chapter 6.6.3.3, page 361). The wizard window is automatically closed afterwards.

[Cancel]

Cancels the determination of the cell constant.

3.5.5 Table - Conductivity standard values

Table 1 Conductivity standard (100 μ S/cm 250 mL) 6.2324.010:

T (°C)	κ (μS/cm)
15	81.6
18	87.3
19	89.4
20	90.9
21	92.7
22	94.7
23	96.9
24	98.6
25	100.0
30	110.6

	T (°C)	κ (μS/cm)
	35	120.7
	40	131.5
	45	142.1
	50	153.2
T	Temperatu	ure
κ	Electrical c	onductiv-

3.6 Timer

3.6.1 Timer tasks

Dialog window: **Workplace** ► **Tools** ► **Timer...** ► **Timer**

One-time or recurrent heater starts that are to be carried out automatically at a particular time can be defined in this dialog window.

Timer table

The timer table shows all the defined starts and cannot itself be edited directly. The first heater starts to appear in the table are recurrent ones, which are sorted according to day of the week and time of the day. These are followed by one-time heater starts sorted according to date/time.

Date/Day

Shows the date on which the heater is to be started automatically.

Time

Shows the time at which the heater is to be started automatically.

Action

Selection of the block on which the heating start is to be carried out.

Active

Shows whether the automatic heater start is active or not.

Menu items

Activating the **[Edit]** button or clicking on the right-hand mouse button opens the following menu for editing the timer table:

New Task ▶

3.6 Timer

Single Task	Define new, one-time automatic heater start (see Chapter 3.6.2, page 90).	
Recurrent Task	Define new, recurrent automatic heater starts (see Chapter 3.6.3, page 91).	
Edit	Edit selected automatic heater start (see Chapter 3.6.2, page 90) or recurrent automatic heater start (see Chapter 3.6.3, page 91).	
Active ►		
On	Set selected automatic heater start to Active .	
Off	Set selected automatic heater start to Not active .	
Invert selection	Set all active automatic heater starts to Not active and all non-active automatic heater starts to Active .	
Delete	Delete selected heater start(s).	

3.6.2 Editing a single task

Dialog window: Workplace ► Tools ► Timer... ► [Edit] ► New Task ► Single Task ► Edit single task

In this dialog window, you can edit a new heater start or the one-time automatic heater start selected in the table.

Active task

on | off (Default value: on)

If this check box is activated, then the automatic heater start is activated for the workplace.

Date

Date on which the automatic heater start is to be carried out. This date can be selected by clicking on in the **Select date** dialog window.

Time

Time at which the heater is to be started automatically.

Input range	00:00 - 23:59	

Action

Action that is to be started automatically.

Selection	Heater Block A on Heater Block B on
Default value	Heater Block A on

Heater Block A on

The one-time heating start in Block A becomes active with this option.

Heater Block B on

The one-time heating start in Block B becomes active with this option.

3.6.3 Editing recurrent tasks

Dialog window: Workplace ► Tools ► Timer... ► [Edit] ► New Task ► Recurrent Task ► Edit recurrent task

A new heater start or the recurrent heater start selected in the table can be edited in this dialog window.

Active task

on | off (Default value: on)

If this check box is activated, then the automatic heater start is activated for the workplace.

Day

Selection of the weekdays on which the automatic heater start is to be carried out.

Time

Time at which the heater is to be started automatically.

Input range	00:00 - 23:59	
-------------	---------------	--

Action

Action that is to be started automatically.

Selection	Heater Block A on Heater Block B on
Default value	Heater Block A on

Heater Block A on

The one-time heating start in Block A becomes active with this option.

Heater Block B on

The one-time heating start in Block B becomes active with this option.

3.7 Text templates

3.7 Text templates

3.7.1 List of text templates

Dialog window: Workplace ► Tools ► Text templates... ► Text templates

Text templates can be defined for the fields **Ident**, **Info 1**, **Info 2** and **Info 3**; these templates can then be applied when these fields are entered in the workplace. The text templates are saved for each client.

Text templates for

Selection of the field for which the text templates are to be defined.

Selection	Ident Info 1 Info 2 Info 3
Default value	Ident

List of text templates

All defined text templates for the selected field are displayed in the list of text templates. The table cannot be edited. The table can be sorted in either ascending or descending order by clicking on the **Text** column title.

Text

Shows the text templates defined for the selected field.

[New]

Adds new text template (see Chapter 3.7.2, page 92).

[Properties]

Edit the selected text template (see Chapter 3.7.2, page 92).

[Delete]

Deletes the selected text template.

3.7.2 Editing text template

Dialog window: Workplace ➤ Tools ➤ Text templates... ➤ Text templates ➤ [New] / [Properties] ➤ Default string

The text template can be edited in the **Default string** dialog window.

Text

Text template entry.

Entry 100 characters

4 Database

4 Database

4.1 Database - General

4.1.1 Database - Definition

Program part: Database

Definition

The term **Database** is used in **StabNet** to refer to the program part in which the determinations saved in the databases can be displayed, managed, evaluated, reprocessed and printed out. The **determination databases** are also referred to as databases; they can, in contrast to the **configuration database**, be generated by the user and contain the determination data. Included among such determination data are the method data used for the determination, the measured data generated during the determination and the results calculated from it.

In the default settings, the empty **StabNet** database is created at the time of installation. This database can, however, be either renamed or deleted by the user.

Organization

In **local server systems** (**StabNet 1.1 Full**), the databases are stored on the drives managed by the computer and are only available to those users registered on that computer who have the appropriate access permission.

In **client/server systems** (**StabNet 1.1 Multi**) the databases are stored on drives managed centrally by the server and are globally available throughout the entire client/server system, i.e., all users with the appropriate access rights can use these databases.

4.1.2 Database - User interface

Program part: Database

Database symbol



Clicking on the database symbol in the vertical bar on the left opens the program part **Database** while at the same time the database symbol is shown in color. The upper left corner of the symbol contains a black field displaying the number of databases currently opened (see Chapter 4.2.2, page 106).

StabNet 1.1 •••••• 93

4.1 Database - General

Elements

The user interface of the **Database** program part comprises the following elements:

- Database-specific menu bar.
- Database-specific toolbar.
- Main window in which up to 4 subwindows can be displayed.

4.1.3 Database - Menu bar

4.1.3.1 Database - Main menus

Program part: **Database**

The menu bar in the **Database** program part contains the following main menu items:

■ File

Open and close databases, database manager, print.

Fdit

Copy selected lines in the determination overview to the clipboard, mark all lines.

View

Change the layout, load a view, save the view, modify the subwindow properties.

Determinations

Search, filter, sign, delete determinations; overlay curves, reprocess, etc.

Tools

Report templates, further templates.

■ Help

Open program help, display program information.

4.1.3.2 Database - File menu

Program part: **Database**

Open	Opens a database (see Chapter 4.2.1, page 104).
Close all	Closes all open databases (see Chapter 4.2.6, page 107).
Close	Closes the database (see Chapter 4.2.6, page 107).
2 Database manager	Management of the determination databases (see Chapter 4.3.1, page 107).
Print ►	
Determination overview	PDF file output of the determination overview (see Chapter 4.5.2.2, page 169).

4 Database

Report	PDF file output of the report (see Chapter 4.5.2.2, page 169).
Logout	Logs out user (see Chapter 2.2.3, page 13).
Exit	Exits the program.
1 'File name'	Opens the selected database (see Chapter 4.2.1, page 104). The last five databases opened are displayed for selection.

4.1.3.3 Database - Edit menu

Program part: **Database**

Сору	Copies the selected lines in the determination overview to the clipboard.
Select all	Selects all lines in the current set of determinations in the determination overview.

4.1.3.4 Database - View menu

Program part: **Database**

Opposite	Updates the determination overview.
Change layout	Modifies the layout of the loaded database view (see Chapter 4.1.7.2, page 102).
Load view	Loads a saved database view (see Chapter 4.1.7.3, page 103).
Save view	Saves the loaded database view (see Chapter 4.1.7.4, page 103).
Split vertically	Splits the database window vertically and displays two databases side by side (see Chapter 4.2.4, page 107).
Split horizontally	Splits the database window horizontally and displays two databases, one above the other (see Chapter 4.2.5, page 107).
Unsplit	Undoes the splitting of the database window (see Chapter 4.2.3, page 107).
Properties >	
Column dis- play	Sets the column display for the Determination overview subwindow (see Chapter 4.5.1.3, page 164).
☑ Toolbar	Activate/deactivate the toolbar display.

4.1 Database - General

4.1.3.5 Database - Determinations menu

Program part: **Database**

Comment	Enters a comment on the selected determination (see Chapter 4.5.2.3, page 169).
Q Search	Opens the Search - Database 'Name' dialog window for searching for determinations (see Chapter 4.5.2.4, page 170).
Filter ►	
V Last filter	Applies the most recently used quick or special filter once again (see Chapter 4.5.2.5.2, page 173).
V Quick filter	Quick filtering of the database with the content of the selected table cell (see Chapter 4.5.2.5.3, page 173).
Y Special filter	Opens the Special filter - Database 'Name' window for the definition of user-specific filters (see Chapter 4.5.2.5.4, page 174).
Remove filter	Removes the current filter (see Chapter 4.5.2.5.5, page 175).
Batch ►	
New batch	Creates a new batch (see Chapter 4.5.2.6.2, page 178).
Delete batch	Deletes a batch (see Chapter 4.5.2.6.3, page 179).
Append to batch	Attaches the selected determinations to the batch (see Chapter 4.5.2.6.4, page 179).
Remove from batch	Removes the selected determinations from the current batch (see Chapter 4.5.2.6.5, page 179).
Sign ►	
Signature 1	Signs the selected determinations at level 1 (see Chapter 2.3.3, page 16).
Signature 2	Signs the selected determinations at level 2 (see Chapter 2.3.4, page 18).
Show signa- tures	Shows all signatures for the focused determination (see Chapter 4.5.2.7.4, page 183).
Delete signa- tures 2	Deletes all signatures at level 2 of the focused determination (see Chapter 2.3.5, page 19).
Send to	Sends the selected determinations per e-mail (see Chapter 4.5.2.8, page 185).

Export	Exports the selected determinations (see Chapter 4.5.2.9, page 185).	
Import	Imports the selected determinations (see Chapter 4.5.2.10, page 186).	
Show method	Shows the method used for the focused determination (see Chapter 4.5.2.12, page 187).	
Show history	Shows all versions of the focused determination in the determination table (see Chapter 4.5.2.13, page 187).	
Make current	Makes the old version selected in the history view the current version once again (see "Making an old version current", page 187).	
Detail overview	Shows the detail overview of results for the selected determinations (see Chapter 4.5.2.15.2, page 189).	
Overlay curves	Overlays the curves of the selected determinations (see Chapter 4.5.2.16, page 198).	
S Reprocess	Reprocesses the selected determinations.	
Extrapolation	Performs extrapolation with selected determinations (see Chapter 4.5.2.18, page 216).	
Delete Delete	Deletes selected determinations (see Chapter 4.5.2.11, page 186).	

4.1.3.6 Database - Tools menu

Program part: **Database**

Report templates ►	
New ►	
Form report	Opens the Report template window with an empty form report (see Chapter 4.4.1.3, page 118). This menu item is disabled as long as the database is empty.
Tabular report	Opens the Report template window with an empty tabular report (see Chapter 4.4.1.3, page 118).
Open	Opens a report template for editing (see Chapter 4.4.1.3, page 118). This menu item is disabled as long as the database is empty.
Manager	Manages report templates (see Chapter 4.4.1.1, page 116).
Templates ►	

4.1 Database - General

Control chart templates	Manages templates for control charts (see Chapter 4.4.2, page 151).
Export tem- plates	Manages export templates (see Chapter 4.4.3, page 156).

4.1.3.7 Help menu

Program part: Workplace / Database / Method / Configuration

StabNet Help	Opens StabNet Help.
About	Displays information about the program and the installation.

4.1.4 Database - Toolbar

Program part: **Database**

≧	Open a database (see Chapter 4.2.1, page 104).
ර	Close database (see Chapter 4.2.6, page 107).
2	Management of the determination databases (see Chapter 4.3.1, page 107).
Q.	Logs out user (see Chapter 2.2.3, page 13).
Pa ·	Copies the selected lines in the determination overview to the clipboard.
3	Updates the determination overview.
···	Modify the layout of the loaded database view (see Chapter 4.1.7.2, page 102).
	Load a saved database view (see Chapter 4.1.7.3, page 103).
	Saves the loaded database view (see Chapter 4.1.7.4, page 103).
00	Splits the database window vertically and displays two databases side by side (see Chapter 4.2.4, page 107).
= 1	Splits the database window horizontally and displays two databases, one above the other (see Chapter 4.2.5, page 107).
⊕	Undoes the splitting of the database window (see Chapter 4.2.3, page 107).

t a	Enter a comment on the selected determination (see Chapter 4.5.2.3, page 169).
٩	Opens the Search window for searching for determinations (see Chapter 4.5.2.4, page 170).
₹\$	Applies the most recently used quick or special filter (see Chapter 4.5.2.5.2, page 173).
₹	Quick filtering of the database with the content of the selected table cell (see Chapter 4.5.2.5.3, page 173).
7	Opens the Special filter window for the definition of user-specific filters (see Chapter 4.5.2.5.4, page 174).
₹	Removes the current filter (see Chapter 4.5.2.5.5, page 175).
1	Signs the selected determinations at level 1 (see Chapter 2.3.3, page 16).
2	Signs the selected determinations at level 2 (see Chapter 2.3.4, page 18).
₩	Shows the method used for the focused determination (see Chapter 4.5.2.12, page 187).
2	Shows all versions of the focused determination in the determination table (see Chapter 4.5.2.13, page 187).
₽	Makes the old version selected in the history view the current version once again (see "Making an old version current", page 187).
፟	Shows the detail overview of results for the selected determinations (see Chapter 4.5.2.15.2, page 189).
^	Overlays the curves of the selected determinations (see Chapter 4.5.2.16, page 198).
5	Reprocess the selected determinations (see Chapter 4.5.2.17.1, page 203).
Ü	Deletes the selected determinations (see Chapter 4.5.2.11, page 186).
ď	Opens a report template for editing (see Chapter 4.4.1.3, page 118).
?	Opens StabNet Help.

4.1 Database - General

4.1.5 Database - Subwindow

Program part: **Database**

Selection

The following subwindows can be displayed in the main window:

Determination overview
 Overview of the determinations saved in the database. This subwindow is permanently on display.

Curve

Shows curves for the focused determination.

Information

Shows information on the focused determination.

Results

Shows the results of the focused determination.

Display

The subwindows can be enlarged or made smaller to suit by dragging the separating bar between the windows.

By clicking on the \square button above at the right, the subwindows can be maximized so that only one subwindow is displayed in the main window. The original view of all subwindows is restored by clicking on the \square button in the maximized subwindow once again.

If you change the view of the subwindows, these changes will remain in effect when the database is closed and reopened.

4.1.6 Database - Functions

Program part: **Database**

The following functions can be carried out in the **Database** program part:

Views

- Modifying the layout of the database view
- Loading a database view
- Saving a database view
- Renaming a database view
- Deleting a database view

Database manager

- Creating a new database
- Renaming a database
- Editing database properties
- Backing up a database
- Restoring a database
- Deleting a database

Determinations

Overview of functions

Templates

- Editing report templates
- Editing control chart templates
- Editing export templates

4.1.7 Views

4.1.7.1 Views - General

Program part: Configuration/Database /

Definition

The contents and design of the main window in the **Database** and **Configuration** program parts is called a **View**. The following elements belong to a view:

- Number, arrangement, sequence and size of the subwindows.
- Representation within the individual subwindows, i.e. column sequence, column width, sorting and filter.

Functions

The following functions are possible for views:

- Changing the layout
 Define the number, arrangement and sequence of the subwindows for the current view.
- Save view
 Save current view.
- Load view
- Load a saved view.

 Rename view

 Rename a saved view.
- Delete view
 Delete a saved view.

Save automatically

If the corresponding item under **Save on closing** is activated under **Options** on the **Save** tab, then the current view will be saved automatically when the program is closed.

Load automatically

The standard procedure is that the view saved when the program is terminated will be loaded automatically the next time that the program is opened. As an alternative, a default view can be defined for each user

4.1 Database - General

group that is loaded automatically the first time that the program part is opened.

The standard procedure is that the view with the following subwindows is opened with the very first program start:

Configuration

Devices, Sensors, Temperature coefficients

Database
 Determination overview, Curves, Information, Results

4.1.7.2 Changing the layout

Dialog window: **Database/Configuration** ► **View** ► **Change layout...** ► **Change layout**

The **Change layout** dialog window is opened with the symbol or the **View** ► **Change layout...** menu item.

Select layout

Selection of a graphical symbol for the number, arrangement and sequence of the subwindows.

Selection	Selection of the possible combinations
-----------	--

Available subwindows

Display the subwindows that are still available for displaying the view.

Selection	Selection of the subwindows	
-----------	-----------------------------	--

Displayed subwindows

Display the subwindows that are shown in the view.

Selection Subwindows

>>

Add the selected subwindow to the view.



Remove the selected subwindow from the view.



Move the selected subwindow upward (modifies sequence).



Move the selected subwindow downward (modifies sequence).

4.1.7.3 Loading a view

Dialog window: **Database/Configuration** ► **View** ► **Load view...** ► **Load view**

The **Load view** dialog window is opened with the symbol or the **View** ► **Load view...** menu item.

Name

Name of the view to be loaded.

[Rename]

Rename the selected view.

[Delete]

Delete the selected view.

[Load]

Load the selected view.

Load view automatically

The standard procedure is that the view saved when the program is terminated will be loaded automatically the next time that the program is opened. As an alternative, a default view can be defined for each user group that is loaded automatically the first time that the program part is opened.

The standard procedure is that the view with the following subwindows is opened with the very first program start:

Configuration

Devices, Sensors, Temperature coefficients

Database

Determination overview, Curves, Information, Results

4.1.7.4 Saving a view

Dialog window: **Database/Configuration** ► **View** ► **Save view...** ► **Save view**

The **Save view** dialog window is opened with the symbol or the **View** ► **Save view...** menu item.

Name

Name under which the view is to be saved.

[Rename]

Rename the selected view.

[Delete]

Delete the selected view.

4.2 Database display

[Save]

Save the view under the given name. The saved views are globally valid and available for client/server systems.

Save view automatically

The current view will be saved automatically when the program is closed if the corresponding item is activated under **Save on closing** on the **Save** tab in the **Options** dialog window in the **Configuration** program part.

4.1.7.5 Renaming a view

Dialog window: **Database/Configuration** ► **View** ► **Load view.../Save view...** ► **[Rename]** ► **Rename view**

To be able to rename a view, either the **Load view** or the **Save view** dialog window must be opened and the **[Rename]** button must be pressed down. The **Rename view** window opens afterwards.

Rename 'Name' view after

entry of a new name for the view.

Entry

50 characters

4.1.7.6 Deleting a view

Function: Database/Configuration ➤ View ➤ Load view.../Save view... ➤ [Delete]

To delete a view, either the **Save view** or **Save view** dialog window must be opened and the **[Delete]** button must be pressed down.

4.2 Database display

4.2.1 Opening a database

Dialog window: **Database** ► **File** ► **Open...** ► **Open database**

The symbol or the **File** ▶ **Open...** menu item opens the **Open database** window in which one of the databases available on the server (or on the local server) can be selected for opening. The names of all of the available databases are displayed in this window; the additional information is loaded afterwards. All of the databases are then displayed, even if the user does not have read permissions.

Database table

The database table contains information concerning all determination databases. The table cannot be edited. The table can be sorted according to the selected column (Name, Number of records, Size, Readable, Editable and Comment columns) in either ascending or descending order by clicking on the column title.

Name

Name of the database.

Number of records

Shows the number of data sets in the database.

Size

Shows the size of the database in KB.

Readable

Shows whether or not the database can be read by the user currently logged in.

Editable

Shows whether or not the database can be edited by the user currently logged in.

Comment

Shows comments about the database.

Opening a database

Database name

Name of the database to be opened. If a database is selected from the table, the name of the database will be entered automatically in this field. It can, however, also be entered manually.

Entry

50 characters

[Open]

Opens the selected database and shows its data sets in the Determination overview. The database name is displayed in the title bar of the program, the number of currently opened databases is displayed in the left upper corner of the database symbol.



NOTE

A maximum of 4 databases can be opened, but only 2 can be displayed at the same time. Databases that are open at the time the program is exited will be opened automatically the next time the program is started.

4.2 Database display

4.2.2 Selecting a database

Program part: **Database**

The number of the currently opened databases is displayed in the upper left corner of the database symbol. If 2 or more databases are opened, then these databases, which can be displayed either next to one another or one above the other in the main window, can be selected with the aid of the database symbol.



No database is opened. **No database loaded** is displayed in the main window.



A database is opened and is displayed in the main window.



Two databases are opened. Normally only one database is displayed in the main window, but the option exists of displaying two databases at once, either next to one another or one above the other.



A menu with the names of all the currently opened databases is displayed by clicking on the database symbol with either the left or right mouse button. The databases displayed in the main window are then marked with a checkmark. Clicking on the desired database displays it in the main window in the place of the previously selected one.

4.2.3 Displaying a single database

Menu item: **Database** ► **View** ► **Unsplit**

In the default settings, the most recently opened database is displayed by itself in the main window. If the display of two windows is enabled, then the symbol or the **View Unsplit** menu item can be used to switch back to the display of just one single database.

4.2.4 Displaying databases next to one another

Menu item: **Database** ► **View** ► **Split vertically**

Two workplaces are displayed next to one another in the main window with the symbol or the **View** > **Split vertically** menu item.

4.2.5 Displaying databases one above the other

Menu item: **Database ► View ► Split horizontally**

Two workplaces are displayed one above the other in the main window with the symbol or the **View ► Split horizontally** menu item.

4.2.6 Closing a database

Menu items: Database ► File ► Close/Close all

Closing a single database

The ☐ symbol or the **File** ► **Close** menu item can be used to close the focused database.

Closing all databases

All the opened databases are closed with the **File ► Close all** menu item.

4.3 Managing databases

4.3.1 Managing databases

Dialog window: **Database** ► **File** ► **Database manager...** ► **Database manager**

The Symbol or the **File** ➤ **Database manager...** menu item is used to open the **Database manager** window in which a user with corresponding access rights can manage databases.

Database table

The database table contains information concerning all determination databases. The table cannot be edited. The table can be sorted according to the selected column (Name, Number of records, Size, Last backup, Next backup and Comment columns) in either ascending or descending order by clicking on the column title.

4.3 Managing databases

Name

Name of the database.

Number of records

Shows the number of data sets in the database.

Size

Shows the size of the database in KB.

Last backup

Display of date and time of the last database backup.

Next backup

Shows the date and the time at which the next backup is to be carried out.

Comment

Shows comments about the database.

Window menus and functions

The **[Edit]** menu beneath the database table contains the following menu items:

New	Creates a new database (see Chapter 4.3.2, page 109).	
Delete	Deletes the selected database (see Chapter 4.3.4, page 109).	
Rename	Renames the selected database (see Chapter 4.3.3, page 109).	

[Properties]

Opens the **Database manager** window for editing the database selected in the table (see Chapter 4.3.5.1, page 110).

[Backup]

Opens the **Backup the database 'Name'** window for backing up the database selected in the table (see Chapter 4.3.6, page 113).

[Restore]

Opens the **Restore databases** window for restoring backed-up databases (see Chapter 4.3.7, page 114).

[Close]

Closes the **Database manager** window.

4.3.2 Creating a new database

Dialog window: **Database** ► **File** ► **Database manager...** ► **Database manager** ► **[Edit]** ► **New...** ► **New database**

The **[Edit]** ► **New...** menu item is used to open the **New database** dialog window in which a name for the new database must be entered.

Name

Name of the new database.

Entry	50 characters
Default value	New database #



NOTE

The database name must be unique in the entire client/server system.

The **Properties - Database - 'Database name'** dialog window opens for editing the database properties with **[OK]**.

4.3.3 Renaming a database

Dialog window: Database ► File ► Database manager... ► Database manager ► [Edit] ► Rename... ► Rename database

The **[Edit]** ➤ **Rename...** menu item is used to open the **Rename database** window for renaming the selected database.

Rename database 'Name' to

Entry of the new database name.

Entry	50 characters
	30 Characters



NOTE

The database name must be unique in the entire client/server system.

4.3.4 Deleting a database

Menu item: Database ► File ► Database manager... ► Database manager ► [Edit] ► Delete

The **[Edit]** ▶ **Delete** menu item is used to delete the selected database.



NOTE

Databases that are open cannot be deleted.

4.3 Managing databases

4.3.5 Database properties

4.3.5.1 Database properties - Overview

Dialog window: **Database** ► **File** ► **Database manager...** ► **Database manager** ► [**Properties**] ► **Properties** - **Database** - '**Database** name'

The properties for a database are set on the following tabs:

General

General information about the database.

Access permissions

Database access permissions for user groups.

Backup

Definition of backup monitoring and automatic backups.

Monitoring

Definition of database monitoring.

4.3.5.2 Database properties - General

Tab: Database ► File ► Database manager... ► Database manager ► [Properties] ► Properties - Database - 'Database name' ► General

General information about the database.

Comment

Freely definable comments about the database.

Entry **250 characters**

Number of records

Shows the number of data sets in the database.

Size

Shows the size of the database in KB.

Created

Shows the date and time of the creation of the database.

Created by

Display of the user (short name) who created the database.

Modified

Shows date and time of the last modification of the database properties.

Modified by

Shows the name of the user (short name) who carried out the modifications.

4.3.5.3 Database properties - Access rights

Tab: Database ► File ► Database manager... ► Database manager ► [Properties] ► Properties - Database - 'Database name' ► Access rights

Database access permissions for user groups.

User group

Shows the user groups defined in the user administration.

Read

on | off (Default value: on)

Activates/deactivates the permission to open the database. The database can only be displayed, but not modified (records cannot be deleted or reprocessed).

Edit

on | off (Default value: off)

Activates/deactivates the permission to edit the database. Data sets can be modified or deleted.



NOTE

If access for editing is activated, then access rights for reading will also automatically be activated. If access for reading is deactivated, then access rights for editing will also automatically be deactivated.

4.3.5.4 Database properties - Backup

Tab: Database ► File ► Database manager... ► Database manager ► [Properties] ► Properties - Database - 'Database name' ► Backup

Definition of backup monitoring and automatic backups.

Backup monitoring

on | off (Default value: off)

Activates/deactivates the backup monitoring for the selected database. If the **Backup monitoring** check box is enabled, then the **Next backup** field in the database table will be highlighted in **red** when the interval time elapses.

Last backup

Display of date and time of the last database backup.

 4.3 Managing databases

Next backup

Date at which the next backup must take place. The date can be selected by pressing ... in the **Select date** dialog window.

Entry	Date selection
Default value	Last backup + 1 month

Interval

Entry of the interval for the backup monitoring. After each automatically or manually triggered backup, the interval entered here will be added automatically to the **Last backup** and the **Next backup** field will be automatically adjusted accordingly.

Input range	1 - 999
Default value	1
Selection	day(s) week(s) Month(s) year(s)
Default value	Month(s)

Start backup automatically

on | off (Default value: off)

Automatic start of the backup for the database in the defined **Backup directory**.

Backup directory

Selection of a directory predefined in the **Program administration** for the automatic backup.

Selection	Selection of the backup directory Default
	backup directory
Default value	Default backup directory



NOTE

Make sure that you have read and write permission for the selected directory.

4.3.5.5 Database properties - Monitoring

Tab: Database ► File ► Database manager... ► Database manager ► [Properties] ► Properties - Database - 'Database name' ► Monitoring

Definition of database monitoring.

Monitoring size

on | off (Default value: off)

Activates/deactivates size monitoring for the selected database. If this check box is activated then the **Size** field in the database table will be highlighted in **red** when the limit value has been exceeded. A corresponding message also appears when the database is opened.

Maximum size

Maximum permitted database size in MB.

Input range	1 - 2147483647 MB
Default value	500 MB

Monitoring number of records

on | off (Default value: off)

Activates/deactivates the monitoring of the number of data sets for the selected database. If this check box is activated, then the **Number of records** field in the database table will be highlighted in **red** when the limit value has been exceeded. At the same time, a corresponding message also appears when the database is opened.

Monitoring size

Maximum permitted number of data sets for database.

Input range	1 - 2147483647
Default value	1000

4.3.6 Backing up database manually

Dialog window: Database ► File ► Database manager... ► Database manager ► [Backup] ► Backup database

[Backup] is used to open the Backup database dialog window:

Backup target

Backup directory

Selection of a directory predefined in the **Program administration** for the backup.

Selection	Selection of the backup directory Default
	backup directory
Default value	Default backup directory

4.3 Managing databases



NOTE

Make sure that you have read and write permission for the selected directory.

Backup name

Selection of an already existing name or entry of a new name for the backup file. If an existing backup file is selected, it will be overwritten.

Entry	50 characters
Default value	Backup-##



NOTE

If the backup directory is on a network drive, the backup date should be added manually to the **Backup name** because the backup date information is not available when the data is restored.

[Start]

Starts manual database backup. After the start, a progress bar appears in the window. The dialog window closes automatically when the backup has been completed.

4.3.7 Restoring the database

Dialog window: Database ► File ► Database manager... ► Database manager ► [Restore] ► Restore databases

The **Restore databases** dialog window opens with **[Restore]**:

Backup directory

Selection of a directory that is predefined in the **Program administration** and in which the backed-up databases are located.

Selection	'Name of the backup directory' Default
	backup directory
Default value	Default backup directory

Backup name

Selection of a backup file.

Selection of backup files	• • • • • • • • • • • • • • • • • • •	Selection	Selection of backup files	
---------------------------	---------------------------------------	-----------	---------------------------	--

Backup date

Shows the moment at which the database was backed up. This information is not available if the backup file is located on a network drive.

Database name

Shows the name of the database. This information is not available if the backup file is located on a network drive.

Number of records

Shows the number of data sets in the database. This information is not available if the backup file is located on a network drive.

Size

Shows the size of the database in KB.

Save as

Name under which the database is to be restored.

Entry	50 characters
Default value	New database ##

[Start]

Starts database restoring. After the start, a progress bar appears in the window. The dialog window closes automatically once the backup has been completed.



NOTE

Existing databases cannot be overwritten, i.e. they must first be deleted so that the database can be restored under its old name.

4.4 Templates

4.4.1 Report templates

4.4.1.1 Managing report templates

4.4.1.1.1 Managing report templates

Dialog window: **Database** ► **Tools** ► **Report templates** ► **Manager...** ► **Report template manager**

The **Report template manager** window is opened with the **Tools** ▶ **Report templates** ▶ **Manager...** menu item.

List of report templates

The list of report templates contains information about all the saved report templates. The table cannot be edited. The table can be sorted according to the selected column (**Name**, **Saved**, **Saved by**, **Comment** columns) in either ascending or descending order by clicking on the column title.

Name

Name of the report template.

Saved

Date and time when the report template was saved.

Saved by

Short name of the user who saved the report template.

Comment

Comment on the report template.

Window menus

The **[Edit]** menu beneath the list of report templates contains the following menu items:

Rename	Renames the selected report template (see Chapter 4.4.1.1.2, page 117).
Сору	Copies the selected report template(s) (see Chapter 4.4.1.1.3, page 117).
Delete	Deletes the selected report template(s) (see Chapter 4.4.1.1.4, page 117).
Export	Exports the selected report template(s) (see Chapter 4.4.1.1.5, page 117).
Import	Imports report template(s) (see Chapter 4.4.1.1.6, page 117).

4.4.1.1.2 Renaming report templates

Dialog window: Database ➤ Tools ➤ Report templates ➤ Manager... ➤ Report template manager ➤ [Edit] ➤ Rename... ➤ Rename report template

The **[Edit]** ► **Rename...** menu item in the **Report template manager** window opens the **Rename report template** window for renaming the selected report template.

Rename report template 'Name' to

Entry of the new name for the report template.

Entry

50 characters



NOTE

The name of the report template must be unique throughout the entire client/server system.

4.4.1.1.3 Copying report templates

Menu item: Database ► Tools ► Report templates ► Manager... ► Report template manager ► [Edit] ► Copy

The [Edit] ➤ Copy menu item in the Report template manager window copies the selected report templates under the name Copy of 'Report template name'.

4.4.1.1.4 Deleting report templates

Menu item: Database ► Tools ► Report templates ► Manager... ► Report template manager ► [Edit] ► Delete...

The **[Edit]** ➤ **Delete...** menu item in the **Report template manager** window deletes the selected report templates.

4.4.1.1.5 Exporting report templates

Dialog window: Database ➤ Tools ➤ Report templates ➤ Manager... ➤ Report template manager ➤ [Edit] ➤ Export... ➤ Select directory for export

The **[Edit] Export...** menu item in the **Report template manager** window exports the selected report templates, each one into a file with the name **'Name'.mrep**. The **Select directory for export** window opens in which the directory for export must be selected.

4.4.1.1.6 Importing report templates

Dialog window: **Database** ► **Tools** ► **Report templates** ► **Manager...** ► **Report template manager** ► [Edit] ► **Import...** ► **Select files to import**

The **[Edit]** ► **Import...** menu item in the **Report template manager** window opens the **Select files to import** dialog window in which the

report templates to be imported must be selected. The report templates are then imported.

4.4.1.2 Creating new report templates

Menu item: Database ► Tools ► Report templates ► New

New form report

The **Report template - New form report** program window is opened with an empty report template (that can then be edited) with the **Tools ▶ Report templates ▶ New ▶ Form report...** menu item.

In the **Form report**, the report section always includes the whole area between the header and the footer. This means that for each determination, at least one page will always be produced.

New tabular report

The **Report template - New tabular report** program window is opened with an empty report template (that can then be edited) with the **Tools ▶ Report templates ▶ New ▶ Tabular report...** menu item.

In the **Tabular report**, the report section can be set with the mouse. For each data set, one such report section will be filled with data and placed row by row on the page. Tabular reports from several determinations can thus be created in this way.

4.4.1.3 Opening report templates

Dialog window: **Database** ► **Tools** ► **Report templates** ► **Open...** ► **Open report template**

The symbol or the **Tools** ➤ **Report templates** ➤ **Open...** menu item is used to open the **Open report template** window in which one of the globally available report templates can be selected and opened.

List of report templates

The list of report templates contains information about all the saved report templates. The table cannot be edited. The table can be sorted according to the selected column (**Name**, **Saved**, **Saved by**, **Comment** columns) in either ascending or descending order by clicking on the column title.

Name

Name of the report template.

Saved

Date and time when the report template was saved.

Saved by

Short name of the user who saved the report template.

Comment

Comment on the report template.

Opening a report template

Name

Name of the report template to be opened. If a report template is selected from the table, the name will be entered automatically in this field. It can, however, also be entered manually.

Entry

50 characters

[Open]

Opens the **Report template** program window, in which the selected report template is shown and can be edited.

4.4.1.4 Editing report templates

4.4.1.4.1 Report template - General

4.4.1.4.1.1 Report template - Overview

Dialog window: Database ► Tools ► Report templates ► Open... ► Open report template ► [Open] ► Report template - 'Name'

Which determination data and which other items (e.g. text fields, images, graphics elements) are to be produced in a report are defined in report templates. The templates can be created or edited in their own program window and then saved globally under a unique name. They are used for the automatic output of reports in determinations or for manual report output from the database.

There are two basically different types of report templates:

Form report

In the Form report, the report section always includes the whole area between the header and the footer. This means that at least one page will always be produced for each determination.

Tabular report

In the Tabular report, the report section can be set with the mouse. For each data set, one such report section will be filled with data and placed row by row on the page. Tabular reports from several determinations can thus be created in this way.

4.4.1.4.1.2 Report template - User interface

Dialog window: Database ► Tools ► Report templates ► Open... ► Open report template ► [Open] ► Report template - 'Name'

Elements

The user interface of the **Report template - 'Name'** dialog window comprises the following elements:

- Menu bar
- General toolbar
- Module-specific toolbar
- Module bar
- Main window

4.4.1.4.1.3 Report template - Menu bar

4.4.1.4.1.3.1 Report template - Main menu

Dialog window: Database ► Tools ► Report templates ► Open... ► Open report template ► [Open] ► Report template - 'Name'

The menu bar in the **Report template - 'Name'** dialog window contains the following main menu items:

- File
 - Save report template, page setup, page preview, close window.
- Fdi
 - Undo, redo, cut, copy, paste, delete, enter comment.
- View
 - Update view, page navigation.
- Insert
 - Insert pages.
- Tools
 - Options.
- Help
 - Open Program Help.

4.4.1.4.1.3.2 Report template - File menu

Dialog window: Database ► Tools ► Report templates ► Open... ► Open report template ► [Open] ► Report template - 'Name' ► File

Save	Saves the opened report template (see Chapter 4.4.1.4.2.11, page 133).
Save as	Saves the opened report template under a new name (see Chapter 4.4.1.4.2.11, page 133).
Page setup	Sets up the page settings for the report template (see Chapter 4.4.1.4.2.2, page 125).

Page preview	Page preview of the report template with the data of the selected determination (see Chapter 4.4.1.4.2.8, page 131).
Close	Closes the Report template - 'Name' program window.

4.4.1.4.1.3.3 Report template - Edit menu

Dialog window: Database ► Tools ► Report templates ► Open... ► Open report template ► [Open] ► Report template - 'Name' ► Edit

Undo:	Undoes the last action.
Redo:	Redoes the undone action.
 ∠ Cut	Cuts the highlighted items and copies them to the clipboard (see "Cutting, copying, pasting, deleting modules", page 130).
Сору	Copies the selected items to the clipboard (see "Cutting, copying, pasting, deleting modules", page 130).
Paste	Pastes highlighted items from the clipboard (see "Cutting, copying, pasting, deleting modules", page 130).
Delete	Deletes the highlighted items (see "Cutting, copying, pasting, deleting modules", page 130).
Comment	Enters a comment on the report template (see Chapter 4.4.1.4.2.9, page 132).

4.4.1.4.1.3.4 Report template - View menu

Dialog window: Database ► Tools ► Report templates ► Open... ► Open report template ► [Open] ► Report template - 'Name' ► View

Update	Updates the view.
First page	Shows the first page of the report template (see Chapter 4.4.1.4.2.4, page 128).
Previous page	Shows the previous page of the report template (see Chapter 4.4.1.4.2.4, page 128).
Next page	Shows the next page of the report template (see Chapter 4.4.1.4.2.4, page 128).
Last page	Shows the last page of the report template (see Chapter 4.4.1.4.2.4, page 128).

4.4.1.4.1.3.5 Report template - Insert menu

Dialog window: Database ► Tools ► Report templates ► Open... ► Open report template ► [Open] ► Report template - 'Name' ► Insert

Page before	Inserts a new page before the page shown (see "Inserting page before", page 128).
Page after	Inserts a new page after the page shown (see "Inserting page after", page 128).

4.4.1.4.1.3.6 Report template - Tools menu

Dialog window: Database ► Tools ► Report templates ► Open... ► Open report template ► [Open] ► Report template - 'Name' ► Tools

Options	Set options for the report template (see Chapter 4.4.1.4.2.10, page 132).
- P. 11 - 11 - 11 - 11 - 11 - 11 - 11 -	Set options for the report template (See Chapter 4.4.1.4.2.10, page 132).

4.4.1.4.1.3.7 Report template - Help menu

Dialog window: Database ► Tools ► Report templates ► Open... ► Open report template ► [Open] ► Report template - 'Name' ► Help

StabNet Help Opens StabNet Help.	
----------------------------------	--

4.4.1.4.1.4 Report template - General toolbar

Dialog window: Database ► Tools ► Report templates ► Open... ► Open report template ► [Open] ► Report template - 'Name'

	Saves the opened report template (see Chapter 4.4.1.4.2.11, page 133).
Dà.	Page preview of the report template with the data of the selected determination (see Chapter 4.4.1.4.2.8, page 131).
PDF	PDF file output of the report template with the data of the selected determination.
I	Undoes the last action.
@	Redoes the undone action.
*	Cuts the highlighted items and copies them to the clipboard (see Chapter 4.4.1.4.2.6, page 129).
	Copies the selected items to the clipboard (see "Cutting, copying, pasting, deleting modules", page 130).

	Pastes highlighted items from the clipboard (see "Cutting, copying, pasting, deleting modules", page 130).
	Deletes the highlighted items (see "Cutting, copying, pasting, deleting modules", page 130).
100 %	Selection of the zoom level (see Chapter 4.4.1.4.2.7, page 131).
11	Activates/deactivates the grid display (see Chapter 4.4.1.4.2.10, page 132).
4	Activates/deactivates snapping to grid (see Chapter 4.4.1.4.2.10, page 132).

4.4.1.4.1.5 Report template - Module-specific toolbar

Dialog window: Database ► Tools ► Report templates ► Open... ► Open report template ► [Open] ► Report template - 'Name'

Depending on the module selected in the report template, other symbols and input fields with which the properties of these modules can be directly edited are shown below the general toolbar (see Chapter 4.4.1.4.1.6, page 123).

4.4.1.4.1.6 Report template - Module bar

Dialog window: Database ► Tools ► Report templates ► Open... ► Open report template ► [Open] ► Report template - 'Name'

k	Select
	If this option is activated, then modules in the report template can be selected, reduced/enlarged and moved (see Chapter 4.4.1.4.2.6, page 129).
A	Text
	If this option is activated, then text fields can be inserted in the report template (see Chapter 4.4.1.4.3.1, page 134).
A	Data
	If this option is activated, then data fields can be inserted in the report template (see Chapter 4.4.1.4.3.2, page 136).
45	Date
	If this option is activated, then date fields can be inserted in the report template in which the actual date is entered (see Chapter 4.4.1.4.3.3, page 138).

⊗	Time
	If this option is activated, then time fields can be inserted in the report template in which the actual time is entered (see Chapter 4.4.1.4.3.4, page 139).
#	Page number
	If this option is activated, then fields can be inserted in the report template in which the page number is entered (see Chapter 4.4.1.4.3.5, page 141).
	Number of pages
	If this option is activated, then fields can be inserted in the report template in which the number of pages is entered (see Chapter 4.4.1.4.3.6, page 143).
6	Fixed report
	If this option is activated, then fixed reports can be inserted in the report template (see Chapter 4.4.1.4.3.7, page 145).
==	Group
	If this option is activated, then group fields can be inserted in the report template (see Chapter 4.4.1.4.3.8, page 146).
	Image
	If this option is activated, then images can be inserted in the report template (see Chapter 4.4.1.4.3.9, page 147).
/	Line
	If this option is activated, then lines can be inserted in the report template (see Chapter 4.4.1.4.3.10, page 148).
	Rectangle
	If this option is activated, then rectangles can be inserted in the report template (see Chapter 4.4.1.4.3.11, page 149).
A	Curve
	If this option is activated, then curves can be inserted in the report template (see Chapter 4.4.1.4.3.12, page 150).

4.4.1.4.2 Report template - Functions

4.4.1.4.2.1 Report template - Function overview

Program window: Report template - 'Name'

The following functions can be carried out in the **Report template - 'Name'** program window:

- Page setup
- Defining sections in main window
- Inserting report pages
- Inserting a module
- Editing a module
- Zooming
- Showing the page preview
- Entering comments on report templates
- Defining options for report templates
- Saving a report template

4.4.1.4.2.2 Report template - Page setup

Program window: Report template - 'Name' ► File ► Page setup... ► Page setup

The **File** ➤ **Page setup...** menu item in the **Report template** - '**Name**' window opens the **Page setup** dialog window in which the report format settings can be made.

General

only for form report

Settings

Selection	Apply to current page Apply to all pages
Default value	Apply to current page

Apply to current page

The page settings are applied only to the currently selected report page.

Apply to all pages

The page settings are applied to all report pages.

Page format

Page format

Selection of the paper size. The width and height of the paper can be defined with **User-defined**.

Selection	A4 Letter Legal User-defined
Default value	A4

Width

Width of the paper size. This parameter can be edited only if **Page format = User-defined**.

Input range	0.0 - 499.0 mm
Default value	210.0 mm

Height

Height of the paper size. This parameter can be edited only if **Page format = User-defined**.

Input range	0.0 - 499.0 mm
Default value	297.0 mm

Orientation

Selection of the page layout.

Selection	Portrait Landscape
Default value	Portrait

Page margins

Top

Upper page margin.

Input range	0.0 - 499.0 mm
Default value	15.0 mm

Bottom

Lower page margin.

Input range	0.0 - 499.0 mm
Default value	15.0 mm

Left

Left-hand page margin.

Input range	0.0 - 499.0 mm
Default value	20.0 mm

Right

Right-hand page margin.

Input range	0.0 - 499.0 mm
Default value	20.0 mm

Layout

Header

Height of the header.

Input range	0.0 - 499.0 mm
Default value	15.0 mm

Footer

Height of the footer.

Input range	0.0 - 499.0 mm
Default value	15.0 mm

Determination height

Height of the section for a single determination on a tabular report.

only for tabular report

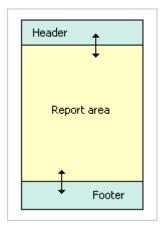
Input range	0.0 - 499.0 mm
Default value	25.0 mm

4.4.1.4.2.3 Report template - Defining sections

Program window: Report template - 'Name'

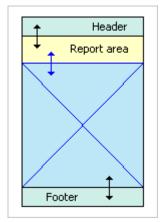
Defining sections for the form report

The header, footer and report sections can be enlarged or reduced with the left mouse button.



Defining sections for the tabular report

The header, footer and report sections can be enlarged or reduced with the left mouse button.





NOTE

If a page break is to be prevented within the report section, then the height of the report section must be selected in such a way that there will be precisely the amount of space required for a whole-number multiple of report sections between the header and the footer.

4.4.1.4.2.4 Report template - Inserting pages

Menu item: Report template - 'Name' ➤ Insert ➤ Page before / Page after

Inserting page before

The **Insert ► Page before** menu item in the **Report template** program window is used to insert a new, empty report page before the report page shown.

Inserting page after

The **Insert** ➤ **Page after** menu item in the **Report template** program window is used to insert a new, empty report page after the report page shown.

Navigating

In report templates with several pages, the navigation bar can be used to switch to the required page.

H

Jumps to first page.

•

Jumps to previous page.

lacksquare

Jumps to next page.



Jumps to last page.



NOTE

It is not possible to insert pages in templates for tabular reports.

4.4.1.4.2.5 Report template - Inserting modules

Program window: Report template - 'Name'

In order to insert a module into a report template, the corresponding symbol must be selected on the module bar and then placed on the report template by creating a field with the left mouse button. The properties window for the corresponding module opens automatically afterwards.

Form report

The following modules can be inserted in a form report:

Header

Text, Data, Date, Time, Page number, Number of pages, Image, Line, Rectangle

Report section

Text, Data, Date, Time, Fixed report, Image, Line, Rectangle, Curve, Group

Footer

Text, Data, Date, Time, Page number, Number of pages, Image, Line, Rectangle

Tabular report

The following modules can be inserted in a tabular report:

Header

Text, Date, Time, Page number, Number of pages, Image, Line, Rectangle

Report section

Text, Data, Date, Time, Image, Line, Rectangle, Curve

Footer

Text, Date, Time, Page number, Number of pages, Image, Line, Rectangle

4.4.1.4.2.6 Report template - Editing modules

Program window: Report template - 'Name'

Activating the selection



This symbol in the module bar must be activated in order to be able to select modules in a report template for editing.

Selecting a single module

Single modules are selected with a click of the left mouse button. This automatically shows the corresponding properties of the module below the toolbar.

Selecting several modules

Several modules are selected by drawing a frame around the required modules with the left mouse button.

Moving, reducing, enlarging modules



When this cursor symbol appears, the selected modules can be moved about on the report template with the left mouse button pressed down.



When one of these cursor symbols appears, the selected modules can be reduced or enlarged, respectively, on the report template with the left mouse button pressed down.

Cutting, copying, pasting, deleting modules



Cuts the selected modules and copies them to the clipboard.



Copies the selected modules to the clipboard.



Pastes modules from the clipboard.



Deletes selected modules.

Editing module properties

Double-clicking the module opens the properties window for the selected module. Alternatively, the properties can also be edited directly below the toolbar.

4.4.1.4.2.7 Report template - Zooming

Program window: Report template - 'Name'



The required zoom factor for showing the report template can be selected in increments of **25%** from **25%** to **400%** with this list box on the toolbar.

4.4.1.4.2.8 Report template - Page preview

Preview window: Report template - 'Name' ► File ► Page preview ► Report preview

The symbol or the File > Page preview menu item in the Report template - 'Name' program window is used to open the Report preview window in which a page preview of the report template is displayed with the data of the determinations selected in the determination overview.

Functions



Produces displayed report as PDF file.



Selects the required zoom factor for displaying the report preview, range **25%** to **400%** in increments of **25%**.

Selecting a determination

If several determinations have been selected for the report display, then the **Determination** navigation bar can be used to switch to the required determination.

14

Jumps to first determination.

4

Jumps to previous determination.

F

Jumps to next determination.

ы

Jumps to last determination.

Selecting a report page

In reports with several pages, the **Page** navigation bar can be used to switch to the required page.

H

Jumps to first page.

•

Jumps to previous page.

H

Jumps to next page.

М

Jumps to last page.

4.4.1.4.2.9 Report template - Comment

Dialog window: Report template - 'Name' ► Edit ► Comment ► Report template comment

The **Report template comment** window, in which comments on the opened report template can be entered, is itself opened with the **Edit** > **Comment** menu item in the **Report template - 'Name'** program window.

Report template comment

Comment on the report template that is shown in the List of report templates.

Entry	1000 characters	

4.4.1.4.2.10 Report template - Options

Dialog window: Report template - 'Name' ► Tools ► Options... ► Options for report templates

The **Options for report templates** dialog window, in which various settings for the report template can be defined, is opened with the **Tools ► Options...** menu item in the **Report template - 'Name'** program window.

Unit

Unit

Selection of the unit for the report templates.

Selection	mm cm inch
Default value	mm

Grid

X distance

Grid distance in X-direction.

Input range	1.0 - 100.0 mm
Default value	5.0 mm

Y distance

Grid distance in Y-direction.

Input range	1.0 - 100.0 mm
Default value	5.0 mm

Display grid

on | off (Default value: off)

Activates/deactivates the grid display on the report template.

Snap at grid

on | off (Default value: off)

Activates/deactivates snapping to grid on the report template.

Default font

Font

Selection of the default font for the report templates.

Selection	Arial Windows fonts
Default value	Arial

4.4.1.4.2.11 Report template - Saving

Dialog window: Report template - 'Name' ► File ► Save / Save as... ► Save report template

The symbol or the **File** ► **Save** menu item is used to save an existing opened report template again under its own name without opening the **Save report template** window.

When saving a newly created report template with the **File** ▶ **Save** menu item or when saving an existing report template with the **File** ▶ **Save as...** menu item, the **Save report template** window is opened in which a name for the report template can be entered or selected.

List of report templates

The list of report templates contains information about all the saved report templates. The table cannot be edited. The table can be sorted according to the selected column (Name, Saved, Saved by, Comment

StabNet 1.1 •••••• 133

columns) in either ascending or descending order by clicking on the column title.

Name

Name of the report template.

Saved

Date and time when the report template was saved.

Saved by

Short name of the user who saved the report template.

Comment

Comment on the report template.

Saving the report template

Name

Entry of the name under which the report template is to be saved.

Entry

50 characters



NOTE

The name of the report template must be unique throughout the entire client/server system.

[Save]

Saves the report template under the required name.

4.4.1.4.3 Report template - Modules

4.4.1.4.3.1 Report template - Text field

Dialog window: **Report template - 'Name' ▶ Properties - Text field**

Text fields are used for outputting any texts in the report.

Insert



In order to insert a text field into a report template, the corresponding symbol must be selected on the module bar and then placed on the report template by creating a field with the left mouse button.

Properties

X pos.

X-position within the permitted range.

Input range 0.0000 - (max. page width) mm

Y pos.

Y-position within the permitted range.

Input range 0.0000 - (max. page height) mm

Width

Width of the text field.

Input range 0.0000 - (max. page width) mm

Height

Height of the text field.

Input range 0.0000 - (max. page height) mm

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Selection of the available Windows fonts.

9

Font size in pt.

Color selection.

В

Bold.

I

Italic.

u

Underlined.

=

Left-justified.

=

Centered.



Right-justified.



Activates/deactivates line break for multi-line text fields.



Fills the field with dots.

Text

Text input for the text field.

4.4.1.4.3.2 Report template - Data field

Dialog window: Report template - 'Name' ▶ Properties - Data field

Data fields are used for outputting determination data in a report.

Insert



In order to insert a data field into a report template the corresponding symbol must be selected on the module bar and then placed on the report template by creating a field with the left mouse button.

Properties

X pos.

X-position within the permitted range.

Input range	0.0000 - (max. page width) mm	
-------------	-------------------------------	--

Y pos.

Y-position within the permitted range.

Width

Width of data field.

Input range	0.0000 - (max. page width) mm	
-------------	-------------------------------	--

Height

Height of data field.

Input range	0.0000 - (max. page height) mm

Data field	Shows path and name of selected data field (the field cannot be edited directly). opens a window for selecting the data field in which all the available fields for the determination overview are shown in tree-form.
	Entry 50 characters
	Text placed before the contents of the data field.
Prefix	
A	Fills the field with dots.
Abc def	Activates/deactivates line break for multi-line data fields.
=	Right-justified.
	Centered.
	Left-justified.
ū	Underlined.
I	Italic.
В	Bold.
	Color selection.
9	Font size in pt.
Arial	Selection of the available Windows fonts.

StabNet 1.1 137

the required field.

The path and name of the data field are entered with a double-click on

Suffix

Text placed after the contents of the data field.

Entry	50 characters	
-------	---------------	--

Preview

Shows a formatted example of text.

4.4.1.4.3.3 Report template - Date field

Dialog window: **Report template - 'Name' ▶ Properties - Current date**

Date fields are used for outputting the current date in a report.

Insert



In order to insert a date field into a report template the corresponding symbol must be selected on the module bar and then placed on the report template by creating a field with the left mouse button.

Properties

X pos.

X-position within the permitted range.

Input range 0.0000 - (max. page width) mm	
---	--

Y pos.

Y-position within the permitted range.

Input range 0.0000 - (max. page height) mm	
--	--

Width

Width of date field.

Lancata de la caración de	0.0000 (
Input range	0.0000 - (max. page width) mm	
iliput range	0.0000 (max. page width) min	

Height

Height of date field.

Input range (0.0000 - (max. page height) mm
---------------	--------------------------------



Selection of the available Windows fonts.



Font size in pt.

_	Color selection.
В	Bold.
I	Italia
<u>u</u>	Italic.
_	Underlined.
=	Left-justified.
事	
_	Centered.
■	Right-justified.
A	
	Fills the field with dots.
Prefix	Text placed before the contents of the date field.
	Entry 50 characters
Suffix	
	Text placed after the contents of the date field.
	Entry 50 characters

Preview

Shows the formatted date.

4.4.1.4.3.4 Report template - Time field

Dialog window: **Report template - 'Name' ▶ Properties - Current time**

Time fields are used for outputting the actual time in the report.

Insert



In order to insert a time field into a report template, the corresponding symbol must be selected on the module bar and then placed on the report template by creating a field with the left mouse button.

Properties

X pos.

X-position within the permitted range.

Input range	0.0000 - (max. page width) mm

Y pos.

Y-position within the permitted range.

Input range	0.0000 - (max. page height) mm
-------------	--------------------------------

Width

Width of the time field.

Height

Height of time field.

Input range	0.0000 - (max. page height) mm
-------------	--------------------------------



Selection of the available Windows fonts.



Font size in pt.



Color selection.



Bold.

I

Italic.

U

Underlined.



Left-justified.



Centered.



Right-justified.



Fills the field with dots.

Prefix

Text placed before the contents of the time field.

Entry 50 characters	
----------------------------	--

Suffix

Text placed after the contents of the time field.

Entry	50 characters	
-------	---------------	--

Preview

Shows the formatted time.

4.4.1.4.3.5 Report template - Page number

Dialog window: Report template - 'Name' ▶ Properties - Page number

The actual page number in the report is produced in a page number field.

Insert



In order to insert a page number field into a report template, the corresponding symbol must be selected on the module bar and then placed in the header or footer of the report template by creating a field with the left mouse button.

Properties

X pos.

X-position within the permitted range.

Y pos.

Y-position within the permitted range.

Input range	0.0000 - (max. page height) mm
-------------	--------------------------------

Width

Width of the page number field.

Input range	0.0000 - (max. page width) mm
-------------	-------------------------------

Height

Height of the page number field.

Input range 0.0000 - (max. page height) mm
--

Arial 🔻

Selection of the available Windows fonts.

9 🔻

Font size in pt.



Color selection.

В

Bold.

I

Italic.

U

Underlined.

=

Left-justified.

#

Centered.

=

Right-justified.

Α...

Fills the field with dots.

Prefix

Text placed before the contents of the page number field.

Entry	50 characters	
-------	---------------	--

Suffix

Text placed after the contents of the page number field.

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-ntr\/		
Littiy	JU CHALACICIS	

Preview

Shows the formatted page number.

4.4.1.4.3.6 Report template - Number of pages

Dialog window: Report template - 'Name' ➤ Properties - Number of pages

This field shows the total number of pages in the report.

Insert



In order to insert a number of pages field into a report template, the corresponding symbol must be selected on the module bar and then placed in the header or footer of the report template by creating a field with the left mouse button.

Properties

X pos.

X-position within the permitted range.

Input range	0.0000 - (max. page width) mm

Y pos.

Y-position within the permitted range.

Input range	0.0000 - (max. page height) mm
Input range	0.0000 - (max. page height) mm

Width

Width of the field.

Input range	0.0000 - (max. page width) mm

Height

Height of the field.

Input range 0.0000 - (max. page height) mm
--

4.4 Templates		
Arial		
	Selection of the available Windows fonts.	
9		
	Font size in pt.	
_	Color selection.	
В	Bold.	
I		
	Italic.	
<u>u</u>	Underlined.	
	Origeninea.	
_	Left-justified.	
=		
	Centered.	
=		
	Right-justified.	
A		
	Fills the field with dots.	
Prefix	Text placed before the contents of the field.	
	Entry 50 characters	
Suffix		
Julia	Text placed after the contents of the field.	
	Entry 50 characters	

144 -----StabNet 1.1

Shows the formatted number of pages.

Preview

4.4.1.4.3.7 Report template - Fixed report

Dialog window: **Report template - 'Name' ▶ Properties - Fixed report**

Fixed reports are used for outputting predefined part-reports of the determination in the report.



NOTE

Fixed reports cannot be inserted in tabular report templates.

Insert



In order to insert a fixed report into a report template, the corresponding symbol must be selected on the module bar and then placed on the report template by creating a field with the left mouse button.

Properties

X pos.

Shows the predefined X position for the fixed report.

Y pos.

Shows the Y-position within the permitted range.

Input range	0.0000 - (max. page height) mm
-------------	--------------------------------

Width

Shows the predefined width of the fixed report.

Height

Height of the fixed report.

Input range 0.0000 - (max. page height) mm	
--	--

Fixed report

Selection of a predefined fixed report.

Selection	Evaluation properties Messages Measuring parameters Method properties Method parameters Sample data Results list Statistical data (short) Statistical data (full) Signature list determination Signature list method Configuration used Monitoring report
Default value	Evaluation properties

4.4.1.4.3.8 Report template - Group field

Dialog window: Report template - 'Name' ▶ Properties - Group field

A group field is for the purpose of grouping together a variety of fields in the report template. All of the fields gathered together in a group field can be moved together as a group. The group field prevents a page break inside the group field.

The group field always extends across the entire width of a page; only the upper edge (Y value) and the height of the field can be configured.



NOTE

Group fields cannot be inserted in tabular report templates.



NOTE

Fixed reports, which do not permit page break controls, cannot be inserted into a group field.

Insert



In order to insert a group field into a report template the corresponding symbol must be selected on the module bar and then placed on the report template by creating a field with the left mouse button.

Properties

X pos.

Shows the predefined X position for the field.

Y pos.

Y-position within the permitted range.

Input range	0.0000 - (max. page height) mm	

Width

Shows the predefined width of the field.

Height

Height of the field

0.0000 - (max. page height) mm

4.4.1.4.3.9 Report template - Image field

Dialog window: Report template - 'Name' ▶ Properties - Graphics field

An image field is used for entering any external graphics on the report template. The file formats *.jpg and *.gif are supported.

Insert



In order to insert an image into a report template, the corresponding symbol must be selected on the module bar and then placed on the report template by creating a field with the left mouse button.

Properties

X pos.

X-position within the permitted range.

Input range	0.0000 - (max. page width) mm
Input range	0.0000 - (max. page width) mm

Y pos.

Y-position within the permitted range.

Input range	0.0000 - (max. page height) mm
in pactarige	oroco (maxii page neight, min

Width

Width of the text field.

Input range	0.0000 - (max. page width) mm

Height

Height of the text field.

Input range 0.0000 - (max. page height) mm
--

Graphics file

Shows path and name of the selected graphics file (the field cannot be edited directly). ... opens a window for selecting the graphics file. The path and name of the graphics file are then entered.

Size

Definition of how the graph is to be displayed.

Selection	original proportional non-proportional
Default value	original

original

Original size.

proportional

Proportional enlargement or reduction in size.

non-proportional

Non-proportional enlargement or reduction in size.

4.4.1.4.3.10 Report template - Line

Dialog window: **Report template - 'Name' ▶ Properties - Line**

Any line can be inserted in the report template.

Insert



In order to insert a line into a report template, the corresponding symbol must be selected on the module bar and then placed on the report template by creating a field with the left mouse button.

Properties

X pos.

X-position within the permitted range.

Y pos.

Y-position within the permitted range.

Input range 0.0000 - (max. page height) mm
--

Length

Length of the line.

Input range	0.0 - (max. page width) mm	
-------------	----------------------------	--

Angle

Angle of the line.

Input range	0.000 - 360.000 °	

Thickness

Thickness of the line.

Input range	0.1 - 10.0 mm	
Default value	0.5 mm	



Selection of the line color.



Selection of the type of line.

4.4.1.4.3.11 Report template - Rectangle

Dialog window: Report template - 'Name' ▶ Properties - Rectangle

Any rectangle can be inserted in the report template.

Insert



In order to insert a rectangle into a report template, the corresponding symbol must be selected on the module bar and then placed on the report template by creating a field with the left mouse button.

Properties

X pos.

X-position within the permitted range.

Input range	0.0000 - (max. page width) mm
-------------	-------------------------------

Y pos.

Y-position within the permitted range.

input range 0.0000 - (max. page neight) min	Input range	0.0000 - (max. page height) mm
---	-------------	--------------------------------

Width

Width of the rectangle.

Input range	0.0000 - (max. page width) mm
ii ipac iai ige	oroco (maxi page main, min

Height

Height of the rectangle.

Thickness

Thickness of the line for the rectangle.

Input range	0.1 - 10.0 mm
Default value	0.5 mm



Selection of the line color.



Selection of the type of line for the rectangle.



Activates/deactivates the fill color.



Selection of the fill color.

4.4.1.4.3.12 Report template - Curve field

Dialog window: Report template - 'Name' ▶ Properties - Curve field

Insert



In order to insert a curve into a report template, the symbol must be selected on the module bar and then placed on the report template by creating a field with the left mouse button.

Properties

X pos.

Shows the predefined X-position for the curve field.

Y pos.

Y-position within the permitted range.

Input range	0.0000 - (max. page height) mm
-------------	--------------------------------

Width

Shows the predefined width of the curve field.

Input range	0.0000 - (max. page width) mm
-------------	-------------------------------

Height

Height of the curve field.

Input range 0.000) - (max. page height) mm
--------------------------	---------------------------

Curve view

Definition of the curve display.

Selection	from database user-defined
Default value	from database

from database

The curve is displayed using the settings that have been saved in the database. The tabs for configuring the display are disabled.

user-defined

The display of the curve in the report can be configured by the user. The tabs for configuring the display are activated.

Tabs

Additional properties for the curve field can be set on the following tabs:

- 5.7.3.1Graphics Axes
 Displaying, labeling and scaling the axes.
- 5.7.3.2Graphics Display
 Definition of the display of curves, axes and background.

4.4.2 Templates for control chart

4.4.2.1 Managing control chart templates

Menu item: Database ➤ Tools ➤ Templates ➤ Control chart templates... ➤ Control chart templates

Globally available templates for control charts can be managed in this dialog window.

Template table

The table with the defined templates cannot be edited, although it can be sorted according to the selected column in ascending or descending order by clicking on the column title.

Template name

Shows the name of the template.

Comment

Shows the comments about the template.

Window menus

The **[Edit]** menu beneath the list of templates contains the following menu items:

New	Creates a new template. The Properties - Control chart template dialog window opens in which the properties for the new template can be defined (see Chapter 4.4.2.2, page 152).
Properties	Opens the Properties - Control chart template - 'Name' dialog window in which the properties of the template selected in the table can be edited (see Chapter 4.4.2.2, page 152).

Сору	Copies the selected template(s) and saves it/them under the name Copy of .
Delete	Deletes the selected template(s).

4.4.2.2 Editing control chart templates

4.4.2.2.1 Control chart template - Properties

Dialog window: Database ► Tools ► Templates ► Control chart templates... ► Control chart templates ► [Edit] ► Properties... ► Properties - Control chart template - 'Name'

Template name

Name under which the control chart template is saved per client in the configuration database.

Entry	50 characters	
-------	---------------	--

Result table

Table with the results for which a control chart is defined.

The most important properties of the control chart of the selected result are displayed next to the table on the right.

[Edit]

Opens the menu for editing the control charts of the individual results.

New	Adds a new result to the template.
Properties	Edits the properties of the selected result (see Chapter 4.4.2.2.2, page 153).
Delete	Deletes the selected result.

Result properties overview

The most important properties in the control chart for a selected result in the table are displayed on the right in the dialog window.

Warning limits

Displays the defined warning limits.

Intervention limits

Displays the defined intervention limits.

Statistics

Displays the defined statistical data.

Comment

Comment on control chart.

Entry	0 - 1000 characters	
-------	---------------------	--

4.4.2.2.2 Editing the result properties

4.4.2.2.2.1 Result properties - General

Dialog window: Database ► Tools ► Templates ► Control chart templates... ► Control chart templates ► [Edit] ► Properties... ► Properties - Control chart template - 'Name' ► [Edit] ► Properties... ► Control chart - result properties

Result

Display of the result variable whose control chart is being edited. — opens the **Select result** dialog window in which all results of the determination which is in focus in the determination overview are available.

Label

Freely definable designation for the control chart of the result; the tab of the control chart in the **Detailed overview - Control chart** window is labeled with this.

Entry	1 - 50 characters
Default value	'empty'

Tabs

The result properties for a control chart template can be set on the following tabs:

- Graphics parameters
 Parameters for the graphical display of the control chart.
- Limit values
 Definition of warning and intervention limits for the control chart.
- Statistics
 Display of statistics data for the control chart.

4.4.2.2.2.2 Control chart template - Graphics parameters

Dialog window: Database ➤ Tools ➤ Templates ➤ Control chart templates... ➤ Control chart templates ➤ [Edit] ➤ Properties... ➤ Properties - Control chart template - 'Name' ➤ [Edit] ➤ Properties... ➤ Control chart - result properties ➤ Graphical settings

Parameters for the graphical display of the control chart.

y Axis

Scaling

Selection of the type of scaling.

Selection	Automatic Manual	
Default value	Automatic	

Automatic

Automatic scaling of the y axis.

Manual

Manual scaling of the y axis with the values of **Minimum** and **Maximum**.

Minimum

Minimum value for manual scaling.

Input range	-1·10 ⁹⁹ - 1·10 ⁹⁹
Default value	0

Maximum

Maximum value for manual scaling.

Input range	-1·10 ⁹⁹ - 1·10 ⁹⁹	
Default value	1000	

Background

Background color

Background color for the control chart. Clicking on the symbol opens the **Select color** dialog window for the selection of the background color (see Chapter 2.5.4, page 62).

Selection	any color white
Default value	white

Measured values

Link measured values

on | off (Default value: off)

If this option is activated then the measured value points will be joined together with a black line.

4.4.2.2.2.3 Control chart template - Limit values

Dialog window: Database ► Tools ► Templates ► Control chart templates... ► Control chart templates ► [Edit] ► Properties... ► Properties - Control chart template - 'Name' ► [Edit] ► Properties... ► Control chart - result properties ► Limit values

Definition of warning and intervention limits to be shown on the control chart.

Warning limits

Warning limits are displayed in **orange** on the control chart.

Lower limit

Lower warning limit.

Input range	-1.0·10 ⁹⁹ - 1.0·10 ⁹⁹
Default value	0

Upper limit

Upper warning limit.

Input range	-1.0·10 ⁹⁹ - 1.0·10 ⁹⁹	
Default value	1	

Intervention limits

Intervention limits are displayed in **red** on the control chart.

Lower limit

Lower intervention limit.

Input range	-1.0·10 ⁹⁹ - 1.0·10 ⁹⁹	
Default value	0	

Upper limit

Upper intervention limit.

Input range	-1.0·10 ⁹⁹ - 1.0·10 ⁹⁹
Default value	1

There is *no* monitoring of the intervention limit and the warning limit as to whether the lower value is smaller than the upper one or, conversely, whether the upper value is greater than the lower one.

4.4.2.2.2.4 Control chart template - Statistics

Dialog window: Database ► Tools ► Templates ► Control chart templates... ► Control chart templates ► [Edit] ► Properties... ► Properties - Control chart template - 'Name' ► [Edit] ► Properties... ► Control chart - result properties ► Statistics

Definition of the display of statistics data on the control chart.

Show statistics data

on | off (Default value: **on**)

If this check box is activated, then the statistics data for **Mean value**, **Standard deviation**, **Number of measuring points** and **Minimum and maximum values** will be shown underneath the graph display.

Draw in mean value

on | off (Default value: on)

If this check box is activated, then the **Mean value** will be shown on the control chart as a continuous line in the color of the measured values.

Draw in standard deviation

on | off (Default value: **on**)

If this check box is activated, then the two values **Mean value + Absolute standard deviation** and **Mean value - Absolute standard deviation** will be shown on the control chart as dotted lines in the color of the measured value.

4.4.3 Export templates

4.4.3.1 Managing export templates

Dialog window: **Database** ► **Tools** ► **Templates** ► **Export templates...** ► **Export templates**

The **Tools ➤ Templates ➤ Export templates...** menu item opens the **Export templates** dialog window in which the globally available templates for the manual or automatic export of determination data can be managed.

Template table

The table with the defined templates cannot be edited, although it can be sorted according to the selected column in ascending or descending order by clicking on the column title.

Name

Shows the name of the export template.

File type

Shows the file format of the export template for data export.

Comment

Shows the comment on the export template.

The **[Edit]** menu below the list of export templates or a right-click on the table opens a menu with the following menu items:

New...

Creates a new template. The **Export template 'Name'** window opens in which a new template can be defined (see Chapter 4.4.3.2, page 157).

Properties...

Edits the selected template. The **Export template 'Name'** window opens in which the template can be edited (see Chapter 4.4.3.2, page 157).

Сору	Copies the selected template and saves it under the name Copy of 'Template name' .
Delete	Deletes the selected template.

4.4.3.2 Editing export templates

4.4.3.2.1 Export template - Properties

Dialog window: Database ► Tools ► Templates ► Export templates... ► Export templates ► [Edit] ► Properties... ► Export template 'Name'

[Edit] ► **Properties...** is used to open the **Export template 'Name'** dialog window in which the properties of the selected export template can be edited.

Name

Name of the export template.

Entry	50 characters	
-------	---------------	--

Comment

Freely definable comment on the export template.

Entry	250 characters	
-------	----------------	--

Target directory

Selection (with $\overline{\cdots}$) of the path for the directory in which the export file is to be saved.

Entry	1000 characters	

File type

Selection of the file format for data export:

Selection	*.rdet (StabNet format) *.csv (Comma Sepa-
	rated) *.xml (XML format) *.txt (Measuring
	point list)
Default value	*.rdet (StabNet format)

*.rdet (StabNet format)

Program-specific data exchange format that can only be imported into other StabNet databases.

*.csv (Comma Separated)

Data exchange format with unformatted text that can be imported into other PC programs (e.g. Excel, Access).

*.xml (XML format)

Data exchange format with XML code that can be imported into corresponding PC programs.

*.txt (Measuring point list)

Data exchange format for the measuring point list with unformatted text that can be imported into corresponding PC programs. The text file contains a document header with date/time of the determination and the determination ID. This is followed by the measuring point lists of the individual commands are listed one after the other. The command name is listed first for each measuring point list, followed by a header with the designations and the units of the measured values of the command. This is followed by the list of the measuring points, each measuring point is listed in a separate line and consists of a time indication and all measured values generated by the command.

[Select fields]

Opens the **Select fields** dialog window in which the required fields for the export can be selected, arranged in the required sequence and renamed (see Chapter 4.4.3.2.2, page 159).



NOTE

Field selection is only possible for the *.csv file type. With *.rdet, *.xml and *.txt, all fields will always be exported.

[Options]

Opens the **Options for CSV format** (see Chapter 4.4.3.2.3, page 160) or **Options for measuring point list** (see Chapter 4.4.3.2.4, page 161) dialog window in which the separators can be defined.



NOTE

The options can only be set for the file types *.csv and *.txt.

File name

One of the following options can be selected for the definition of the name of the export file:

Selection	Determination ID Sample data Request on
	each export Fixed file name (append data)
Default value	Determination ID

Determination ID

If this option is selected then the name of the export file will be formed from the unambiguous **Determination ID**, the **Computer name**, the date stamp **-YYYYMMDD-HHMMSS** and the suffix for the format.

Sample data

If this option is selected, then the name of the export file is formed from the selected sample data (**Ident** or **Info 1...3**), the **Computer name**, the date stamp **-YYYYMMDD-HHMMSS** and the suffix for the format. If the generated name already exists in the directory then a version number will additionally be appended to the date.

Request on each export

If this option is selected, then the name of the export file will be requested at each export. In addition to the entered name, the **Computer name** and the date stamp **-YYYYMMDD-HHMMSS** will be added automatically.

Fixed file name (append data)

If this option is selected, then the name of the export file will be formed from the name entered here and the suffix for the format. If the file is already present in the directory, then the data will be appended to this file.



NOTE

The **Fixed file name (append data)** can only be selected for the *.csv (Comma Separated) file type.

4.4.3.2.2 Export template - Selecting fields

Dialog window: Database ➤ Tools ➤ Templates ➤ Export templates... ➤ Export templates ➤ [Edit] ➤ Properties... ➤ Export template 'Name' ➤ [Select fields] ➤ Select fields

[Select fields] in the properties window for export templates opens the **Select fields** dialog window in which the fields for data export can be selected for the *.csv file type.

Available fields

Display of all the fields that can be exported.

Selected fields

Display of all the fields that will be exported.

Default name

Non-editable name of the field to be exported.

Displayed name

Field name editable by the user for the exported field. The **Default name** is entered as default. If the field name is deleted, then the **Default name** will appear again.



Adds the selected field.



Removes the selected field.



Changes the sequence of the exported fields by moving the selected field upwards.



Changes the sequence of the exported fields by moving the selected field downwards.

4.4.3.2.3 Export template - Options for CSV format

Dialog window: Database ➤ Tools ➤ Templates ➤ Export templates... ➤ Export templates ➤ [Edit] ➤ Properties... ➤ Export template 'Name' ➤ [Options] ➤ Options for CSV format

The **Options for CSV format** dialog window in which the separators can be defined is opened with **[Options]** in the properties window for export templates.

Field separator

Selection of the field separator.

Selection	; , TAB
Default value	;

Record separator

Selection of the data set separator (CR = Carriage return, LF = Line feed).

Selection	CR/LF CR LF
Default value	CR/LF

Header

on | off (Default value: on)

If this check box is activated, the column headers are exported at the beginning of the export file.

4.4.3.2.4 Export template - Options for measuring point list

Dialog window: Database ➤ Tools ➤ Templates ➤ Export templates... ➤ Export templates ➤ [Edit] ➤ Properties... ➤ Export template 'Name' ➤ [Options] ➤ Options for measuring point list

The **Options for measuring point list** dialog window in which the separators can be defined is opened with **[Options]** in the properties window for export templates.

Field separator

Selection of the field separator.

Selection	; , TAB
Default value	;

4.4.3.2.5 Export template - Request at file export

If the **Request on each export** option has been selected in the properties of the export template under **File name** (see Chapter 4.4.3.2.1, page 157), then the **File export** dialog is displayed before the export of a determination. If several determinations have been marked for export, then this dialog will be displayed for each individual determination.

Target directory

Display of the target directory for the export file that has been defined in the properties of the export template used (see Chapter 4.4.3.2.1, page 157).

File name

Entry of the name under which the export file is to be saved in the **Target directory**. Both the user name and the current time stamp are automatically attached to the name entered at the time the file is created.

[OK]

The corresponding determination will be exported to the indicated file.

[Cancel]

The export of *the corresponding determination* is canceled. If several determinations have been marked for export, then the **File export** dialog will be displayed afterwards for the next determination.

[Cancel all]

The export of all selected determinations is canceled.

4.4.3.3 XML export

4.4.3.3.1 XML export - Overview

Dialog window: Database ► Tools ► Templates ► Export templates... ► Export templates ► [Properties] ► Export template

General

An XML export file with all determination data can be created by using an XML report template for the export of determinations.

Structure

An XML export file is constructed as follows (extract):

<?xml version="1.0" encoding="ISO-8859-1" ?>

9	
- <determinationreport></determinationreport>	Determination report
<xmlcreator val=""></xmlcreator>	Program name
<pre><xmlcreatorversion val=""></xmlcreatorversion></pre>	Program version
<xmlcreatorbuildno val=""></xmlcreatorbuildno>	Build number
<subtype val=""></subtype>	
+ <determination></determination>	Determination data
+ <method></method>	Method data
+ <sample></sample>	Sample data
+ <singleresults></singleresults>	Single results
+ <resultmonitoring dynamic=""></resultmonitoring>	Monitored results
+ <methodparams></methodparams>	Method parameters
<measparams></measparams>	Measuring parameters
<evaluation></evaluation>	Evaluation
<properties></properties>	Properties
+ <statistics></statistics>	Statistics results
+ <configuration></configuration>	Device data
- <system></system>	System data
<username val=""></username>	User name (short name)
<usernamefull val=""></usernamefull>	User name (full name)
<cli>entName val=""/></cli>	Client name
<pre><pre><pre><pre>ogVersion val="" /></pre></pre></pre></pre>	Program version - Build number

<licenseRoot val="" />

License code

</System>

</DeterminationReport>



NOTE

dynamic= means that the following nodes can appear more than once.

4.5 Subwindow - Determination overview

4.5.1 Determination overview - General

4.5.1.1 Determination overview - Overview

Subwindow: **Database** ▶ **Determination overview**

General

The **Determination overview** subwindow displays selected data in tabular form for the determinations contained in the open database. It is always displayed in the **Database** program part, i.e. it cannot be removed from the database view. The subwindow can be enlarged and reduced as required; it can also be maximized.

Elements

The **Determination overview** subwindow includes the following elements:

- Determination table
- Filter selection
- Batch selection
- Navigation bar

4.5.1.2 **Determination overview - Table**

Subwindow: **Database** ▶ **Determination overview**

Data display

The information defined in the **Column display** regarding the determinations is displayed in the determination table.

If a result value is monitored and lies within the limits defined, then it will be shown in **green**. If it is outside these limits then the value will be shown in **red**.



NOTE

Lines that contain red entries will also show the line number highlighted with a red background.

Updating

As long as the **Database** program part remains open, changes in the determination table that are caused by ongoing determinations or by other users (adding, changing or deleting data sets) are not displayed automatically. The table must either be updated or resorted or filtered with **View Dpdate**. The determination table is updated automatically every time a switch is made from a different program part to the **Database** program part.

Table view

Click on the column title to sort the table according to the selected column in either ascending or descending order. The table view can be adapted with the left mouse button as follows:

- Drag the margin between column titles
 Sets the column width.
- **Double-click on the margin between column titles**Sets the optimal column width.
- Drag the column title
 Moves the column to the required location.

Data set selection and table navigation

The determinations selected in the table are displayed in **green**; the focused determination, the data of which is displayed in the other subwindows, is marked with an arrow before the line number. There are various opportunities for data set selection in the table.

In the determination table, it is not possible to show more than 200 determinations at once. If more than 200 data sets are present in the database, then the Navigation bar must be used to switch to further sets of determinations

4.5.1.3 Determination overview - Column display

Dialog window: **Database** ► **View** ► **Properties** ► **Column display...** ► **Column display**

The **Column display** dialog window is opened with **View ▶ Properties ▶ Column display...**. Here the columns that are to be shown in the determination table can be defined.

Columns available

Display of all the fields that can be shown as columns in the determination table.

Columns displayed

Display of all the fields that will be shown as columns in the determination table.

Default name

Non-editable name of the field that is displayed as a column.

Displayed name

Editable name (by double-click) of the column displayed in the determination overview.



Adds the selected column to the table.



Removes the selected column from the table.



Changes the sequence of the displayed columns by moving the selected column upwards.



Changes the sequence of the displayed columns by moving the selected column downwards.

4.5.1.4 Determination overview - Filter selection

Subwindow: **Database** ▶ **Determination overview**

Filter

Selection of the filter with which the determination table is to be filtered:

Selection	All determinations All determinations of a
	multiple determination Quick filter Tempo-
	rary filter 'Filter name'
Default value	All determinations

All determinations

The table is shown unfiltered.

All determinations of a multiple determination

The table is filtered so that all determinations are shown that are linked with the selected determination as part of a multiple determination.

Quick filter

The table is filtered according to the most recently defined **Quick filter**.

Temporary filter

The table is filtered according to the **Special filter** that was most recently defined but not yet saved.

'Filter name'

The table is filtered according to the selected and saved **Special filter**.

4.5.1.5 Determination overview - Batch selection

Subwindow: **Database** ▶ **Determination overview**

Batch

Selection of the batch whose determinations are to appear in the determination table.

Selection	No batch selected 'Batch name'
Default value	No batch selected

No batch selected

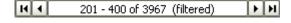
The table is shown unfiltered.

'Batch name'

The table is filtered according to the selected and saved **Batch**.

4.5.1.6 Determination overview - Navigation bar

Subwindow: **Database** ▶ **Determination overview**



The navigation bar shown below the determination table is used for navigation in extensive tables in which all the determinations can no longer be displayed simultaneously. It contains the following elements:

H

Jump to the first set of determinations in the table.

4

Switches back to the previous set of determinations in the table.

201 - 400 of 3967 (filtered)

Display of the selected set of #### - #### determinations in the table. If the table is not filtered, then the total number of all determinations will also be shown. If the table is filtered, then the total number of filtered determinations will appear with the additional information (filtered).

 \mathbf{F}

Moves onward to the next set of determinations in the table.



Jumps to the last set of determinations in the table.

4.5.1.7 Determination overview - Table navigation

Subwindow: **Database** ▶ **Determination overview**

Navigation in the determination table can be carried out with the mouse and the vertical and horizontal scroll bars. The following options are also provided by the keyboard:

[↑]

Moves the line cursor up by one field.

[↓]

Moves the line cursor down by one field.

[Ctrl] [End]

Jumps to the last determination in the current set.

[Ctrl] [Home]

Jumps to the first determination in the current set.

[Page Up]

Scrolls backward within the current set.

[Page Down]

Scrolls forward within the current set.

[Alt] [End]

Jumps to last determination (of all).

[Alt] [Home]

Jumps to first determination (of all).

[Alt] [←]

Jumps to first data set of previous set.

[Alt] [→]

Jumps to first data set of next set.

In the determination table it is not possible to show more than 200 determinations at once. If more than 200 determinations are present in the database then the navigation bar must be used to switch to further sets of determinations.

4.5.1.8 Determination overview - Data set selection

Subwindow: **Database** ▶ **Determination overview**

The determinations selected in the table are displayed in **green**; the focused determination, the data of which is displayed in the other subwindows, is marked with an arrow before the line number. The first determination is always selected and focused when a database is opened.

The following possibilities are available for the selection of determinations in the determination table:

Single determinations

Single determinations are selected by clicking on them with the mouse within the line (including line number). This determination whose data is shown in the other opened subwindows is now focused and marked with an arrow in front of the line number.

Several determinations in sequence

In order to select several determinations in sequence, the required range can be selected with the left mouse button pressed down. It is also possible to select a range with a click on the first determination and **[Shift] & click** on the last determination. The last determination to be selected receives the focus.

Several determinations not in sequence

In order to select several determinations not in sequence, the individual determinations must be selected with the **Ctrl key** and the left mouse button. The last determination to be selected receives the focus.

All determinations

With **[Ctrl] [A]** or by clicking on the uppermost left-hand table field, all the filtered determinations within the current set of determinations are selected. The focus is retained.

4.5.2 Determination overview - Functions

4.5.2.1 Updating the determination overview

Menu item: **Database** ▶ **View** ▶ **Update**

The **View** ► **Update** menu item or the symbol is used to update the determination table.



NOTE

The determination table is updated automatically when the database is opened and when changing from one other program part to the **Database** program part, but afterwards only when resorting or refiltering is carried out.

4.5.2.2 Printing determination overview

Dialog window: **Database** ► **File** ► **Print** ► **Determination overview...** ► **Print determination overview** (**PDF**)

The **Print determination overview (PDF)** dialog window opens with the **File** ▶ **Print** ▶ **Determination overview...** menu item.

Selection

Selection	Selected determinations All filtered determi-
	nations
Default value	Selected determinations

Selected determinations

If this option is selected, then a list will be produced with all of the determinations that are selected (highlighted) in the determination table.

All filtered determinations

If this option is selected, then a list will be produced with all the determinations in the determination table that meet the filter criterion.

Orientation

Selection	Portrait Landscape	
Default value	Portrait	

Portrait

If this option is selected, then the determination table will be produced in portrait format.

Landscape

If this option is selected then the determination table will be produced in landscape format.

[OK]

The determination table is produced in the required format as a PDF file and opened directly with Acrobat Reader; it can then be printed out and/ or saved.

4.5.2.3 Determination comment

Dialog window: **Database** ▶ **Determinations** ▶ **Comment...** ▶ **Determination comment**

The **Determinations Comment...** menu item or the **Determination comment** dialog window in which new comments on the selected determination can be entered or an existing comment can be edited.

Comments entered this way appear automatically as a tooltip text when the cursor is kept on the number field of a line in the determination table

for more than 1 second. It is additionally displayed in the **Information** subwindow.

4.5.2.4 Searching for determinations

Dialog window: **Database** ► **Determinations** ► **Search...** ► **Search - Database** 'Name'

The **Determinations** ► **Search...** menu item or the Search opens the **Search - Database 'Name'** dialog window for the search for determinations.

Search in

Selection of the data field in which the search is to be carried out.

Selection	All fields 'Field name'	
-		

All fields

A search is made in all fields of the database.

'Field name'

A search is made only in the selected field. The 10 most recently selected fields are always available for selection.

[More...]

Opens the **Search - Field selection** dialog window in which all fields that can be used for searching are displayed in the form of a tree. A field can be included in the search by highlighting it and closing the dialog window with **[OK]**.

Search options

Type

Selection of the type of format for fields in which several types are possible. Only this type will be shown for fields with a fixed type.

Selection	Text Date Number
Default value	Text

Operator

Selection of the comparison operator for the search criterion.

for fields of the ty Selection	<pre>#pe = text = <> empty not empty</pre>	
Default value	=	
for fields of the type = date		

Selection	= <> < <= > >= empty not empty inva- lid out of limits Today
Default value	= '

invalid

Values with the **invalid** entry are searched for.

out of limits

Values that are outside of the defined limit values for the selected fields will be searched for (values shown in red).

Today

A search is made for the current date. A range in days can also be defined in the **Search term** field, according to which the search should be carried out, starting from the current date.

for fields of the type = number

, , , , , ,	· ·
Selection	= <> < <= > = empty not empty inva-
	lid out of limits
Default value	=

invalid

Values with the **invalid** entry are searched for.

out of limits

Values that are outside of the defined limit values for the selected fields will be searched for (values shown in red).

Search word

Entry of the search term for the search in the selected data field. For fields where **Type** = **Date**, the date can be selected by pressing on [...] in the **Select date** dialog window.

for fields of the type = text

Entry	256 characters
	Definition of a text expression as a search term. The
	last 10 search terms are saved and can be selected.
	The following wildcards can be used in the search
	term:
Selection	^? ^# ^\$ ^*

۸?

Wildcard for any character.

^#

Wildcard for any digit.

۸\$

Wildcard for any letter of the alphabet.

۸*

Wildcard for any character string.

for fields of the type = date

Entry	 	all possible date values
		Definition of a date as search term. The last 10
		search terms are saved and can be selected.

for fields of the type = date and operator = today

Input range	-9999 - 9999
Default value	0
	Definition of a numerical value as a range in days in
	which, starting from the current date, the search is
	to be carried out. The last 10 search terms are saved
	and can be selected.

for fields of the type = number

Entry	all possible numerical values
	Definition of a numerical value as search term. The
	last 10 search terms are saved and can be selected.

Search direction

Selection of the search direction.

Selection	All Down Up
Default value	All

ΑII

A search will be made down to the end of the database and then again from above down to the selected data set.

Down

A search will be made to the end of the database.

Up

A search will be made to the beginning of the database.

Match case

on | off (Default value: off)

If this option is activated, then upper/lower case will be differentiated when searching in fields of the **Text** type.

Search for whole word only

on | off (Default value: off)

If this option is enabled, then the field contents must be identical with the search term during searches in **Text** fields (no part-search).

[Search next]

Search until next occurrence of the search term.

4.5.2.5 Filtering determinations

4.5.2.5.1 Filtering determinations - Overview

Subwindow: **Database** ► **Determination overview**

The following possibilities exist for filtering determinations in the determination table:

- Filter selection in the filter bar
- Last filter
- Quick filter
- Special filter
- Remove filter

4.5.2.5.2 Determinations - Last filter

Menu item: Database ▶ Determinations ▶ Filter ▶ Last filter

The most recently applied filter is reactivated with the **Determinations** ► **Filter** ► **Last filter** menu item or with the symbol.

4.5.2.5.3 **Determinations - Quick filter**

Menu item: Database ▶ Determinations ▶ Filter ▶ Quick filter

A rapid filtration can be carried out in accordance with the content of the selected table field using the **Determinations** ➤ **Filter** ➤ **Quick filter**

menu item or the symbol. After this function has been selected, the field in the determination table in which the cursor is located will have a colored background during navigation. At the same time, the following special filter symbol appears:



Double-clicking with the left mouse button on the field selected in the table will cause its contents to be set as the filter criterion, and this filter will be applied directly to the table.



NOTE

The quick filter can be applied again within the filtered table, so that the number of entries can be limited step by step.

4.5.2.5.4 Determinations - Special filter

Dialog window: **Database** ► **Determinations** ► **Filter** ► **Special filter...** ► **Special filter** - **Database** 'Name'

The **Determinations** ► **Filter** ► **Special filter...** menu item or the **y** symbol is used to open the **Special filter** - **Database 'Name'** dialog window for the definition of user-specific filters.

Filter

Selection of the filter to be loaded for editing.

Selection	'Filter name' New filter
Default value	New filter

'Filter name'

The saved filter is loaded.

New filter

An empty table with the name **New filter** is loaded.

[Save filter]

Opens the **Save filter** dialog window in which the filter criteria entered in the table can be saved as a special filter under the required name.

[Delete filter]

The currently loaded special filter is deleted.

Table view

The overview table shows all the defined filter criteria and cannot be directly edited. The filter conditions will be numbered automatically in sequence. The table view can be adapted with the left mouse button as follows:

- Drag the margin between column titles
 Sets the column width
- Double-click on the margin between column titles
 Sets the optimal column width

For the meaning of the columns, see Edit filter criterion.

Functions

The **[Edit]** menu beneath the filter table contains the following menu items:

Edit line	Opens the Edit filter criterion dialog window in which the filter condition of
	the line selected in the table can be edited (see Chapter 4.5.2.5.7, page 176).

Insert new line	Inserts a new empty line above the line selected in the table. The Edit filter criterion dialog window then opens automatically (see Chapter 4.5.2.5.7, page 176).
Cut lines	Transfers the selected lines to the clipboard.
Copy lines	Copies the selected lines to the clipboard.
Paste lines	Pastes lines from the clipboard above the selected line.
Delete lines	Deletes the selected lines.

[Apply filter]

Applies filter criteria to the determination table.

4.5.2.5.5 Determinations - Deleting a filter

Menu item: Database ➤ Determinations ➤ Filter ➤ Remove filter

The **Determinations** ► **Filter** ► **Remove filter** menu item or the symbol is used to delete the most recently used filter, and all determinations will be displayed.

4.5.2.5.6 Determinations - Saving a filter

Dialog window: Database ► Determinations ► Filter ► Special filter... ► Special filter - Database 'Name' ► [Save filter] ► Save filter

The **[Save filter]** button is used to open the **Save filter** dialog window for saving a special filter.

All the saved special filters are shown in the upper field.

Filter name

Name under which the special filter is to be saved.

Entry	50 characters	
-------	---------------	--

[Save]

Saves the filter under the given name.



NOTE

The filters are saved globally in the configuration database and are therefore available for all clients.

StabNet 1.1 ----- 175

4.5.2.5.7 **Determinations - Editing the filter criterion**

Dialog window: Database ➤ Determinations ➤ Filter ➤ Special filter... ➤ Special filter - Database 'Name' ➤ [Edit] ➤ Edit line ➤ Edit filter criterion 'Name'

[Edit] ► **Edit line** is used to open the **Edit filter criterion 'Name'** dialog window in which the filter criterion selected in the filter table can be edited.

Link

Selection of the type of link (logical operator) with the preceding filter condition

Selection	AND OR
Default value	AND

AND

Logical "AND" link.

OR

Logical "OR" link.

Field

Selection of the data field for which a condition is to be formulated.

Selection	'Field name'
	Filtering is carried out only for the selected field. The
	10 most recently selected fields are always available
	for selection.

[More...]

Opens the **Filter - Field selection** dialog window in which all fields that can be used for filtration are listed in the form of a tree. A field can be included by highlighting it and closing the dialog window with **[OK]**.

Condition

Type

Selection of the type of format for fields in which several types are possible. Only this type will be shown for fields with a fixed type.

Selection	Text Number Date	
Default value	Text	

Operator

Selection of the comparison operator for the filter criterion.

for fields of the type = text

· · · · · · · · · · · · · · · · · · ·	
Selection	= <>
Default value	=

for fields of the type = date

Selection	= <> < <= > > Today
Default value	=

Today

A search is made for the current date. A range in days can also be defined in the **Comparative value** field, according to which filtration should be carried out, starting from the current date.

for fields of the type = number

Selection	= <> < <= > >= empty not empty inva- lid out of limits
Default value	= '

invalid

Filtration is in accordance with values with the **invalid** entry

out of limits

Values that are outside of the limit values defined for the selected fields will be filtered for (values shown in red).

Comparative value

Selection or entry of the comparative value for the filter criterion. For fields where **Type** = **Date**, the date can be selected by pressing on [...] in the **Select date** dialog window.

for fields of the type = text

Entry	256 characters
•	Definition of a text expression as comparative value.
	* can be used as a wildcard for any character string
	if the Use asterisk (*) as wildcard option is
	enabled.

for fields of the type = date

, ,	 , ,	
Entry		all possible date values
		Definition of a date as comparative value.

for fields of the type = date and operator = today

Input range	-9999 - 9999
Default value	0
	Definition of a numerical value as a range in days in which, starting from the current date, the filtering is to be carried out.

for fields of the type = number

j 0. j. 0. 0.0 0 j 1 0 1 j 0 0	
Entry	all possible numerical values
	Definition of a numerical value as comparative
	value.

Match case

on | off (Default value: off)

If this option is activated, then upper/lower case will be differentiated when filtering fields of the **Text** type.

Use asterisk (*) as wildcard

on | off (Default value: off)

If this option is activated, then the asterisk * is used as a wildcard for any character strings when filtering fields of the **Text** type.

4.5.2.6 Determinations - Batch

4.5.2.6.1 Batch - Overview

Subwindow: **Database** ▶ **Determination overview**

A **Batch** is a selection of determinations that can be combined to suit and that can be saved under a single name and also selected again under this name. A batch can include a maximum of 500 determinations.

The following possibilities exist for loading and managing batches in the determination table:

- Select batch
- Create batch
- Delete batch
- Attach determinations to batch
- Remove determinations from batch

4.5.2.6.2 Creating a batch

Dialog window: Database ➤ Determinations ➤ Batch ➤ New batch... ➤ New batch

The **Determinations** ▶ **Batch** ▶ **New batch...** menu item opens the **New batch** dialog window for creating a new batch.

Batch name

Name of the batch.

	Entry	64 characters
--	-------	---------------

4.5.2.6.3 Deleting a batch

Dialog window: Database ➤ Determinations ➤ Batch ➤ Delete batch... ➤ Delete batch

The **Determinations** ▶ **Batch** ▶ **Delete batch...** menu item opens the **Delete batch** dialog window for deleting a batch.

Batch name

Selection of the batch that is to be deleted.

Selection Batch name:	Selection	'Batch name'	
-----------------------	-----------	--------------	--

4.5.2.6.4 Attaching determinations to a batch

Dialog window: Database ► Determinations ► Batch ► Append to batch... ► Append to batch

The **Determinations** ➤ **Batch** ➤ **Append to batch...** menu item opens the **Append to batch** dialog window for adding determinations to an existing batch.

Batch name

Selection of the batch to which the selected determinations are to be attached.

C 1 .:		
Selection	'Batch name'	
2616611011	battii iiaiiie	

Selection

Selection of the determinations that are to be added to the batch.

Selection	Selected determinations	All filtered determi-
	nations	

Selected determinations

The data sets selected in the determination overview are added to the batch.

All filtered determinations

All of the data sets filtered in the determination overview are added to the batch.

4.5.2.6.5 Removing determinations from a batch

Dialog window: Database ► Determinations ► Batch ► Delete batch...

The **Determinations** ▶ **Batch** ▶ **Delete batch...** menu item is used to delete the determinations selected in the determination table from the loaded batch.

4.5.2.7 Signing determinations

4.5.2.7.1 Rules for electronic signatures

Program parts: **Method / Database**

In StabNet, methods and determination can be **electronically signed** at two levels. The following rules apply for this:

Signature levels

Methods and determinations can be signed at two levels (Signature Level 1 and Signature Level 2) by entering the user name and password.

Multiple signing

Methods and determinations can be signed several times at each level. All signatures are saved and documented in the Audit Trail.

Signing at Level 1

If Level 2 has been signed then no more signatures are possible at Level 1.

Signing at Level 2

Level 2 can only be signed if signatures already exist at Level 1.

Different users

The same user may sign only on either Level 1 or Level 2.

Reason and comment

Each signature must be accompanied by a reason selected from predefined default reasons. Additionally, a further comment can be entered.

Saved data

For each signature, signature date, user name, full name, reason and comments are saved.

Deleting signatures 1

Signatures at Level 1 are automatically deleted again when creating a new version.

Deleting signatures 2

Signatures at Level 2 can only be deleted by users who have the appropriate rights.

Signing methods

Methods can only be signed individually.

Signature options

The options for electronic signatures are set in the **Signatures** tab in the **Security settings** dialog window.

4.5.2.7.2 Signature Level 1

Dialog window: **Database** ► **Determinations** ► **Sign** ► **Signature 1...** ► **Signature Level 1**

Dialog window: Method ► File ► Method manager... ► Method manager ► [Sign] ► Signature 1... ► Signature Level 1

Methods or determinations can be signed at level 1 in the **Signature Level 1** window.



NOTE

Methods or determinations which have been signed at level 1 can be modified and deleted. If the modified method or determination is saved as a new version, then all existing signatures will be deleted automatically, i.e. the method or determination must be signed again.

Info

Display of information for signing and deleting signatures. The following messages are possible:

Selection	Signature possible Signature 1 not possible
	(signature 2 exists) Signature not possible
	(accessed by other client)

Signature possible

The selected method or determination can be signed.

Signature 1 not possible (signature 2 exists)

The selected method or determination can no longer be signed at level 1 as it has already been signed at level 2.

Signature not possible (accessed by other client)

The selected method or determination cannot be signed as it is already marked to be signed on a different client.

User

Entry of the user name (short name).

Password

Entry of the password.

Entry	24 characters	
-------	---------------	--

Reason

Selection from the **Default reasons** defined in the **Security settings** dialog window for the **Signature level 1** category.

Comment

Entry of a comment on the signature.

Entry 1000 characters	
-----------------------	--

[Sign]

Sign the method or determination. The window remains open.



NOTE

Methods or determinations can be signed at level 1 only if the user belongs to a user group with the corresponding permission.

4.5.2.7.3 Signature Level 2

Dialog window: Database ➤ Determinations ➤ Sign ➤ Signature 2... ➤ Signature Level 2

Dialog window: Method ▶ File ▶ Method manager... ▶ Method manager ▶ [Sign] ▶ Signature 2... ▶ Signature Level 2

Methods or determinations can be signed at level 2 in the **Signature Level 2** window.



NOTE

Methods or determinations signed at level 2 are **locked**, i.e. they can neither be modified nor deleted. In order to be able to edit such methods or determinations again, the signatures on level 2 must first be deleted.

Info

Information for signing and deleting signatures is displayed in this box. The following messages are possible:

Selection	Signature possible Signature 2 not possible
	(signature 1 missing) Signature not possible
	(accessed by other client)

Signature possible

The selected method or determination can be signed.

Signature 2 not possible (signature 1 missing)

The selected method or determination cannot be signed at level 2 as it has not yet been signed at level 1.

Signature not possible (accessed by other client)

The selected method or determination cannot be signed as it is already marked to be signed on a different client.

User

Entry of the user name (short name).

Entry 24 characters	
----------------------------	--

Password

Entry of the password.

Entry	24 characters
-------	---------------

Reason

Selection from the **Default reasons** defined in the **Security settings** dialog window for the **Signature level 2** category.

Selection 'Selection from the default reasons'

Comment

Entry of a comment on the signature.

Entry **1000 characters**

[Sign]

Sign the method or determination. The window remains open.



NOTE

Methods or determinations can only be signed at level 2 if the user belongs to a user group with the corresponding permission.

4.5.2.7.4 Displaying determination signatures

Dialog window: **Database** ► **Determinations** ► **Sign** ► **Show signatures...** ► **Signatures** - **Determination** 'Determination ID'

The **Determinations** ➤ **Sign** ➤ **Show signatures...** menu item opens the **Signatures** - **Determination 'Determination ID'** window with a table in which the information for all of the signatures for the selected determination is displayed.

Signature

Shows at which level the determination has been signed (**Level 1** or **Level 2**).

Signature date

Date and time at which the determination was signed.

User

Short name of the user who signed the determination.

Full name

Full name of the user who signed the determination.

Reason

Reason for signature.

Signature comment

Comment on the signature.

4.5.2.7.5 Deleting signatures level 2

Dialog window: Database ➤ Determinations ➤ Sign ➤ Delete signatures
2... ➤ Delete Signatures Level 2

Dialog window: Method ▶ File ▶ Method manager... ▶ Method manager ▶ [Sign] ▶ Delete signatures 2... ▶ Delete Signatures Level 2

All signatures on level 2 for the selected method or determination can be deleted in the **Delete Signatures Level 2** window.

User

Entry of the user name (short name).

Entry	24 characters	
-------	---------------	--

Password

Entry of the password.

Entry	24 characters	
-------	---------------	--

Reason

Selection from the **Default reasons** defined in the **Security settings** dialog window for the **Signature level 2** category.

Comment

Entry of a comment on the signature.

Entry	1000 characters	

[Delete]

Delete signatures 2.



NOTE

Signatures 2 can only be deleted if the user belongs to a user group with the corresponding permission.

4.5.2.8 Sending determinations to

Dialog window: **Database** ► **Determinations** ► **Send to...** ► **Send determinations by e-mail**

The **Send determinations by e-mail** dialog window opens with the **Determinations** ▶ **Send to...** menu item.

Selection of how the file name is to be formed for sending.

Selection	Determination ID Sample data File name
Default value	Determination ID

Determination ID

The name of the export file is formed out of an unambiguous determination ID, the computer name, the date stamp -"YYYYMMDD-HHMMSS" and the suffix for the format.

Sample data

Selection of the sample data. The name of the export file is formed out of this ID, the computer name, the date stamp "-YYYYMMDD-HHMMSS" and the suffix for the format. If the generated name already exists in the directory, then a version number will be additionally appended to the date.

File name

Name under which the export file of a determination is to be saved as an attachment to the e-mail message. If more than one determination is selected, then a sequential number will be added to this name for each determination.

Sample data

Only editable for **File name = Sample data**, otherwise inactive.

Selection	Ident Info 1 Info 2 Info 3
Default value	Ident

After confirmation of the file name with **[OK]**, the default Windows e-mail client opens with an empty message and the export files of the selected determinations are automatically added as an attachment in the *.rdet format.

4.5.2.9 Exporting determinations

Dialog window: **Database** ▶ **Determinations** ▶ **Export...** ▶ **Export determinations**

Click on the **Determinations** ➤ **Export...** menu item to open the **Export determinations** dialog window for exporting the selected determinations.

Selection

Selection of determinations for the export.

Selection	All selected data records All filtered data
	records
Default value	All selected data records

All selected data records

All those determinations are exported that have been selected (highlighted) in the determination table.

All filtered data records

All the determinations from the determination table as a whole that correspond to the set filter are exported.

Export template

Selection of the export template for the data export.

Selection	'Export template'	

4.5.2.10 Importing determinations

Dialog window: **Database** ▶ **Determinations** ▶ **Import...** ▶ **Import determinations**

The **Determinations** ➤ **Import...** menu item opens the **Import determinations** dialog window in which the determinations to be imported must be selected. These determinations are then imported into the open database.



NOTE

Exported determinations can be imported only in the *.rdet file format.

4.5.2.11 Deleting determinations

Menu item: **Database** ▶ **Determinations** ▶ **Delete**

The selected determinations are deleted after the confirmation request with the symbol or the **Determinations** ▶ **Delete** menu item.



NOTE

If a database is opened simultaneously on several clients and if determinations are deleted on a client, then these will continue to be shown on the other clients in the determination table until the table is updated. All of the fields of these determinations will then have the entry **deleted**.



NOTE

If the **Comment on modification of determinations** option in the **Security settings** is switched on, then the **Modification comment** window appears before saving.

4.5.2.12 Determinations - Showing method

Menu item: **Database** ▶ **Determinations** ▶ **Show method...**

The **Determinations** ➤ **Show method...** menu item or the symbol opens the **Determination method 'Method name'** dialog window in which the method used for the selected determination is displayed with the three subwindows **Measuring parameters**, **Evaluation** and **Properties**. In contrast to the **Method** program part, there are no parameters are available for editing here.

Saving the method

[Save as...]

With this button, the determination method can be saved in a method group. To accomplish this, the **Save method** window is opened in which the method group is selected and a method name can be entered or selected.

4.5.2.13 Determinations - Displaying history

Menu item: Database ➤ Determinations ➤ Show history

Menu item: Database ➤ Determinations ➤ Make current

Activating/deactivating history view

With the **Determinations** ➤ **Show history** menu item or the **\because** symbol, only the currently focused determination and all of the previous versions of this determination will be shown in the determination table.

If the history view is disabled again with the **Determinations** ▶ **Show**history menu item or the symbol, then the original selection of determinations in the determination table will appear again.

Making an old version current

The **Determinations** ► **Make current** menu item or the symbol causes the determination version selected in the table to be made the current determination version again. This creates a new determination whose version number is increased by +1 compared with the last version to have been saved.

4.5.2.14 Determinations - Report output

Dialog window: **Database** ► **File** ► **Print** ► **Report...** ► **Report output**

Selection

Selection	Selected determinations All filtered determi-
	nations
Default value	Selected determinations

Selected determinations

If this option is selected, then the reports will be produced for all determinations that are selected (highlighted) in the determination table.

All filtered determinations

If this option is selected, then the reports will be produced for all the determinations in the determination table that meet the filter criterion.

Report type

Selection	Original report template(s) Report template
Default value	Original report template(s)

Original report template(s)

The report template that was selected at the time a method was created is referred to as the original report template. The determination reports are produced at the **output target** defined below with this report template. If a determination is being reprocessed, a new determination version is created and the content of the original report is updated.

Report template

If this option is selected, then reports according to the selected report template will be produced at the **Output target** defined below.

Output target

Printer

on | off (Default value: on)

If this check box is activated, the reports are printed on the selected printer.

Selection	Default printer 'Printer name'
Default value	Default printer

PDF file

on | off (Default value: **off**)

If this check box is activated, then the reports are output as PDF files under the entered file name.

A dialog window is opened with the button in which the desired directory is selected and a name for the PDF files can be entered. An index is appended automatically to the name at the time of output.



NOTE

If several reports are produced simultaneously as a PDF file, then an index will be automatically appended to the file name.

4.5.2.15 Determinations - Detail overview

4.5.2.15.1 Opening detail overview

Dialog window: Database ➤ Determinations ➤ Detail overview... ➤ Open detail overview

Specification is made in this dialog window as to which determinations are to be displayed for the detail overview.

Selection

Selection of the determinations that are to be displayed in the detail overview.

Selection	Selected determinations All filtered determi-	
	nations	
Default value	Selected determinations	

Selected determinations

All those determinations are displayed that have been selected (highlighted) in the determination table.

All filtered determinations

All those determinations from the whole determination table are displayed in the detail overview that correspond to the set filter.

4.5.2.15.2 Detail overview - General

Dialog window: **Database** ► **Determinations** ► **Detail overview...** ► **Open detail overview** ► [OK] ► **Detail overview**

After the determinations have been selected (see Chapter 4.5.2.15.1, page 189), the **Detail overview - Results** dialog window opens in which the results and control charts for the selected determinations are displayed.

The dialog window contains the following two areas, which can be selected with the respective symbol on the left-hand side:

- Results
- Control chart

4.5.2.15.3 Detail overview - Results

Dialog window: Database ► Determinations ► Detail overview... ► Open detail overview ► [OK] ► [Results] ► Detail overview - Results

The dialog window displays the results for the selected determinations in graphics and tabular form, along with the associated statistical evaluations.

Graph display

The results contained in the selected determinations are displayed as graphs through several determinations. Each result defined in the method has a tab of its own that has the result name (**Induction time**, **Stability time**, **Standard time**) as its designation.

The y axis is automatically scaled in the unit \mathbf{h} (hours); on the x axis the selected determinations are numbered sequentially from $\mathbf{1}$ to \mathbf{n} in accordance with their recording date and displayed at identical intervals. The statistical mean value is marked in the graph as a blue line.

The result values are presented with the following symbols:

0

Result of a determination that is taken into account for the statistical calculations. A mouse click on the symbol will also cause the associated determination to be highlighted in the table.

۰

Result of a determination that is taken into account for the statistical calculations and which is also highlighted in the table.

×

Result of a determination that is not taken into account for the statistical calculations.

The following context-sensitive menu opens with a right-hand mouse click inside the graphics frame:

Show all	Shows the entire graph. This menu item is always enabled.	
Zoom	Opens the dialog for entry of a zoom range (see Chapter 4.5.2.15.5, page 196).	
Unzoom	Undoes the last zoom action.	
Сору	Copies the graph.	

Axes

y axis

The y axis is labeled with the unit of the result.

The scaling of the y axis takes place automatically in accordance with the values of the respective result.

The unit of the result of the first determination is used as the unit.

x axis

The 'Number' of the results is entered on the x axis

The results of the various determinations are all displayed with the same spacing. The results of the determinations are listed from left to right in accordance with the ascending recording date of the determination.

If the determination does not contain the result displayed, then this space will remain empty.

Statistics

The results of the determinations used (see under *Table*) are statistically evaluated automatically and the calculated dimensions are listed below the graph.

The same number of decimal places is displayed as in the database part **Results**.

The **mean value** will be shown on the graph as a continuous blue line.

Mean value:

Mean value of the results.

Minimum:

Smallest value of the results.

Maximum:

Largest value of the results.

Absolute standard deviation:

Absolute standard deviation of the results.

Relative standard deviation:

Relative standard deviation of the results.

Number of determinations:

Total number of determinations in the table for which statistics are activated.

Table

Table with information concerning the selected determinations. It contains the following columns:

Date

Date the determination was recorded.

Number

Number of the determination (sorted chronologically).

Ident

Identification for the sample data of the determination.

Method

Name of the method used for the determination.

Induction time

Value of the induction time.

Stability time

Value of the stability time.

Standard time

Value of the standard time.

Statistics

Indicates whether a result was used for calculation of the statistics or not.

The graph of the results values is synchronized with the determination table. A point can be selected in either the graph or in the table. The point is then highlighted in **blue** and the corresponding line in the table in **green**. Points that were deleted manually from the statistics appear as a **black cross** in the graph.

Click on the column title to sort the table according to the selected column in either ascending or descending order. The table view can be adapted with the left mouse button as follows:

- Drag the margin between column titles
 Sets the column width.
- **Double-click on the margin between column titles**Sets the optimal column width.
- Drag the column title

Moves the column to the required location.

Clicking on the table of determinations with the right mouse button causes a context-sensitive menu to appear with the following menu items:

On

Activates the **Statistics** check box for the highlighted determinations.

Off

Deactivates the **Statistics** check box for the highlighted determinations.

Invert selection

Inverts the selection of the highlighted determinations.

Functions

[Print (PDF)]

Opens the **Print result overview (PDF)** dialog window (see Chapter 4.5.2.15.6, page 196), in which the contents of the result overview can be output as a PDF file in the required format.

4.5.2.15.4 Detail overview - Control chart

Dialog window: **Database** ► **Determinations** ► **Detail overview...** ► **Open detail overview** ► **[OK]** ► **[Control chart]** ► **Detail overview** - **Control chart**

The dialog window displays a control chart of the results for the selected determinations in graphics and tabular form, along with the associated statistical evaluations.

Template

Selection of the saved template for displaying control charts. When the dialog window is opened, the most recently used template will be loaded. If a new template is selected, then the display will be updated automatically.

Selection

'Saved templates'

[Templates]

Opens the **Control chart templates** dialog window for creating and editing control chart templates (see Chapter 4.4.2.1, page 151).

Graph display

The result contained in the selected determination (or the results of several selected determinations) is displayed graphically through several determinations. Each result has a tab of its own that has the result name defined in the template as its designation.

The y axis is scaled in accordance with the template; on the x axis the selected determinations are numbered sequentially from ${\bf 1}$ to ${\bf n}$ in accordance with their recording date and displayed at identical intervals. The intervention limits are displayed in the graph with orange lines, the warning limits with red lines, the statistical mean value with a blue line and the standard deviation ranges with black lines.

The result values are presented with the following symbols:

0

Result of a determination that is taken into account for the statistical calculations. A mouse click on the symbol will also cause the associated determination to be highlighted in the table.

StabNet 1.1 •••••• 193

۰

Result of a determination that is taken into account for the statistical calculations and which is also highlighted in the table.

×

Result of a determination that is not taken into account for the statistical calculations.

The following context-sensitive menu opens with a right-hand mouse click inside the graphics frame:

Show all	Shows the entire graph. This menu item is always enabled.	
Zoom	Opens the dialog for entry of a zoom range (see Chapter 4.5.2.15.5, page 196).	
Unzoom	Undoes the last zoom action.	
Сору	Copies the graph.	

Axes

y axis

The configuration of the y axis takes place in the properties of the control chart (see Chapter 4.4.2.2, page 152).

x axis

The 'Number' of the results is entered on the x axis

The results of the various determinations are all displayed with the same spacing. The results of the determinations are listed from left to right in accordance with the ascending recording date of the determination.

If the determination does not contain the result displayed, then this space will remain empty.

The date and time for the first and last point are shown as the legend.

Table

Table with information concerning the selected determinations. It contains the following columns:

Date

Date the determination was recorded.

Number

Number of the determination (sorted chronologically).

Ident

Identification for the sample data of the determination.

Method

Name of the method used for the determination.

Induction time

Value of the induction time.

Stability time

Value of the stability time.

Standard time

Value of the standard time.

Statistics

Indicates whether a result was used for calculation of the statistics or not.

The graph of the results values is synchronized with the determination table. A point can be selected in either the graph or in the table. The point is then highlighted in **blue** and the corresponding line in the table in **green**. Points that were deleted manually from the statistics, appear as a **black cross** in the graph.

Click on the column title to sort the table according to the selected column in either ascending or descending order. The table view can be adapted with the left mouse button as follows:

- Drag the margin between column titles
 Sets the column width.
- **Double-click on the margin between column titles**Sets the optimal column width.
- Drag the column title

Moves the column to the required location.

Clicking on the table of determinations with the right mouse button causes a context-sensitive menu to appear with the following menu items:

On

Activates the **Statistics** check box for the highlighted determinations.

Off

Deactivates the **Statistics** check box for the highlighted determinations.

Invert selection Inverts the

Inverts the selection of the highlighted determinations.



NOTE

Highlighted lines in the table can be copied to other programs with CTRL+C and CTRL+V. The context menu for the table is not permitted to be open while this is carried out!

StabNet 1.1 ------ 195

Functions

[Print (PDF)]

Opens the **Print control chart (PDF)** dialog window (see Chapter 4.5.2.15.7, page 197), in which the contents of the control chart can be output as a PDF file in the required format.

4.5.2.15.5 **Detail overview - Zooming**

Dialog window: Database ➤ Determinations ➤ Detail overview... ➤ Open detail overview ➤ [OK] ➤ [Results] / [Control chart] ➤ Detail overview - Results / Detail overview - Control chart ➤ Zoom... ➤ Zoom

Specifies the displayed area; this is always spanned over the whole size of the graphics window.

x axis

Visible range in X direction.

from

Starting point in X direction.

Input range	-10 ¹² - 10 ¹²	
1		

to

Endpoint in X direction.

Input range	-10 ¹² - 10 ¹²	
1		

Y Axis

Visible range in Y direction.

from

Starting point in Y direction.

	Input range	-10 ¹² - 10 ¹²	
--	-------------	--------------------------------------	--

to

Endpoint in Y direction.

Input range	-10 ¹² - 10 ¹²	
-------------	--------------------------------------	--

4.5.2.15.6 Printing the result overview

Dialog window: Database ➤ Determinations ➤ Detail overview... ➤ Open detail overview ➤ [OK] ➤ [Results] ➤ Detail overview - Results ➤ [Print (PDF)] ➤ Print result overview (PDF)

Selection	All result types 'Selected results'	-
Default value	All result types	

All result types

Produces a result overview for all result types.

'Selected results'

Produces a result overview for the selected results only.

Orientation

Selection	Portrait Landscape
Default value	Portrait

Portrait

Produces the result overview in portrait format.

Landscape

Produces the result overview in landscape format.

Comment

Possibility of entering comments on the result overview which will be produced together with the result overview.

Entry	1000 characters	
,	. ooo characters	

[OK]

The result overview is produced in the required format as a PDF file and can be opened directly with Acrobat Reader; it can then be printed and/or saved.

4.5.2.15.7 Printing the control chart

Dialog window: Database ► Determinations ► Detail overview... ► Open detail overview ► [OK] ► [Control chart] ► Detail overview - Control chart ► [Print (PDF)] ► Print control chart (PDF)

Orientation

Selection	Portrait Landscape	
Default value	Portrait	

Portrait

Produces the control chart in portrait format.

Landscape

Produces the control chart in landscape format.

Comment

Possibility of entering comments on the control chart which will be produced together with the control chart.

Entry	0 - 1000 characters

[OK]

The control chart is produced in the required format as a PDF file and opened directly with the Acrobat Reader; it can then be printed out and/ or saved.

4.5.2.16 Determinations - Overlaying curves

4.5.2.16.1 Overlaying curves - Selection

Dialog window: **Database** ► **Determinations** ► **Overlay curves...** ► **Overlay curves**

The **Determinations** ► menu item or the symbol opens the **Overlay curves** dialog window for selecting the determinations whose curves are to be overlaid.

Selection

Selection	Selected determinations All filtered determ	
	nations	
Default value	Selected determinations	

Selected determinations

Displays curves from all of the determinations that have been selected in the determination table. An unlimited number of curves from determinations can be displayed in the **Curve overlay** dialog window. There is no limitation.

All filtered determinations

Displays curves from all of the determinations contained in the whole determination table that correspond to the filter that was set.

[OK]

Opens the **Overlay of curves** dialog window (see Chapter 4.5.2.16.2, page 198) and loads selected determinations. No determinations are displayed yet while the determinations are being loaded. The table with the determinations has a gray background and the progress of the procedure is visualized by a bar. Once all of the determinations have been loaded, the curves are displayed and the determination table is activated.

4.5.2.16.2 Overlaying curves - Display

Dialog window: **Database** ► **Determinations** ► **Overlay curves...** ► **Overlay curves** ► **OK** ► **Overlay of curves**

The **Overlay of curves** dialog window displays the curves for the selected determinations in graphics and tabular form.

Graph display

The curves of the selected determinations are displayed graphically in different colors. The colors and their sequence can be configured. If more curves are contained in the overview than the 10 defined colors, this color scheme will be repeated for the remaining curves. The color sample from StabNet 1.1 is used for the 10 colors.

Clicking on a curve causes it to be depicted with a bolder line, and a frame is created around the entire curve that is scaled to the right-hand side.

The following context-sensitive menu	opens with a right-hand mouse click
inside the graphics frame:	

Show all	Shows the entire graph.
Zoom	Opens the dialog for entry of a zoom range (see Chapter 4.8.5.2, page 240).
Unzoom	Undoes the last zoom action.
Сору	Copies the graph.
Properties	Defines the properties for the curve display (see Chapter 4.5.2.16.3, page 201).

Axes

The **x axis** is automatically scaled in such a way that the longest curve is displayed in its entirety.

The **Y axis** is automatically scaled in the unit of the first selected determination and adjusted to the largest curve.

Table

Table with information concerning the selected determinations. It contains the following columns:

Date

Date the determination was recorded.

Number

Number of the determination (sorted chronologically).

Ident

Identification for the sample data of the determination.

Method

Name of the method used for the determination.

Sample temperature [°C]

Value of the sample temperatur used for the determination.

Induction time [h]

Value of the induction time determined.

Stability time [h]

Value of the stability time determined.

Legend

Color of the line in which the curve is displayed.

Display

Indicates whether a curve is displayed or not.

The graph is synchronized with the determination table. A curve can be selected in either the graph or in the table. The line is then shown in bold-face.

Click on the column title to sort the table according to the selected column in either ascending or descending order. The table view can be adapted with the left mouse button as follows:

- **Drag the margin between column titles** Sets the column width.
- Double-click on the margin between column titles
 Sets the optimal column width.
- Drag the column title
 Moves the column to the required location.



Moves the curve upward (modifies sequence).



Moves the curve downward (modifies sequence).

The position of the curves can be changed by pressing the following keys:

[PageUp] Moves the curve upwards by 10% of the graph-

ics window.

[PageDown] Moves the curve downwards by 10% of the

graphics window.

[Shift]-[↑] Enlarges the spacing of two curves within the

same graphic frame by 10%.

[Shift]-[\downarrow] Decreases the spacing of two curves within the

same graphic frame by 10%.

Clicking on the table of determinations with the right mouse button causes a context-sensitive menu to appear with the following menu items:

On	Activates the Display check box for the highlighted curves.
Off	Deactivates the Display check box for the highlighted curves.
Invert selection	Inverts the Display setting for the highlighted curves.

Scaling

The displayed curves are scaled and displayed in accordance with the following rules:

- The curves are displayed in the sequence that they are listed in the table, e.g. the top entry in the table corresponds to the lowest curve.
- The scaling and the alignment of the curves is modified when the curve overview is opened, when the properties of the curve overview have been changed or when the sequence in the table (column sorting, moving manually with arrow keys) is changed.
- The y axis is scaled in such a way that it corresponds to the **topmost determination of the table (lowest curve)**.
- The smallest value of the y axis is fixed and has the value 0.
- All of the other curves are presented relative to the lowest curve with the same scaling.
- The reference point for the relative display is the first point of each curve; a different one (a particular time) can however be selected. All curves must lie on top of one another at this point. Starting from here, a curve offset in X and Y direction can be defined. This can be configured in the **context menu of the graph** (right mouse button) by means of a **Overlay of curves properties** dialog (see Chapter 4.5.2.16.3.1, page 201).
- The scaling of the graphics window is such that all selected curves are displayed in their entirety.
- If a curve was hidden with the **Display** check box, then the graph is updated automatically. The curve is no longer displayed and the remaining curves move closer to one another. The hidden curve appears **gray** in the table.
- A curve can be selected by clicking on it (e.g. cursor symbol changes when this is possible) and is given a frame; the Y scaling of the curve is displayed on the right-hand edge of the frame. This frame can **not** however be moved (in contrast to the situation when only one determination is to be found in the curve overlay), the 'asterisk' in the middle of the frame is therefore hidden from view.

4.5.2.16.3 Overlaying curves - Properties

4.5.2.16.3.1 Properties - General

Tab: Database ➤ Determinations ➤ Overlay curves... ➤ Overlay curves ➤ OK ➤ Overlay of curves ➤ Properties... ➤ Overlay of curves - properties ➤ General

Reference point

The point at which all of the displayed curves coincide with one another before the curve offset is applied.

Time

Moment in which the Y values of all curves lie above one another.

Input range	0.00 - 9999.99 h
Default value	0.0 h

Curve offset

The offset based on the reference point that is used to display the curves for clear comprehension.

X-Axis

Offset on the X axis (time axis). The curves are moved towards one another by the amount of the specified percentage of the length of the selected curve.

Input range	0.0 - 100.0 %
Default value	0.0 %

Y-Axis

Offset on the Y axis (measurement value axis). The curves are moved towards one another by the amount of the specified percentage of the height of the selected curve.

Input range	0.0 - 100.0 %
Default value	5.0 %

4.5.2.16.3.2 Properties - Colors

Tab: Database ➤ Determinations ➤ Overlay curves... ➤ Overlay curves ➤ OK ➤ Overlay of curves ➤ Properties... ➤ Overlay of curves - properties ➤ Colors

On this tab you can define and modify the colors which will be used for the display of the curves in the curve overlay. In the default settings, 10 colors are defined (standard colors).

Table "Colors"

The table permits the definition of 1 to 20 colors. The defined colors are applied in sequence to the curves that are selected in the curve overlay.

The following context-sensitive menu opens with a right-hand mouse click inside the table:

New	Adds another color. The Choose color dialog opens (see Chapter 2.5.4, page 62).
Edit	Edits the properties of the selected color. The Choose color dialog opens (see Chapter 2.5.4, page 62).
Delete	Deletes the selected color. This function is only available if more than one color is defined.



Moves color upward (modifies sequence).



Moves color downward (modifies sequence).

[Load default colors]

Pressing this button causes the table of the colors to be reset to the 10 standard colors. Any changes you made yourself will be lost at this time. The changes will however be permanently applied by first pressing the **[OK]** button.

4.5.2.16.4 Printing the curve overview (PDF)

Dialog window: Database ► Determinations ► Overlay curves... ► Overlay curves ► OK ► Overlay of curves ► Print (PDF) ► Print curves overview (PDF)

The **Print curves overview (PDF)** dialog window opens with **[Print (PDF)]**.

Orientation

Selection	Portrait Landscape	
Default value	Portrait	

Portrait

Produces the curve overview in portrait format.

Landscape

Produces the curve overview in landscape format.

Comment

Possibility of entering comments on the curve overview that will be produced along with it.

[OK]

The curve overview is produced in the required format as a PDF file and can be opened directly with Acrobat Reader; it can then be printed and/or saved.

4.5.2.17 Determinations - Reprocessing

4.5.2.17.1 Reprocessing - General

Dialog window: **Database** ▶ **Reprocess...** ▶ **Reprocessing**

Reprocessing determinations

The determinations saved in the database can be reprocessed at any time. Sample data, evaluation parameters and result definitions can be modified and the results can be recalculated. The reprocessed determination can then be saved in the database as a new version.



NOTE

Determinations signed at level 2 can no longer be reprocessed.

Opening the reprocessing window

The reprocessing of determinations that have been selected in the **Determination overview** subwindow takes place in the independent **Reprocessing** dialog window. The window is opened with **Determina-**

tions ➤ **Reprocess...** or with the Symbol. When the window is opened, the first of the selected determinations is always shown as standard.

Closing the reprocessing window

The **Reprocessing** dialog window is closed with **[OK]**, **[Cancel]** or with the **X** symbol.



NOTE

The reprocessing window cannot be closed while a recalculation is still running.

4.5.2.17.2 Reprocessing - Rules

Dialog window: **Database** ▶ **Reprocess...** ▶ **Reprocessing**

Selecting determinations

The following rules apply for the selection of determinations that are reprocessed:

Number of determinations

Only a maximum of 200 determinations can be selected for reprocessing.

Opened determination

Opened determinations (e.g. opened by a user on another client) cannot be reprocessed.

Signed determination

Determinations signed at level 1 can be reprocessed. Determinations signed at level 2 cannot be reprocessed.

Multiple determinations

Multiple determinations can only be reprocessed as a group.

Reprocessing sequence

The following rules apply for reprocessing the selected and modified determinations:

Recalculate

All of the determinations are reprocessed that are located in the Reprocessing table. If one determination is not to be reprocessed, then the respective line must be deleted.

Sequence

The determinations are reprocessed in the same sequence in which they are to be found in the reprocessing table.

Move manually

If the induction time in the **Curves** subwindow was moved manually during reprocessing, then the induction time will **not** be calculated automatically during reprocessing.

Set tangent

If the induction time in the **Curves** subwindow was redetermined during reprocessing by the setting of a tangent, then the induction time will **not** be calculated automatically during reprocessing.

4.5.2.17.3 Reprocessing window

Dialog window: **Database** ▶ **Reprocess...** ▶ **Reprocessing**

Subwindows

The **Reprocessing** dialog window contains the following subwindows that can be enlarged and reduced by dragging the separating bar between them:

- Reprocessing table
 - Selecting determination, editing sample data and defining sequence in which the determinations are to be reprocessed.
- Results
 - Displaying reprocessing results.
- Evaluation
 - Editing evaluation parameters.
- Curves

Evaluating curves manually, displaying measurement curves.

Functions

The buttons with which the various reprocessing operations can be triggered are located on the lower edge of the window.

[Method...]

The button opens a menu with the following menu item:

Save as...

Opens the **Save method** dialog window (see Chapter 5.2.6, page 250). The method from which the evaluation parameters originate is saved. This menu item is active only if a determination is selected.

[Recalculate]

Triggers reprocessing. If determinations were evaluated manually, then a query appears as to whether these manual evaluations should be retained or not. As long as the reprocessing is running, all subwindows and buttons are disabled; a progress bar is displayed in the lower area of the window.



NOTE

All determinations are reprocessed with the evaluation parameters of the **selected** determination.

It is not until this moment that all the modifications that were made in the reprocessing are incorporated into the determinations. The changed results and measurement curves are displayed in the **Reprocessing table**, **Results**, and **Curves** subwindows.

[Update]

Is used to apply changes in the evaluation parameters to **the selected determination**. This makes it possible to find the correct evaluation parameters quickly without reprocessing the entire table with each optimization attempt.

[Undo]

This button is used to reset all modifications made during reprocessing but not yet saved; the original data and results are then available once again.

[OK]

With this button, a new version with a version number increased by **+1** is saved for each determination that has been modified by reprocessing and the **Reprocessing** subwindow will be closed.

The button is active only when reprocessing was triggered with **[Recalculate]** and the determinations are consistent with the altered parameters. The button becomes inactive once again as soon as something is edited in reprocessing.

All reprocessed determinations are stored with the status **modified**.

The method status of a reprocessed determination changes from **original** to **modified** if the evaluation parameters have been changed. If only sample data has been changed, then the method status remains the same as before. A determination with the **modified** method status retains this method status under all circumstances.

The manual changes in the curve subwindow (**Move induction time** and **Set tangents manually**) are also saved (*see Chapter 4.5.2.17.7, page 214*)).



NOTE

If the **Comment on modification of determinations** option is activated under **Configuration** ▶ **Tools** ▶ **Security settings...** ▶ **Security settings** ▶ **Audit Trail/Modifications**, then the **Modification comment determination** dialog window will appear before saving (see Chapter 4.5.2.17.8, page 215).

[Cancel]

With this button, the result of the reprocessing made since the last saving will not be saved and the **Reprocessing** subwindow will be closed. The same function can also be triggered with the symbol in the upper right-hand corner of the window.

Progress bar

A progress bar appears in the lower part of the window during recalculation or updating. **The buttons of the dialog window are disabled during this time.** The reprocessing can be canceled thereby with the symbol next to the bar.

It is not until after the end that additional data can be modified and recalculation or updating can once again be triggered. The recalculated curves appear in the **Curves** subwindow after the recalculation.

4.5.2.17.4 Reprocessing table subwindow

4.5.2.17.4.1 Reprocessing table

Subwindow: Database ► Reprocess... ► Reprocessing ► Reprocessing table

The determinations that are up for reprocessing are listed in the **Reprocessing table** subwindow of the **Reprocessing** dialog window. The sample data of the individual determinations can be modified here and the sequence in which the determinations are to be processed is established here.

Table

The table contains all of the determinations that are to be reprocessed.

It has a fixed number of columns. The **Determination start**, the **Method name**, all sample data (**Ident**, **Info 1**, **Info 2**, **Info 3**), the **Induction time [h]**, the **Stability time [h]** and the **Evaluation type** are displayed in separate columns for each determination. The sequence of the columns can be modified per Drag&Drop.

By default, the table is sorted in ascending order according to the determination start time. The sequence can, however, be modified with the arrow keys on the right-hand margin.

Clicking on a line causes a determination to be given a **green** background, thus highlighting it as being selected (only one line can be selected at any one time). This results in the following consequences:

- The properties of the selected determination are displayed in the Results, Evaluation and Curves subwindows.
- The selected determination can be moved upwards or downwards with the arrow keys in the reprocessing table.
- The selected determination can be edited or deleted.

Arrow keys



NOTE

The sequence of the determinations in the reprocessing table establishes the sequence in which the determinations will be reprocessed.



Moves the selected determination one line upwards.



Moves the selected determination one line downwards.

Edit menu

[Edit] contains the following menu items:

Edit line	Opens the Edit line - Reprocessing dialog window to edit the sample date of the selected determination (see Chapter 4.5.2.17.4.2, page 209).
Delete line	The selected determination is removed from reprocessing. Multiple determinations cannot be deleted individually in the reprocessing table.
Increment	Using the cursor, which takes on the form ♀, the range which is to be automatically incremented can be selected from a column in the table. The number standing at the end of the expression will thereby be automatically increased by 1 in the selected cells of a column, starting from the first selected cell (see Chapter 4.5.2.17.4.3, page 211). This works not only with pure numbers but also with text expressions which end with a number (e.g. ABC10 → ABC11 → ABC12).
Filling	Fill the selected cells automatically (see Chapter 4.5.2.17.4.4, page 211).

The menu items can also be found as a context-sensitive menu of the table. Click with the right mouse button to open this menu.

4.5.2.17.4.2 Editing line - Reprocessing

Subwindow: Database ► Reprocess... ► Reprocessing ► Reprocessing table ► Edit ► Edit line

The sample data for the line selected in the table can be edited in this dialog window.

Method

Display of the method that was used for the determination.

Ident

Name for the determination. If text templates are defined for **Ident**, then these can be selected (see Chapter 3.7.1, page 92).

Entry	0 - 100 characters
Default value	'empty'
Selection	Selection of text templates

Info#

Entry of additional information about the sample. Text templates can be selected here if they have been defined for this parameter (see Chapter 3.7.1, page 92).

Entry	0 - 100 characters
Default value	'empty'
Selection	Selection of text templates

Notes on the dialog window

- The dialog window is not dynamic. All of the sample data relevant to reprocessing is always listed.
- The fixed values have no role to play in reprocessing; all fields can be edited from all lines, no matter whether they involved fixed values or not.
- Once reprocessing has been triggered, the sample data from the reprocessing is used for the calculation. Neither fixed values nor limit values for sample data are taken into account during reprocessing.
- The method of the reprocessed determination retains however the fixed values and input limits for sample data from the method with which the determination was originally created.
- If sample data that does not match the fixed value settings is used in reprocessing, then the data must be identified as having been modified during reprocessing.

Can the fixed values of a method be edited in reprocessing?

No. That is not relevant for the reprocessing of a determination. Because of the fact that this involves a method property, it must be carried out in the method editor.

Can limit values for the sample data be edited in reprocessing?

No. That is not relevant for the reprocessing of a determination. Because of the fact that this involves a method property, it must be carried out in the method editor.

What is triggered by the editing of the sample data?

The changes are not incorporated in the determination(s) until the reprocessing has been actively triggered:

- In *one* highlighted determination with **[Update]**.
- In *all* of the determinations in the table with **[Recalculate]**.

Navigation



Display of the currently selected line in the table with the following functions:

H

Jumps to the first line in the table.

Jumps to the previous line in the table.

5

Option of entering the desired line number to which the program directly jumps when the **[Enter]** key is pressed.

Jumps to the next line in the table.

ы

Jumps to the last line in the table.

Functions

[Apply]

Applies the sample data entered in the respective line of the table.

[Close]

Closes the input window. The current sample data will not be applied in the table (this needs to be triggered beforehand with **[Apply]**).

4.5.2.17.4.3 Incrementing lines

Subwindow: Database ► Reprocess... ► Reprocessing ► Reprocessing table ► Edit ► Increment

The selected cell entries of the first line are thereby transferred into the cells of the selected section lying below and are incremented per line. To accomplish this, the cursor is pulled across the cells that are to be incremented, starting from the first, modified cell.

The cell entries below are overwritten.

Rules for incrementing

- In the case of text without a number at the end, the first cell entry is transferred to the highlighted cells without anything being incremented as a result (the same response as with Filling). Sample -> Sample
- Whole numbers are incremented by 1. 1->2->3
- In the case of numbers with decimal places, the last place is incremented. 1.0->1.1, 1.00->1.01, 1.99->2.00
- In the case of exponential display, the exponent is increased. 1e2->1e3
- In the case of texts with a number at the end of the line, the number is incremented. **Sample 1->Sample 2**

Fields that cannot be incremented:

- Determination start
- Method name
- Induction time [h]
- Stability time [h]
- Evaluation type

4.5.2.17.4.4 Filling up lines

Subwindow: Database ► Reprocess... ► Reprocessing ► Reprocessing table ► Edit ► Filling

The selected cell entries of the first line are thereby transferred during filling into the cells of the selected section lying below, with the cell entries lying below being overwritten during this process. To accomplish this, the cursor is pulled across the cells that are to be filled, starting from the first, modified cell.

Only sample data fields can be filled:

- Ident
- Info 1
- Info 2
- Info 3

4.5.2.17.5 Subwindow Results

Subwindow: **Database** ▶ **Reprocess...** ▶ **Reprocessing** ▶ **Results**

The results of the selected determination are displayed in the **Results** subwindow of the **Reprocessing** dialog window. Structure and properties correspond to the **Results** subwindow in the **Database** program area (see Chapter 4.7, page 235).

Tabs

The results of the determination are shown on the following tabs:

- Results
 Display of the calculated results.
- Statistics
 - Display of the statistics data concerning the statistically evaluated results of multiple determinations. This tab is displayed only if a statistics has been defined in the method.
- Monitoring
 Display of the monitoring data. This tab is displayed only if a monitoring has been defined in the method.

4.5.2.17.6 Evaluation subwindow

Subwindow: **Database** ▶ **Reprocess...** ▶ **Reprocessing** ▶ **Evaluation**

The evaluation parameters of the selected determination are displayed in the **Evaluation** subwindow of the **Reprocessing** dialog window.

Evaluation sections

The **Evaluation** subwindow is comprised of three sections that can be selected with the following symbols on the left-hand symbol bar:

The automatic evaluation of the induction time and the stability time of the determination selected in the reprocessing table can be activated or deactivated and the standard time can be calculated in the **Parameters** section (see Chapter 5.6.2, page 272).

Additional results can also be defined by the user in the **Results** section, and results can be both evaluated statistically and monitored (*see Chapter 5.6.3, page 275*).

Report templates, the databases for the storage of the determination data and export templates are defined in the **Documentation** section (see Chapter 5.6.4, page 282).

Editing the evaluation parameters

Even though the entire evaluation of the method is visible, not all of the ranges can be edited in reprocessing. The sections that cannot be edited are not executed in reprocessing.







Section	Visible	Can be edited	Execute
Parameters (see Chapter 5.6.2, page 272)	+	+	+
Results (see Chapter 5.6.3, page 275)	+	+	+
Documentation (see Chapter 5.6.4, page 282)	+	-	-

The evaluation parameters of all determinations can be edited in the reprocessing. The modifications remain in effect when the selected determination is changed. If a different determination is selected after a change and then afterwards a switch is made back again to the original determination, the modified parameters will continue to be in the evaluation parameters.

Editing alone does not trigger any further actions. The changes are not incorporated in the determination(s) until the reprocessing has been actively triggered with **[Recalculate]**:

- In a highlighted determination with **[Update]**.
- In all of the determinations in the table with the **[Recalculate]** button.

The evaluation parameters with which reprocessing was at this time carried out are written to all of the determinations that were processed with them. Changes to evaluation parameters that are made in reprocessing but not applied by the above-named functions are discarded at this time.

Actions that are not carried out with reprocessing

The following actions, which are defined in the method under **Documentation**, are no longer carried out during reprocessing:

Report

No new report will be generated with reprocessing.

Database

No new database entry will be generated with reprocessing. The reprocessed determination is saved as a new version.

Automatic export

No new export will be generated with reprocessing.

Resetting evaluation parameters

If evaluation parameters have been edited, no matter whether in a loaded method or by selected determinations, then all changes can be undone with **[Undo]** or **[Cancel]**.

4.5.2.17.7 **Subwindow curves**

Subwindow: **Database** ▶ **Reprocess...** ▶ **Reprocessing** ▶ **Curves**

The measurement curve of the determination selected in the reprocessing table is displayed in the **Curves** subwindow. This curve can be reprocessed manually.

Toolbar

The toolbar above the curve contains symbols with the following functions for re-evaluation of the curve:



Move induction time

Pressing this symbol makes it possible to move the induction time to a required position manually. When the cursor is placed on the induction timeline, it assumes the following shape: \longleftrightarrow . The induction timeline is moved to the required position with the left mouse button pressed down.



Set tangents manually

The induction time can be redetermined manually by setting two tangents after pressing this symbol. The first point on the curve at which the first tangent is to be created automatically is selected by moving the cursor and clicking with the left mouse button. The first tangent is set after selecting the second point and clicking with the left mouse button. A third point is selected afterwards at which the second tangent is to be created by moving the cursor and clicking with the left mouse button. The second tangent is set and a new endpoint is set simultaneously at the intersection point of the two tangents after the fourth point has been selected and the left mouse button has been clicked.

Move tangent points

The set tangent points can also be moved once again later. To accomplish this, the cursor must be placed on the desired tangent point until a cross hair appears. After a click with the left mouse button, the tangent point can now be moved with the mouse to the required new location. Clicking once more with the left mouse button sets the tangent point.



Delete tangents

The tangents that were set manually are deleted once again. They can be subsequently created once again. They can be edited only if **Set tangents manually = active**, otherwise the symbol is disabled.



Automatic evaluation

The evaluation with the 2nd derivative is displayed after this symbol is pressed.

Context-sensitive menu

Clicking on the curve window with the right mouse button will cause a context-sensitive menu to appear with the following menu items:

Show all	Shows the entire curve. This menu item is always enabled.	
Zoom	Opens the dialog for entry of a zoom range (see Chapter 4.8.5.2, page 240).	
Unzoom	Undoes the last zoom action (as often as required).	
Сору	Copies the measurement curve displayed in the graphics window to the clipboard.	

Saving manual evaluations

The **[OK]** button in the **Reprocessing** dialog window is used to save a new version of every determination that has been modified by the reprocessing, together with a version number than has been increased by **+1**, and to close the **Reprocessing** subwindow (see Chapter 4.5.2.17.3, page 205). If the induction time was moved beforehand or if the induction time was changed by the setting of tangents, then the new position of the induction line, the associated induction time and the previously created tangents will also be saved in the **Curves** subwindow when this saving is carried out.

4.5.2.17.8 Modification comment for determinations

Dialog window: **Database** ▶ **Determinations** ▶ **Delete/Reprocess...**

If the **Comment on modification of determinations** option is switched on in the security settings, then the **Modification comment determination** window appears, in which a **Reason** must be selected and a **Comment** on the modification must be entered before the modified determination can be accepted.

Reason

Selection from the default reasons defined in the **Security settings** dialog window for the **Modification of determinations** category.

Selection	Selection from default texts

Comment

Entry of a comment on the modification of the determinations.

Entry	1000 characters	

4.5.2.18 **Determinations - Extrapolation**

4.5.2.18.1 Extrapolation - Calculation

4.5.2.18.1.1 General notes on calculation

Subwindow: **Database** ► **Extrapolation**

Extrapolation can be used to convert the results (induction time or stability time) measured at various temperatures to a required target temperature. Furthermore, the Q_{10} factor and the temperature coefficient for the Arrhenius calculation type for the conversion of the induction or stability time into the standard time can be determined with this procedure.

The extrapolation can be carried out two ways:

in accordance with the Q₁₀ rule

The Q_{10} rule is an empirical rule. When extrapolation is carried out in accordance with the Q_{10} method, the Q_{10} factor, with which the standard time can be calculated, is determined from the Q_{10} coefficient B.

• in accordance with the Arrhenius equation

The Arrhenius equation describes the exact temperature dependency of the reaction speed.

4.5.2.18.1.2 Calculation in accordance with Q₁₀

Subwindow: **Database** ► **Extrapolation**

The dependency of the reaction speed on the temperature is generally described with the following formula:

$$(1) t = A \cdot e^{(B \cdot T)}$$

Variable symbol	Variable name	Unit	Description
t	Induction or stability time	h	Time until the break point or the defined conductivity change in the conductivity vs. time curve.
A	Coefficient		
В	Q ₁₀ coefficient		Coefficient with which the Q ₁₀ factor can be calculated
T	Temperature	°C or K	Temperature for which the induction or stability time is calculated.

Linear equation for the calculation of the coefficients A and B from the linear regression

Equation (1) logarithmized

(2)
$$\ln(t) = B \cdot T + \ln A$$

General linear equation

$$(3) y = m \cdot x + b$$

y corresponds to $\ln(t)$

x corresponds to T

m Slope of the linear regression

b Axis intercept of the linear regression

$$(4) B=m$$

(5)
$$A = e^b$$

Calculation of the temperature coefficient Q_{10}

In accordance with equation (2) for T_1 and T_2 , results in

$$\ln(t_1) = B \cdot T_1 + \ln A$$

$$\ln(t_2) = B \cdot T_2 + \ln A$$

(6)
$$\ln(t_2) - \ln(t_1) = B \cdot T_2 + \ln A - B \cdot T_1 - \ln A$$

(7)
$$\ln \frac{t_2}{t_1} = B(T_2 - T_1)$$

(8)
$$\frac{t_2}{t_1} = e^{B(T_2 - T_1)}$$

$$\frac{t_2}{t_1} = Q$$
 The result with $\frac{t_2}{t_1} = T_1 + 10^{\circ} C_{\text{is}}$

(9)
$$Q = e^{B \cdot (T_2 - T_1)}$$

(10)
$$Q_{10} = e^{B \cdot (-10)}$$

Calculation of the extrapolated induction or stability time with the help of $\mathbf{Q}_{\mathbf{10}}$

In accordance with equation (8), the following is true

$$(11) \quad \frac{t_e}{t_m} = e^{B \cdot (T_e - T_m)}$$

Equations (10) and (11) result in

(12)
$$\frac{t_e}{t_m} = Q_{10}^{\frac{T_e - T_m}{-10}}$$

(13)
$$t_e = t_m \cdot Q_{10}^{\frac{Tm - T_e}{10}}$$

Variable symbol	Variable name	Unit	Description
T_m	Measuring tempera- ture	°C	Temperature at which the induction or stability time is measured.
	Induction or stability time at measuring temperature	h	Induction or stability time that is measured at the defined temperature T_m
T_e	Target temperature	K	Target temperature for the extrapolation

Variable symbol	Variable name	Unit	Description
t_e	Induction time at target temperature	h	Induction or stability time at target temperature T_e to be calculated

4.5.2.18.1.3 Calculation in accordance with Arrhenius

Subwindow: **Database** ► **Extrapolation**

According to Arrhenius, the dependency of the reaction speed on the temperature is described with the following formula:

$$(1) t = A \cdot e^{(B \cdot \frac{1}{T})}$$

Variable symbol	Variable name	Unit	Description
t	Induction or stability time	h	Time until the break point or the defined conductivity change in the conductivity vs. time curve.
A	Coefficient		
В	Arrhenius coefficient		
T	Temperature	K	Temperature for which the induction or stability time is calculated.

Linear equation for the calculation of the coefficients A and B from the linear regression

Equation (1) logarithmized

(2)
$$\ln(t) = B \cdot \frac{1}{T} + \ln A$$

General linear equation

$$(3) y = m \cdot x + b$$

y corresponds to $\ln(t)$

x corresponds to $\frac{1}{T}$

m Slope of the linear regression

b Axis intercept of the linear regression

$$(4) B=m$$

(5)
$$A = e^b$$

Calculation of the extrapolated induction or stability time

In accordance with equation (2), $1/T_{\rm m}$ and $1/T_{\rm e}$ result in

(6)
$$\ln(t_m) = B \cdot \frac{1}{T_m} + \ln A$$

(7)
$$\ln(t_e) = B \cdot \frac{1}{T_e} + \ln A$$

(8)
$$\ln(t_m) - \ln(t_e) = B \cdot \frac{1}{T_m} + \ln A - B \cdot \frac{1}{T_e} - \ln A$$

(9)
$$B(\frac{1}{T_m} - \frac{1}{T_e}) = \ln \frac{t_m}{t_e}$$

(10)
$$t_e = \frac{t_m}{e^{B(\frac{1}{T_m} - \frac{1}{T_e})}}$$

Variable symbol	Variable name	Unit	Description
T_m	Measuring temperature	°C	Temperature at which the induction or stability time is measured.
t_m	Induction or stability time at measuring temperature	h	Induction or stability time that is measured at a defined temperature T_m

Variable symbol	Variable name	Unit	Description
T_e	Target temperature	°C	Target temperature for the extrapolation
t_e	Induction or stability time at target temperature	h	Induction or stability time at target temperature T_e to be calculated

4.5.2.18.2 Extrapolation - Selection

Menu item: Database ➤ Determinations ➤ Extrapolation... ➤ Extrapolating determinations

The **Determinations Extrapolation...** menu item opens the **Extrapolating determinations** dialog window for the selection of the determinations whose results are to be included in the extrapolation.

Selection

Selection	Selected determinations All filtered determi-	
	nations	
Default value	Selected determinations	

Selected determinations

Includes results from all determinations in the extrapolation that are selected (highlighted) in the determination table. Any number of results can be included in the extrapolation, there is no restriction.

All filtered determinations

Includes results from all determinations from the entire determination table in the extrapolation that correspond to the set filter.

4.5.2.18.3 Extrapolation - View

Menu item: Database ➤ Determinations ➤ Extrapolation... ➤ Extrapolating determinations ➤ Extrapolation

After the determinations have been selected (see Chapter 4.5.2.15.1, page 189), the **Extrapolation** dialog window opens in which the selected results (which were measured at various temperatures) are extrapolated onto the required target temperature. In addition, the **temperature coefficient** for the conversion of the **induction time** into the **standard time** can be determined and stored here (see Glossary, page 448).

Graph display

The line calculated with the help of linear regression $T = \ln(t)/B - \ln(A)/B$ for Q_{10} and $1/T = \ln(t)/B - \ln(A)/B$ for Arrhenius is depicted in the **temperature vs. time** graph.

The result values are presented with the following symbols:

O

Result of a determination that is taken into account for the extrapolation. A mouse click on the symbol will also cause the associated determination to be highlighted in the table.

۰

Result of a determination that is taken into account for the extrapolation and which is also highlighted in the table.

The following context-sensitive menu opens with a right-hand mouse click inside the graphics frame:

Show all	Shows the entire graph. This menu item is always enabled.
Zoom	Opens the dialog for entry of a zoom range (see Chapter 4.5.2.18.4, page 225).
Unzoom	Undoes the last zoom action.
Сору	Copies the graph.

Table

Table with information concerning the selected determinations. It contains the following columns:

Determination start

Start time of the determination.

Ident

Identification of the sample.

Method name

Name of the method used for the determination.

Sample temperature [°C]

Sample temperature at which the determination was carried out.

Temperature correction [°C]

Temperature correction of the method used for the determination.

Induction time [h]

Induction time that was determined at the time of the determination (is displayed only for **Results used** = **Induction time**).

Stability time [h]

Stability time that was determined at the time of the determination (is displayed only for **Results used = Stability time**).

Used

Indicates whether a result is used for the calculation of the regression line or not.

The graph of the results values is synchronized with the determination table. A point can be selected in either the graph or in the table. The point is then highlighted in **blue** and the corresponding line in the table in **green**. Points that were deleted manually from the statistics disappear from the graph.

Click on the column title to sort the table according to the selected column in either ascending or descending order. The table view can be adapted with the left mouse button as follows:

- Drag the margin between column titles
 Sets the column width.
- Double-click on the margin between column titles
 Sets the optimal column width.
- Drag the column title
 Moves the column to the required location.

Clicking on the table of determinations with the right mouse button causes a context-sensitive menu to appear with the following menu items:

On	Activates the Used check box for the highlighted determinations.
Off	Deactivates the Used check box for the highlighted determinations.
Invert selection	Inverts the Used setting for the highlighted determinations.

Extrapolation parameters

Parameter for the calculation of the extrapolation:

Calculation type

Selection of the exponential formula for calculating the time extrapolated from the measured values for the target temperature. The formula used for the calculation is displayed next to the input field.

Selection	Arrhenius Q10
Default value	Arrhenius

Arrhenius

If this option is selected, then the Arrhenius equation must be used to calculate the extrapolated time for the target temperature.

Q10

If this option is selected, then the Q_{10} equation must be used to calculate the extrapolated time for the target temperature.

Results used

Selection of the results that are used for the calculation.

If a result is selected for which the determination contains no value, then the **!** symbol will appear in the first column of the determination in question.

Selection	Induction time Stability time
Default value	Induction time

Target temperature

Target temperature for the calculation of the extrapolation time. The target temperature can be selected by pressing on in the **Changing the target temperature** dialog window.

Input range	-100.0 - 300.0 °C (Increment: 0.1)
Default value	97.8 °C

Regression coefficients

Display of the regression coefficients determined:

Α

Calculated coefficient A of the exponential formula.

B (Arrhenius coefficient)

Calculated coefficient B of the exponential Arrhenius formula.

B (Q10 coefficient)

Calculated coefficient B of the exponential Q_{10} formula.

Q10 factor

Calculated factor of the exponential Q_{10} formula that specifies by how much the induction time or stability time changes for each 10°C.

 \mathbb{R}^2

Calculated coefficient of determination for the regression line.

Number of determinations

Number of determinations used for the calculation of the regression lines.

Extrapolation

Display of the extrapolation results determined:

Time

Result of the extrapolation for the specified temperature in hours and years.

Target temperature

Display of the target temperature used for the extrapolation calculation.

Functions

[Save factor]

Saves Q₁₀ factor as temperature coefficient. The button is active only if **Results used Induction time** is selected in the list field.

[Save coefficient]

Saves Arrhenius factor as temperature coefficient. The button is active only if **Results used Induction time** is selected in the list field.

[Print (PDF)]

Printing the extrapolation (see Chapter 4.5.2.18.6, page 226).

4.5.2.18.4 Extrapolation - Zooming

Menu item: Database ➤ Determinations ➤ Extrapolation... ➤ Extrapolating determinations ➤ Extrapolation ➤ Zoom... ➤ Zoom

The context-sensitive **Zoom...** menu item opens the **Zoom** dialog window for entering the zoom range, which is always spanned over the entire area of the graphics window.

x axis

Visible range in X direction.

from

Starting point in X direction.

Input range	10 ⁻¹ - 10 ¹² (Increment: 10 ⁻⁶)
Default value	10 ⁻¹

to

Endpoint in X direction.

Input range	10 ⁻¹ - 10 ¹² (Increment: 10 ⁻⁶)
Default value	Current endpoint in X direction.

Y Axis

Visible range in Y direction.

from

Starting point in Y direction.

Input range	-10 ¹² - 10 ¹² (Increment: 10 ⁻⁶)
Default value	Current starting point in Y direction.

to

Endpoint in Y direction.

Input range	-10 ¹² - 10 ¹² (Increment: 10 ⁻⁶)
Default value	Current endpoint in Y direction.

4.5.2.18.5 Saving the coefficient/factor

Menu item: Database ➤ Determinations ➤ Extrapolation... ➤ Extrapolating determinations ➤ Extrapolation ➤ [Save coefficient] / [Save factor] ➤ Saving the coefficient/factor

[Save coefficient] / [Save factor] opens the Saving the coefficient/ factor dialog window in which the Arrhenius coefficient or Q₁₀ factor determined in the extrapolation can be saved in the table of the temperature coefficients (see Chapter 6.7.2, page 365). At this time, either a temperature coefficient that already exists can be overwritten or a new one can be created with [New].

Name

Name of the temperature coefficient under which the Arrhenius coefficient or Q_{10} factor is to be saved.

Entry	1 - 40 characters
Default value	'empty'
Selection	'Temperature coefficient'

[New]

Saves Arrhenius coefficient or Q_{10} factor under a new name.

[OK]

Saves Arrhenius coefficient or Q₁₀ factor under the selected name.



NOTE

Arrhenius coefficients or Q_{10} factors can be saved only if they were determined with induction times.

4.5.2.18.6 Printing the extrapolation

Menu item: Database ➤ Determinations ➤ Extrapolation... ➤ Extrapolating determinations ➤ Extrapolation ➤ Print (PDF) ➤ Printing the extrapolation (PDF)

Orientation

Selection	Portrait Landscape
Default value	Portrait

Portrait

Produces the extrapolation report in portrait format.

Landscape

Produces the extrapolation report in landscape format.

Comment

Possibility of entering comments on the extrapolation that will be produced along with it.

Entry

0 - 1000 characters

4.6 Subwindow Information

4.6.1 Information - Overview

Subwindow: **Database** ► **Information**

General

General information about the focused determination in the determination table is shown in the **Information** subwindow. The subwindow can be activated in the **Database** program part during the definition of the layout and thus made visible. It can be enlarged and reduced as required; it can also be maximized.

Tabs

Information about the determination is shown on the following tabs:

- Determination
 - Display of general information about the determination.
- Method
 - Display of general information about the method used.
- Sample
 - Display of general information about the sample used.
- Configuration
 - Display of general information about the instrument, sensor and temperature coefficient.
- Messages
 - Display of messages about the determination.
- Determination comment
 - Display of the comment on the determination.

4.6.2 Information - Determination

Tab: **Database** ► **Information** ► **Determination**

Display of general information about the determination.

Identification

Information about the identification of the determination.

4.6 Subwindow Information

Determination ID:

Unambiguous and unmistakable identification for the determination.

Server name:

Computer name of the server to which the client was connected when the determination was recorded.

Client ID:

Name of the client with which the determination was recorded.

Recording

Information about the recording of the determination.

Determination start:

Date and time at start of determination.

Determination duration:

Duration of the determination from its start to its end or to termination, in h

Determination run:

Way in which the determination was ended:

Selection	regular without remarks regular with
	remarks stop stop by error

regular without remarks

The determination was finished automatically after the method expired normally and without any messages.

regular with remarks

The determination was finished automatically after the method expired normally but with messages.

stop

The determination was canceled manually with **[Stop]**.

stop by error

The determination was canceled automatically due to an error.

Start conductivity [µS/cm]:

Conductivity measurement value at the start of the determination.

User (short name):

Short name of the user.

User (full name):

Full name of the user.

Program version

Display of program version and build number of **StabNet** with which the determination was recorded.

License ID

Display of the license serial number with which the determination was recorded.

Status/Version

Information about the determination version.

Determination status:

Selection	original modified	

original

Determination data unaltered.

modified

Determination data modified.

Determination version:

Version of the determination. The unaltered original determination has the version number **1**, reprocessed determinations have a version number **>1**.

Reprocessing date:

Date and time when the reprocessed determination version was saved.

Reprocessed by (short name):

Short name of the user logged in when the determination was reprocessed.

Reprocessed by (full name):

Full name of the user logged in when the determination was reprocessed.

Reprocessed with program version:

Display of version and build number of the program version with which the determination was reprocessed.

Evaluation type:

Information as to how the evaluation was accomplished.

Selection	Automatically Manual Tangent
	<u> </u>

Automatically

Automatic evaluation.

Manual

Manual evaluation.

4.6 Subwindow Information

Tangent

Evaluation by means of tangent.

Modification reason determination:

Reason for the modification of the determination.

Modification comment determination:

User comment for the modification of the determination.

Signature level 1 / Signature level 2

Information about the signatures at level 1 or level 2 in chronological order.

Signature date:

Date and time at which the determination was signed.

Signed by (short name):

Short name of the user who signed the determination.

Signed by (full name):

Full name of the user who signed the determination.

Signature reason:

Reason for signature selected by the user.

Signature comment:

User comment at the time of signing the determination.

4.6.3 Information - Method

Tab: Database ► Information ► Method

Display of general information about the method used.

Identification

Information about the identification of the method.

Method name:

Name of the method.

Method group:

Name of the method group to which the method belonged at the moment of the determination.

Method ID:

Unambiguous and unmistakable identification for the method.

Method comment:

Comment on the method that was defined in the **Properties - Method** dialog window.

Status/Version

Information about the method version.

Method status:

Selection	original modified (stop criteria) modified
	(reprocessed)

original

Determination method unaltered.

modified (stop criteria)

Stop criteria for the determination method have been changed.

modified (reprocessed)

Determination method was modified during **Reprocessing**.

Method version:

Version of the method the determination has been created with. The unaltered original method has the version number **1**, modified methods have a version number **>1**.

Method saving date:

Date and time when the modified method version was saved.

Method saved by (short name):

Short name of the user logged in when the modified method was saved.

Method saved by (full name):

Full name of the user logged in when the modified method was saved.

Modification reason method:

Reason for the modification of the method.

Modification comment method:

User comment for the modification of the method.

Signature level 1 / Signature level 2

Information about the signatures at level 1 or level 2 in chronological order.

Signature date:

Date and time at which the method was signed.

4.6 Subwindow Information

Signed by (short name):

Short name of the user who signed the method.

Signed by (full name):

Full name of the user who signed the method.

Signature reason:

Reason for signature selected by the user.

Signature comment:

User comment at the time of signing the method.

4.6.4 Information - Sample

Tab: **Database** ► **Information** ► **Sample**

Display of general information about the sample used.

Sample data

Information about the sample. The only sample data shown is that for which a value is available.

Ident:

Identification of the sample.

Number of determinations:

Specification of the number of determinations n/m (n=determination number of a multiple determination; m=nominal number of determinations of a multiple determination).

Identifications

Information regarding the sample data. This will only be shown when a value is present.

Info 1:

Display of the data entered as **Info 1** for the sample.

Info 2:

Display of the data entered as **Info 2** for the sample.

Info 3:

Display of the data entered as **Info 3** for the sample.

Live modifications

Information on the last live modification of sample data.

Modification reason sample data:

Reason for the sample data modification.

Modification comment sample data:

User comment for the modification of the sample data.

4.6.5 Information - Configuration

Tab: **Database** ► **Information** ► **Configuration**

Display of general information about the devices, sensors and temperature coefficients.

Device 'Device name'

Information about the device used (only the existing device information will be shown).

Device type:

Type of device.

Program version:

Device program version.

Device serial number:

Serial number of the device.

Measuring block:

Designation of the measuring block on which the measurement was carried out.

Measuring position:

Measurement position at which the measurement was carried out.

Sensor 'Sensor name'

Information about the conductivity sensor used.

Sensor serial number:

Serial number of the conductivity sensor.

Cell constant:

Cell constant of the conductivity sensor.

Temperature coefficient 'Name'

Information about the temperature coefficient used.

4.6 Subwindow Information

Type:

Type of the temperature coefficient.

Arrhenius coefficient:

Value of the Arrhenius coefficient

Q10 factor

Value of the Q factor

Assignment date:

Date and time of last value assignment.

Assignment method:

Method with which the value was assigned (manual or by adoption from the extrapolation).

User

The user who was logged in during value assignment or who entered the value manually.

4.6.6 Information - Messages

Tab: **Database** ► **Information** ► **Messages**

Display of messages generated during the determination run.

'Time'

Display of the time at which the message was generated in the run (date, time, UTC in the format **YYYY-MM-DD hh:mm:ss UTC.....**).

Message title:

Display of message title and number.

Message text:

Display of the message.

4.6.7 Information - Determination comment

Tab: **Database** ► **Information** ► **Determination comment**

Display of the comment on the determination.

Determination comment:

Display of the comment entered for the determination.

4.7 Results subwindow

4.7.1 Results - General

Subwindow: **Database** ► **Results**

The automatically calculated results and the user-defined results and the variables used for this purpose are displayed in the **Results** subwindow in the **Database** program part.

When navigating in the determination overview, this data will be updated automatically (after a certain time delay).

The **Results** subwindow can be activated in the **Database** program part during the definition of the layout and thus made visible. It can be enlarged and reduced as required; it can also be maximized.

Tabs

The results of the determination are shown on the following tabs:

- Results
 Display of the calculated results.
- Statistics
 Display of the statistics data for the results.
- Monitoring
 Display of the monitoring data for the results.

4.7.2 Results - Results

Tab: Database ➤ Results ➤ Results

Tab: Database ▶ Reprocess... ▶ Reprocessing ▶ Results ▶ Results

All of the calculated results and the formulas used for this purpose are displayed on the **Results** tab.

Results

"Result"

Display of result name, result value with defined number of decimal places, and result unit.



NOTE

If a result value is monitored and lies within the limit value defined, then the text will be shown in **green**, if it lies outside the limits it will be shown in **red** text color.

4.7 Results subwindow

Result definitions

"Result":

Display of the formulas used for the calculation of the user-defined results.

'Variable name':

Display of the variables that were used in the formulas for user-defined results.



NOTE

Variables that have not been created during the determination are not displayed and lead to invalid results.

4.7.3 Results - Statistics

Tab: Database ► Results ► Statistics

Tab: Database ➤ Reprocess... ➤ Reprocessing ➤ Results ➤ Statistics

All of the calculated results and the associated statistical evaluations defined in the method are displayed on the **Statistics** tab.



NOTE

This tab is displayed only if the **Statistical link** has been defined at either **2 positions** or **4 positions** in the **Measuring parameters** subwindow in the **Start options** section, thus meaning that the determination is a multiple determination.

Results

"Result"

Display of result name, result value with defined number of decimal places, and result unit.



NOTE

If a result value is monitored and lies within the limit value defined, then the text will be shown in **green**, if it lies outside the limits it will be shown in **red** text color.

n:

Display of the number of determinations performed with statistically evaluated results.

Mean value:

Display of the mean value for statistically evaluated results.

Absolute standard deviation:

Display of the absolute standard deviation for statistically evaluated results.

Relative standard deviation:

Display of the relative standard deviation for statistically evaluated results.

Minimum:

Display of the minimum value for statistically evaluated results.

Maximum:

Display of the maximum value for statistically evaluated results.

4.7.4 Results - Monitoring

Tab: Database ► Results ► Monitoring

Tab: Database ➤ Reprocess... ➤ Reprocessing ➤ Results ➤ Monitoring

All of the calculated results and the associated limit values defined in the method are displayed on the **Monitoring** tab.



NOTE

This tab is displayed only when results monitoring has been defined in the method.

Results

"Result"

Display of result name, result value with defined number of decimal places, and result unit.



NOTE

If a result value is monitored and lies within the limit value defined, then the text will be shown in **green**, if it lies outside the limits it will be shown in **red** text color.

4.8 Curves subwindow

Lower limit:

Display of the bottom limit value for the result.

Upper limit:

Display of the top limit value for the result.

Message:

Displays the message defined for when the limit values are exceeded.

Action:

Displays the action defined for when the limit values are exceeded.

4.8 Curves subwindow

4.8.1 Curve window - General

Subwindow: **Database** ► **Curves**

The **Curves** subwindow in the **Database** program part or in the **Reprocessing** dialog window has the following properties:

- Views of measurement curves of the determinations recorded.
- Visualization of the effects of parameter changes and manual evaluation on the induction time and stability time with reprocessing.
- Curve overlay (see Chapter 4.5.2.16, page 198).

The measurement curves for the focused determination in the determination table is shown in the **Curves** subwindow. When navigating in the determination overview, these curves will be updated automatically (after a certain time delay).

The **Curves** subwindow can be activated in the **Database** program part during the definition of the layout and thus made visible. It can be enlarged and reduced as required; it can also be maximized.

The measurement curves can only be viewed in the database, but not edited. Reprocessing must be used to accomplish this (see Chapter 4.5.2.17, page 203).

4.8.2 Curve window - Display

Subwindow: **Database** ► **Curves**

Header

The designation **Curves - 'Ident'** and an element for maximizing/minimizing the window appear in the title bar of the subwindow. **'Ident'** corresponds for this purpose to the respective sample data parameter from the displayed determination.

Cursor

The coordinates of the cursor are displayed in the title bar.

Display of several curves

There is no limit to the number of measurement curves that can be overlaid (see Chapter 4.5.2.16, page 198).

4.8.3 Curve window - View

Subwindow: **Database** ► **Curves**

The curve window is used for displaying and viewing the measurement curve. The curve can be zoomed in or out and its display (background, axes,...) completely configured. It consists of the following elements:

- Background
- Grid
- Axes with labeling
- Measuring point curve
- Induction timeline and/or stability timeline with the calculated time
- Line of the evaluation sensitivity
- 2nd derivative with second y axis
- Tangents

Context-sensitive menu

Clicking on the curve window with the right mouse button will cause a context-sensitive menu to appear with the following menu items:

Show all	Shows the entire curve. This menu item is always enabled.
Zoom	Opens the dialog for entry of a zoom range (see Chapter 4.8.5.2, page 240).
Unzoom	Undoes the last zoom action (as often as required).
Properties	Opens the Properties - Graph dialog window for the definition of the properties of the curve display (see Chapter 5.7.3, page 289).
Сору	Copies the measurement curve displayed in the graphics window.

4.8.4 Labeling of the axes

Subwindow: **Database ► Curves**

The following rules apply for the labeling of the axes within the curve window:

- All labels are **horizontal**, not only the units but also the scaling.
- The tick mark spacing is always 1, 2, 5 * 10^x
- The exponential notation is used only for the numbers $<10^{-2}$ or $>10^{6}$.

4.8 Curves subwindow

The following rules apply for the formatting of the axis tick marks within the graphics window:

■ If the starting or end value of the axis labeling >10⁶ and if the delta of both values is >1000, then an exponential display is used.

If this is not the case:

Decimal places are displayed only if the displayed value permits them.

If this is not the case:

• If the starting and end values are <0.01, then exponential display is used.

If none of the above cases occurs:

■ The tick marks are calculated on the basis of the displayed section and a check is made as to which tick has the most decimal places. All of the tick marks are then displayed with this number of decimal places.

4.8.5 Zooming

Only the measurement curve can be zoomed (enlarged) in the **Curves** subwindow. The curve of the 2nd derivation cannot be zoomed.

4.8.5.1 Zooming with the mouse

Dialog window: **Database ► Curves ► Zoom... ► Zoom**

Subwindow: **Database** ▶ **Reprocess...** ▶ **Reprocessing** ▶ **Curves**

Curves can be zoomed as often as required by spanning a section of the curve display with the left-hand mouse key pressed down. The smallest range that can be zoomed is 10^{-6} h or 10^{-6} µS/cm.

4.8.5.2 Zooming with the dialog

Dialog window: **Database** ► **Curves** ► **Zoom...** ► **Zoom**

Dialog window: **Database** ▶ **Reprocess...** ▶ **Reprocess-**

ing ▶ Curves ▶ Zoom... ▶ Zoom

Dialog window: **Database** ► **Determinations** ► **Extrapolation...** ► **Extrapolating determinations** ► **Extrapolation** ► **Zoom**... ► **Zoom**

Dialog window: Workplace ► Live curve ► Zoom... ► Zoom

The context-sensitive **Zoom...** menu item opens the **Zoom** dialog window for entering the zoom range. It is always spanned over the whole size of the curve window.



NOTE

The settings are temporary. They are not saved in the properties of the curve display.

4 Database

x axis

Visible range in X direction.

from

Starting point in X direction.

Input range	-10 ¹² - 10 ¹² (Increment: 10 ⁻⁶)
Default value	Current starting point in X direction.

to

Endpoint in X direction.

Input range	-10 ¹² - 10 ¹² (Increment: 10 ⁻⁶)
Default value	Current endpoint in X direction.

Y Axis

Visible range in Y direction.

from

Starting point in Y direction.

Input range	-10 ¹² - 10 ¹² (Increment: 10 ⁻⁶)
Default value	Current starting point in Y direction.

to

Endpoint in Y direction.

Input range	-10 ¹² - 10 ¹² (Increment: 10 ⁻⁶)
Default value	Current endpoint in Y direction.

4.8.5.3 Zooming with the keyboard

Dialog window: **Database ► Curves ► Zoom... ► Zoom**

Subwindow: **Database** ► **Reprocess...** ► **Reprocessing** ► **Curves**

The arrow keys only become active if the graphics window has the focus. It receives the focus by clicking on the graphics window, the focus being displayed by a red frame.

Zooming with the keyboard can make the zoom range bigger than in the overview window. In this case, the overview window does not change its size. Only a partial frame or not even a red frame is outlined.

[↑]	Zooms in the view in the direction of the y axis.	
[↓]	Zooms out the view in the direction of the y axis.	
[←]	Zooms in the view in the direction of the x axis.	
[→]	Zooms out the view in the direction of the x axis.	

4.8 Curves subwindow

4.8.6 Moving the curve

Subwindow: **Database** ► **Curves**

Subwindow: **Database** ► **Reprocess...** ► **Reprocessing** ► **Curves**

The arrow keys only become active if the curve window has the focus. It receives the focus by clicking on the curve window, and the focus is displayed by a colored frame around the graphics window.

[PageUp] Moves the curve upwards by 10% of the graph-

ics window.

[PageDown] Moves the curve downwards by 10% of the

graphics window.

[0](Zero) Moves the lowest point of the curve to zero. This

function is not possible in the live display.

[Ctrl][←] Moves the zoomed section to the right by 10%

of the graphics window, i.e. the curve shifts to

the left in the visible range.

[Ctrl][→] Moves the zoomed section to the left by 10% of

the graphics window, i.e. the curve shifts to the

right in the visible range.

4.8.7 **Curve window - Properties**

Subwindow: Database ► Curves ► Properties... ► Properties - Graphics

The context-sensitive **Properties...** menu item in the curve window opens the **Properties - Graphics** dialog window in which properties of the curve display can be defined. These properties are specific for every determination.

The properties window contains the following tabs:

Axes

Displaying, labeling and scaling the axes.

Display

Definition of the display of curve, axes and background.

The curve properties are saved and indexed per method name and per determination. The curve properties are however not saved in either the method or in a determination, i.e. a change of depiction does not mean that either the method or the determination needs to be saved once again.

At the end of a determination, the current settings are stored in the database along with the determination. The determination is then displayed in the **Database** program part with the settings for the curve window that were stored at this time.

4 Database

Settings are not applied until **[Apply]** is pressed or unless the dialog is closed with **[OK]**. If the dialog with the properties of the graphics window is still open when a determination is ended, then the old settings will thus continue to be used. In addition, the dialog is closed automatically.

Properties of the curve display are not stored in saveable views.

4.8.8 Curve window - Display of the curves

The settings for the display of the graphs is stored for each determination.

Graph properties of new data sets

Determinations are stored with the graph settings of the method at the moment of the recording.

Changing the display in the database

The graph properties can be modified in the Curves dialog window of the database (see Chapter 4.8.7, page 242).

The modification always refers only to the **selected** determination in the determination overview. If several determinations are highlighted, then the change will nevertheless still only affect the selected determination.

The graph properties need not be saved separately. They remain in effect, i.e. the determinations in the database are always displayed with the last setting.

Exception: The zoom factor is not retained; the entire range is always displayed.

Saving graph properties

Every determination has its own settings for displaying the graphs. It must be ensured that a change in the graph settings will not generate a new determination version.

5.1 Method - General

5 Method

5.1 Method - General

5.1.1 Method - Definition

Program part: Method

Definition

In **StabNet** a **method** is an instruction for processing a sample, which can be created in the **Method** program part and started in the **Work-place** program part.

Management

Methods are organized in **Method groups** and are always automatically assigned a new version, i.e. each time a method is stored a new **version** is created. Methods can also be **signed at two levels** and be locked against further modifications. Methods are stored in the **configuration database** and globally accessible for all clients.

5.1.2 Method - User interface

Program part: Method

Method symbol



Clicking on the method symbol in the vertical bar on the left opens the program part **Method** while at the same time the method symbol is shown in color. The upper left corner of the symbol contains a black field displaying the number of methods currently opened (see Chapter 5.2.3, page 249).

Elements

The user interface of the **Method** program part comprises the following elements:

- Method-specific menu bar.
- Method-specific toolbar.
- Main window, in which one method can be opened and shown.

5.1.3 Method - Menu bar

5.1.3.1 Method - Menu File

Program part: **Method**

New	Create a new method (see Chapter 5.2.1, page 247).	
Open	Open an existing method (see Chapter 5.2.2, page 247).	
Save	Save the selected method (see Chapter 5.2.6, page 250).	
Save as	Save the selected method under a new name (see Chapter 5.2.6, page 250).	
Close all	Close all opened methods (see Chapter 5.2.9, page 254).	
Close	Close the selected method (see Chapter 5.2.9, page 254).	
Method check	Check the selected method for plausibility (see Chapter 5.2.5, page 250).	
Method manager	Open the method manager (see Chapter 5.3.1, page 254).	
Method groups	Open the method groups manager (see Chapter 5.4.1, page 265).	
PDF Print (PDF)	PDF file output of the method report (see Chapter 5.2.8, page 253).	
🔼 Logout	Log out the user. The Login dialog window opens (see Chapter 2.2.3, page 13).	
Exit	Exit the program.	

5.1.3.2 Method - Menu View

Program part: **Method**

Toolbar	Activate/deactivate the toolbar display.
---------	--

5.1.3.3 Help menu

Program part: Workplace / Database / Method / Configuration

StabNet Help	Open StabNet Help.
About	Display information about the program and the installation.

5.1 Method - General

5.1.4 Method - Toolbar

Program part: Method

Ď	Create a new method (see Chapter 5.2.1, page 247).	
3	Open an existing method (see Chapter 5.2.2, page 247).	
	Save the selected method (see Chapter 5.2.6, page 250).	
r r	Close the selected method (see Chapter 5.2.9, page 254).	
2	Open the method manager (see Chapter 5.3.1, page 254).	
2	Open the method groups manager (see Chapter 5.4.1, page 265).	
PDF	PDF file output of the method report (see Chapter 5.2.8, page 253).	
✓	Check the selected method for plausibility (see Chapter 5.2.5, page 250).	
2.	Log out user (see Chapter 2.2.3, page 13).	
?	Open StabNet Help.	

5.1.5 Method - Functions

Program part: Method

The following functions can be carried out in the **Method** program part:

Method editor

- Creating a new method
- Opening a method
- Selecting a method
- Editing a method
- Checking a method
- Printing method reports (PDF)
- Saving a method
- Closing a method

Managing methods

- Managing methods
- Renaming a method
- Copying a method
- Moving a method
- Deleting a method

- Exporting a method
- Importing a method
- Signing methods
- Showing the method history

Managing method groups

- Method groups
- Edit method groups

5.2 Method editor

5.2.1 Creating a new method

Dialog window: **Method** ► **File** ► **New...** ► **New method**

With the symbol or the **File** ▶ **New...** menu item the **New method** window is opened, in which a method template can be selected for the new method.

Templates

Selection of the template with which the new method is to be generated.

_		
\sim	IDCT.	n
ンヒ	lect	IUII

Oil | Biodiesel | PVC

Oil

Default method for 892 Professional Rancimat.

Biodiesel

Default method for 893 Professional Biodiesel Rancimat.

PVC

Default method for 895 Professional PVC Thermomat.

Description

Description of the selected method template.

[OK]

Open the selected template for editing.

5.2.2 Opening a method

Dialog window: **Method** ► **File** ► **Open...** ► **Open method**

The **Open method** window is opened with the symbol or the **File ► Open...** menu item. One of the globally available methods can be selected and opened.

Method group

Method group

Selection of the method group whose methods will be displayed in the method table (see Chapter 5.4, page 265).

5.2 Method editor

Selection	'Method groups' Main group
Default value	Main group

Method table

The method table contains information about all methods of the selected method group. The table cannot be edited. With a click on the column title (columns Name, Saved, User, Full name, Version, Signed, Method comment) the table can be sorted according to the selected column in ascending or descending order.

Name

Name of the method.

Saved

Date and time when the method was saved.

User

Short name of the user who saved the method.

Full name

Full name of the user who saved the method.

Version

Version number of the method.

Signed

Display indicating whether and at which level the method has been signed.

Selection	no Level 1 Level 2	
-----------	------------------------	--

no

The method has not been signed yet. It can be opened for editing and can be deleted.

Level 1

The method has been signed electronically at level 1. It can be opened for editing and can be deleted. If the method is modified and saved again, a new version is created and all the signatures will be deleted.

Level 2

The method has been signed electronically at level 2. The method is locked now and it can neither be opened for editing nor deleted.

Method comment

Comment on the method defined in method properties (see Chapter 5.7.4.2, page 295).

Open method

Method name

Name of the method to be opened. If a method is selected from the table, the method name will be entered automatically in this field. It can, however, also be entered manually.

Entry

50 characters

[Open]

Opens the selected method in the main window in the place of the method that is already opened. The method name is displayed in the title bar of the program; the number of currently opened methods is displayed in the left upper corner of the method symbol.



NOTE

A maximum of 9 methods can be opened but only one can be displayed.

5.2.3 Selecting a method

Program part: Method

The number of currently opened methods is displayed in the left upper corner of the method symbol. If 2 or more methods are opened, the method displayed in the main window can be selected using the method symbol.



No method is opened. No method is displayed in the main window.

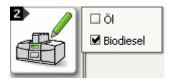


One method is opened and is displayed in the main window.



Two methods are opened; one of them is displayed in the main window.

5.2 Method editor



A menu with the currently opened methods is displayed by clicking with either the left or right mouse button on the method symbol. The method displayed in the main window is marked with a checkmark. Clicking on the desired method displays it in the place of the previously selected one.

5.2.4 Editing a method

Program part: Method

The method is edited in the **Measuring parameters**, **Evaluation** and **Properties** subwindows.

Methods can only be edited if they are not signed at **Level 2**.

5.2.5 Checking a method

Menu item: **Method** ► **File** ► **Method check**

With the **Solution** symbol or the **File** ► **Method check** menu item, a method check for the method in focus is triggered. The following points are checked:

Formulas

Are the variables used in formulas available?

Plausibility

Are the parameters defined in the method plausible?

Templates

Are the e-mail templates, export templates and report templates used in the method also available in the configuration?

Database

Is a database named in the method and is it available?

A respective error message is displayed for each error found. The check has to be started again afterwards. When the method check has been completed successfully, it is confirmed with a message.

5.2.6 Saving a method

Dialog window : Method ► File ► Save / Save as... ► Save method

Using the **!** symbol or the **File ► Save** menu item, an existing focused method is saved again under its name without the **Save method** window being opened.

When saving a **newly** created method with the **File ► Save** menu item or when saving an existing method with the **File ► Save as...** menu item, the **Save method** window is opened, where the method group can be selected and a method name can be entered or selected.

Method group

Method group

Selection of the method group where the method is to be stored (see Chapter 5.4, page 265).

Selection	'Method groups' Main group
Default value	Main group

Method table

The method table contains information about all methods of the selected method group. The table cannot be edited. With a click on the column title (columns **Name**, **Saved**, **User**, **Full name**, **Version**, **Signed**, **Method comment**) the table can be sorted according to the selected column in ascending or descending order.

Name

Name of the method.

Saved

Date and time when the method was saved.

User

Short name of the user who saved the method.

Full name

Full name of the user who saved the method.

Version

Version number of the method.

Signed

Display indicating whether and at which level the method has been signed.

Selection	no Level 1 Level 2	

no

The method has not been signed yet. It can be opened for editing and can be deleted.

Level 1

The method has been signed electronically at level 1. It can be opened for editing and can be deleted. If the method is modified and saved again, a new version is created and all the signatures will be deleted.

5.2 Method editor

Level 2

The method has been signed electronically at level 2. The method is locked now and it can neither be opened for editing nor deleted.

Method comment

Comment on the method defined in method properties (see Chapter 5.7.4.2, page 295).

Saving the method

Method name

Entry of the name under which the method is to be saved.

Entry

50 characters



NOTE

The method name must be unique in the entire client/server system.

[Save]

Save the focused method under the desired method name in the selected method group.

The **method check** is automatically carried out before saving the method - it can also be started manually at any time (see Chapter 5.2.5, page 250). The method is checked as thoroughly as possible. Checks for devices, sensors and temperature coefficients are not carried out until the start of the method in order to ensure that method commands can also be created for devices which are not yet configured in the system. If an error is detected during the method check, a message is displayed asking whether the method should be saved nevertheless. Faulty methods cannot be started.

A new method version with a new method identification is created each time a modified method is saved (see Chapter 5.3.11, page 264). If the Comment on modification of methods option under Security settings > Audit Trail > Modifications is enabled in the Configuration program part (see Chapter 6.2.2.4, page 318), the Modification comment method (see Chapter 5.2.7, page 253) window appears before saving.

5.2.7 Modification comment on method

Dialog window: Method ► File ► Save / Save as... ► Save method ► Modification comment method

If the Comment on modification of methods option under Security settings ► Audit Trail/Modifications is enabled in the Configuration program part (see Chapter 6.2.2.4, page 318), then the Modification comment method window appears first when saving a modified method or deleting methods. In this window, a reason can be selected and a comment on the change has to be entered.

Reason

Selection from the **Default reasons** defined in the **Security settings** dialog window for the **Modification of methods** category (see Chapter 6.2.2.6, page 320).

Selection Selection from the default reasons	
--	--

Comment

Entry of a comment for modifying the method.

Entry	1,000 characters
,	•

5.2.8 Printing method reports (PDF)

Menu item: Method ► File ► Print (PDF)...

The **File** ▶ **Print** (**PDF**)... menu item or the symbol can be used to open the **Print method reports** (**PDF**) window, where the desired report for the focused method can be selected and output as a PDF file.

Report selection

Selection of the partial reports to be output for the method report.

Measuring parameters

on | off (Default value: on)

Output of measuring parameters. This partial report includes the **Measuring parameters** fixed report (see Chapter 4.4.1.4.3.7, page 145).

Evaluation

on | off (Default value: on)

Output of all evaluation parameters. This partial report includes the **Evaluation properties** fixed report (see Chapter 4.4.1.4.3.7, page 145).

5.3 Managing methods

Properties

on | off (Default value: on)

Output of all method settings. This partial report includes the **Method properties** fixed report (see Chapter 4.4.1.4.3.7, page 145).

5.2.9 Closing a method

Menu item: Method ► File ► Close / Close all

Closing a single method

Using the symbol or the **File ► Close** menu item, the selected method is closed. If the method has been modified, a prompt for confirmation to save the method as a new version will appear.

Closing all methods

All opened methods are closed with the menu item **File ► Close all**. A prompt for confirmation to save the method as a new version will appear for each method that has been modified.

5.3 Managing methods

5.3.1 Managing methods

Dialog window: **Method** ► **File** ► **Method manager...** ► **Method manager**

Using the symbol or the **File** ► **Method manager...** menu item, the **Method manager** dialog window is opened, where a user with corresponding access rights can manage methods.

Method group

Method group

Selection of the method group for which the methods should be displayed in the table.

Selection	'Method group' Main group
Default value	Main group

[Method groups]

Opens the **Method groups** dialog window for managing the method groups (see Chapter 5.4.1, page 265).

Method table

The method table contains information about all methods of the selected method group. The table cannot be edited. With a click on the column title (columns **Name**, **Saved**, **User**, **Full name**, **Version**, **Signed**,

Method comment) the table can be sorted according to the selected column in ascending or descending order.

Name

Name of the method.

Saved

Date and time when the method was saved.

User

Short name of the user who saved the method.

Full name

Full name of the user who saved the method.

Version

Version number of the method.

Signed

Display indicating whether and at which level the method has been signed.

Selection	no Level 1 Level 2

no

The method has not been signed yet. It can be opened for editing and can be deleted.

Level 1

The method has been signed electronically at level 1. It can be opened for editing and can be deleted. If the method is modified and saved again, a new version is created and all the signatures will be deleted.

Level 2

The method has been signed electronically at level 2. The method is locked now and it can neither be opened for editing nor deleted.

Method comment

Comment on the method defined in method properties.

Window menus

The **[Edit]** menu below the method table contains the following menu items:

Rename Rename the selected method (see Chapter 5.3.2, page 256).	
Сору	Copy the selected method(s) in the same method group (see Chapter 5.3.3, page 257).

5.3 Managing methods

Move	Move the selected method(s) to a different method group (see Chapter 5.3.4, page 257).	
Delete	Delete the selected method(s) (see Chapter 5.3.5, page 257).	
Send to	Export the selected method(s) and attach it (them) to an e-mail (see Chapter 5.3.6, page 258).	
Export	Export the selected method(s) (see Chapter 5.3.7, page 258).	
Import	Import the selected method(s) (see Chapter 5.3.8, page 259).	
The [Sign] menu below the method table contains the following menu items:		
Signature 1	Sign the selected method at level 1 (see Chapter 2.3.3, page 16).	
Signature 2	Sign the selected method at level 2 (see Chapter 2.3.4, page 18).	

[History]

Show signatures...

Delete signatures 2...

Open the **Method history** dialog window of the selected method (see Chapter 5.3.11, page 264).

Shows all signatures of the selected method (see Chapter 5.3.10.4, page 263).

Delete all signatures at level 2 of the selected method (see Chapter 2.3.5, page

[Close]

Close the dialog window and save the entries.

5.3.2 Renaming a method

Dialog window: Method ► File ► Method manager... ► Method manager ► [Edit] ► Rename... ► Rename method

Using the **[Edit]** ► **Rename...** menu item opens the **Rename method** window for renaming the selected method.

Rename method 'Method name' to

Entry of the new method name.

Entry	50 characters	
y	50 0.10.000.5	



NOTE

The method name must be unique in the entire client/server system. Locked methods cannot be renamed. Renaming a method is not regarded as a modification, i.e. the method version does not change.

5.3.3 Copying a method

Menu item: Method ► File ► Method manager... ► Method manager ► [Edit] ► Copy

Using the **[Edit]** ► **Copy** menu item, the selected methods are saved in the same method group under the name **Copy of 'Method name'**.

5.3.4 Moving a method

Dialog window: Method ► File ► Method manager... ► Method manager ► [Edit] ► Move... ► Move method(s)

Using the **[Edit]** Move... menu item, the selected methods are moved to the desired method group. The method group can be selected in the **Move method(s)** window.

Method group

Selection of the method group to which the selected methods should be moved.

Selection

'Method group'



NOTE

Locked methods (methods signed at **Level 2**) cannot be moved.

5.3.5 **Deleting a method**

Menu item: Method ► File ► Method manager... ► Method manager ► [Edit] ► Delete...

Using the **[Edit]** ► **Delete...** menu item, the selected methods and all method versions are deleted.

If the **Comment on modification of methods** option is enabled in the **Security settings** (see Chapter 6.2.2.4, page 318), then the **Modification comment method** (see Chapter 5.2.7, page 253) dialog window initially appears when deleting methods.

5.3 Managing methods



NOTE

Locked methods (methods signed at **Level 2**) cannot be deleted.

5.3.6 Sending a method to

Menu item: Method ► File ► Method manager... ► Method manager ► [Edit] ► Send to...

Using the **[Edit]** ► **Send to...** menu item, the selected methods are each exported as a file named **'Method name'.rmet**.

Afterwards, the Windows standard e-mail client will open with an empty message. The export files of the highlighted objects will automatically be added as an attachment. The user can complete the e-mail him-/herself and send it on. The exported methods are stored only temporarily on the computer and will be deleted automatically after the e-mail has been sent.



NOTE

The exported methods are stored uncoded but with a checksum. If a file stored in this manner is tampered with, then it cannot be imported again.

5.3.7 Exporting a method

Menu item: Method ► File ► Method manager... ► Method manager ► [Edit] ► Export...

Using the **[Edit] Export...** menu item, the selected methods are each exported as a file named **'Method name'.rmet**. The **Select directory for export** dialog window opens, where the directory for export must be selected.



NOTE

The exported methods are stored uncoded but with a checksum. If a file stored in this manner is tampered with, then it cannot be imported again.

5.3.8 Importing a method

Menu item: **Method** ▶ **File** ▶ **Method manager...** ▶ **Method manager** ▶ **[Edit]** ▶ **Import...**

The **Select files to import** dialog window opens with the menu item **[Edit] ► Import...**. Here you must select the methods to be imported and the method group into which the methods are to be imported. These methods are imported into the opened method table.

5.3.9 Renaming an imported method

Menu item: **Method** ▶ **File** ▶ **Method manager...** ▶ **Method manager** ▶ **[Edit]** ▶ **Import...**

Methods with the same name as methods already imported can only be imported under a new name. The window **Import method** opens for renaming the method.

Rename imported method 'Method name' to

Entry of the new method name.

Entry

50 characters



NOTE

The method name must be unique in the entire client/server system. Locked methods cannot be renamed. Renaming a method is not regarded as a modification, i.e. the method version does not change.

5.3.10 Signing methods

5.3.10.1 Rules for electronic signatures

Program parts: **Method / Database**

In StabNet, methods and determination can be **electronically signed** at two levels. The following rules apply for this:

Signature levels

Methods and determinations can be signed at two levels (Signature Level 1 and Signature Level 2) by entering the user name and password.

Multiple signing

Methods and determinations can be signed several times at each level. All signatures are saved and documented in the Audit Trail.

Signing at Level 1

If Level 2 has been signed then no more signatures are possible at Level 1.

5.3 Managing methods

Signing at Level 2

Level 2 can only be signed if signatures already exist at Level 1.

Different users

The same user may sign only on either Level 1 or Level 2.

Reason and comment

Each signature must be accompanied by a reason selected from predefined default reasons. Additionally, a further comment can be entered.

Saved data

For each signature, signature date, user name, full name, reason and comments are saved.

Deleting signatures 1

Signatures at Level 1 are automatically deleted again when creating a new version.

Deleting signatures 2

Signatures at Level 2 can only be deleted by users who have the appropriate rights.

Signing methods

Methods can only be signed individually.

Signature options

The options for electronic signatures are set in the **Signatures** tab in the **Security settings** dialog window.

5.3.10.2 Signature Level 1

Dialog window: **Database** ► **Determinations** ► **Sign** ► **Signature 1...** ► **Signature Level 1**

Dialog window: Method ► File ► Method manager... ► Method manager ► [Sign] ► Signature 1... ► Signature Level 1

Methods or determinations can be signed at level 1 in the **Signature Level 1** window.



NOTE

Methods or determinations which have been signed at level 1 can be modified and deleted. If the modified method or determination is saved as a new version, then all existing signatures will be deleted automatically, i.e. the method or determination must be signed again.

Info

Display of information for signing and deleting signatures. The following messages are possible:

Selection	Signature possible Signature 1 not possible
	(signature 2 exists) Signature not possible
	(accessed by other client)

Signature possible

The selected method or determination can be signed.

Signature 1 not possible (signature 2 exists)

The selected method or determination can no longer be signed at level 1 as it has already been signed at level 2.

Signature not possible (accessed by other client)

The selected method or determination cannot be signed as it is already marked to be signed on a different client.

User

Entry of the user name (short name).

Entry	24 characters
-------	---------------

Password

Entry of the password.

Reason

Selection from the **Default reasons** defined in the **Security settings** dialog window for the **Signature level 1** category.

Selection	'Selection from the default reasons'	
Selection	'Selection from the default reasons'	

Comment

Entry of a comment on the signature.

Entry	1000 characters
,	

[Sign]

Sign the method or determination. The window remains open.



NOTE

Methods or determinations can be signed at level 1 only if the user belongs to a user group with the corresponding permission.

5.3.10.3 Signature Level 2

Dialog window: Database ► Determinations ► Sign ► Signature 2... ► Signature Level 2

Dialog window: Method ► File ► Method manager... ► Method manager ► [Sign] ► Signature 2... ► Signature Level 2

Methods or determinations can be signed at level 2 in the **Signature Level 2** window.

5.3 Managing methods



NOTE

Methods or determinations signed at level 2 are **locked**, i.e. they can neither be modified nor deleted. In order to be able to edit such methods or determinations again, the signatures on level 2 must first be deleted.

Info

Information for signing and deleting signatures is displayed in this box. The following messages are possible:

Selection	Signature possible Signature 2 not possible
	(signature 1 missing) Signature not possible
	(accessed by other client)

Signature possible

The selected method or determination can be signed.

Signature 2 not possible (signature 1 missing)

The selected method or determination cannot be signed at level 2 as it has not yet been signed at level 1.

Signature not possible (accessed by other client)

The selected method or determination cannot be signed as it is already marked to be signed on a different client.

User

Entry of the user name (short name).

Entry	24 characters

Password

Entry of the password.

Entry	24 characters	
-------	---------------	--

Reason

Selection from the **Default reasons** defined in the **Security settings** dialog window for the **Signature level 2** category.

Selection	'Selection from the default reasons'

Comment

Entry of a comment on the signature.

[Sign]

Sign the method or determination. The window remains open.



NOTE

Methods or determinations can only be signed at level 2 if the user belongs to a user group with the corresponding permission.

5.3.10.4 Displaying method signatures

Dialog window: Method ▶ File ▶ Method manager... ▶ Method manager ▶ [Sign] ▶ Show signatures... ▶ Signatures - 'Method name' method

Using the **[Sign]** ► **Show signatures...** menu item opens the **Signatures** - **'Method name' method** window with a table displaying information for all of the signatures for the selected method.

Signature

Shows at which level the method has been signed (Level 1 or Level 2).

Signature date

Date and time at which the method was signed.

User

Short name of the user who has signed the method.

Full name

Full name of the user who has signed the method.

Reason

Reason for signature.

Signature comment

Comment on the signature.

5.3.10.5 Deleting signatures level 2

Dialog window: **Database** ► **Determinations** ► **Sign** ► **Delete signatures** 2... ► **Delete Signatures** Level 2

Dialog window: Method ► File ► Method manager... ► Method manager ► [Sign] ► Delete signatures 2... ► Delete Signatures Level 2

All signatures on level 2 for the selected method or determination can be deleted in the **Delete Signatures Level 2** window.

User

Entry of the user name (short name).

Entry **24 characters**

5.3 Managing methods

Password

Entry of the password.

Entry **24 characters**

Reason

Selection from the **Default reasons** defined in the **Security settings** dialog window for the **Signature level 2** category.

Selection 'Selection from the default reasons'

Comment

Entry of a comment on the signature.

Entry **1000 characters**

[Delete]

Delete signatures 2.



NOTE

Signatures 2 can only be deleted if the user belongs to a user group with the corresponding permission.

5.3.11 Showing the method history

Dialog window: Method ► File ► Method manager... ► Method manager ► [History] ► Method history

Using the **[History]** button opens the **Method history** dialog window with a table display of all of the **versions** of the selected method.

Name

Name of the method.

Version

Version number of the method.

Method ID

Unique method identification.

Saved

Date and time when the method was saved.

User

Short name of the user who saved the method.

Full name

Full name of the user who saved the method.

Modification reason

Reason entered when saving the modified method.

Modification comment

Comment entered when saving the modified method.

[Show method]

Open the **Method 'Method name' - Version #** dialog window, in which the method for the selected method version is displayed.

[Make current]

Make the selected method version to the current method version. This creates a new method whose version number is increased by **+1** compared with the last version to have been saved.

5.4 Method groups

5.4.1 Managing method groups

Dialog window: **Method** ▶ **File** ▶ **Method groups...** ▶ **Method groups**

Using the symbol or the File ► Method groups... menu item, the Method groups dialog window is opened, where a user with corresponding access rights can manage method groups. The information on the existing method groups is shown in a table. The table cannot be edited and is not automatically updated. By clicking on the column title the table can be sorted according to the selected column in either ascending or descending order.

Name

Name of the method group.

Number

Shows the number of methods in the method group.

Saved

Date and time when the method group was saved.

User

Short name of the user who saved the method group.

Full name

Full name of the user who saved the method group.

5.4 Method groups

Comment

Comment on the method group.

[New]

Opens the **Properties - Method group - 'New Group'** dialog window for defining a new method group (see Chapter 5.4.2, page 266).

[Properties]

Opens the **Properties - Method group 'Name'** dialog window, in which the method group selected in the table can be edited *(see Chapter 5.4.2, page 266)*.

[Delete]

Delete the method group selected in the table.

5.4.2 Edit method groups

5.4.2.1 Method groups - Properties

Dialog window: Method ▶ File ▶ Method groups... ▶ [Properties] ▶ Properties - 'Name' method group

Using the **[Properties]** button or double-clicking a line in the table opens the **Properties - 'Name' method group** properties window for the selected method group.

The parameters for method groups are configured on the following tabs:

- General General parameters.
- Access permissions
 Access rights for method groups and their methods.

5.4.2.2 Method groups - General

Tab: Method ▶ File ▶ Method groups... ▶ [Properties] ▶ Properties - 'Name' method group ▶ General

Name

Name of the method group. The name has to be entered when creating a new method group.

Entry **50 characters**

Number

Shows the number of methods in the method group.

Comment

Freely definable remarks about the method group.

Entry **1,000 characters**

5.4.2.3 Method groups - Access rights

Tab: Method ► File ► Method groups... ► [Properties] ► Properties - 'Name' method group ► Access rights

Access rights for method groups and their methods can be assigned per user group.



NOTE

The **Administrators** user group always has both access rights, i.e. they cannot be disabled.

User group

Names of the user groups.

Execute

on | off (Default value: on)

Permission to start methods from a method group. Methods in this group can only be opened and started but cannot be edited or deleted.

Edit

on | off (Default value: **on**)

Permission to edit methods from a method group. Methods in this group can be opened, started, edited and deleted. New methods can be added as well.

5.5 Measuring parameters subwindow

5.5.1 Measuring parameters

Subwindows **Method** ► **Measuring parameters**

The most important parameters for carrying out the measurement are set in this subwindow. The settings affect the progression of the measurement curve recorded.

Sample temperature

Setpoint temperature in the sample.

Input range	50 - 220 °C (Increment: 1)
Default value	120 (oil), 110 (biodiesel), 200 (PVC) °C

Temperature correction

Specification of how many °C the heating block temperature has to be increased by so that the sample reaches the setpoint temperature. This value is determined by measuring the deviation between the current temperature in the sample and the heating block temperature using a calibrated, external temperature sensor. If a temperature sensor is not available, approximations can be entered from the table for temperature correction values (see Chapter 5.5.2, page 271).

Input range	-9.9 - 9.9 °C (Increment: 0.1)
Default value	1.6 (oil), 0.9 (biodiesel), 0.8 (PVC) °C
Selection	auto

auto

With **auto**, the **Temperature correction** determined previously for a temperature correction determination (see Chapter 3.4, page 81) and saved on the instrument on the **Temperature correction** tab (see Chapter 7.1.1.3, page 377) is used automatically for the determination. The requirement for this is that, for the determination, the same instrument, the same block, the same gas flow and the same temperature have been selected at which the temperature correction determination was carried out.



NOTE

Please note that the maximum permissible sum of **Sample temperature** and **Temperature correction** for the 893 Professional Biodiesel Rancimat is **159.9** °C. Methods with a higher value cannot be loaded for this instrument.

Gas flow

Gas flow through the sample. The gas flow can only be set for both blocks jointly. The value of the method loaded for block A is always decisive.

Input range	1.0 - 25.0 L/h (Increment: 0.1)
Default value	20.0 (air; oil), 10.0 (air; biodiesel), 7.0 (nitro-
	gen; PVC) L/h

Start options

Statistical link

Mode for starting and stopping determinations at different measuring positions. The determinations of a multiple determination are linked statistically with one another.

Selection	none 2 positions 4 positions
Default value	none

none

All positions can be started and and stopped individually. The determinations can be started directly at the instrument by pressing the start buttons. Stopping is not possible at the instrument.

2 positions

The 2 positions can be started and stopped one after the other. The two determinations of the multiple determination can also be started directly at the instrument by pressing the start buttons. Stopping is not possible at the instrument. Only the determinations that have been started and stopped are taken into account in the statistics.

4 positions

The 4 positions of a block can be started and stopped separately. The 4 determinations of the multiple determination can also be started directly at the instrument by pressing the start buttons. Stopping is not possible at the instrument. Only the determinations that have been started and stopped are taken into account in the statistics.

Start delay

Waiting time until starting the measurement. It is shown in the **Work-place** program part by a time display that counts down.

Input range	0 - 1,000 min (Increment: 1)
Default value	0 min

Max. start conductivity

on | off (Default value: **off**)

If this check box is activated, whether the conductivity in the measuring vessel is higher than the defined maximum conductivity is checked each time a determination is started. If this is the case, a prompt appears asking whether the determination is to be started or not despite this.

Editable only if **Max. start conductivity** = **on**, otherwise inactive.

Input range	1 - 400 μS/cm (Increment: 1)
Default value	20 μS/cm

Stop criteria

Time

on | off (Default value: off)

Time until the automatic stop of the determination.

Input range	0.1 - 99,999.9 h (Increment: 0.1)
Default value	24.0 h

Conductivity

on | off (Default value: off)

Conductivity limit value. The determination is ended automatically when this value is reached.

Input range	1 - 400 μS/cm (Increment: 1)
Default value	400 (oil, PVC), 200 (biodiesel) μS/cm

Endpoint(s)

on | off (Default value: on)

Automatic stop of the determination if all of the end points in the method have been reached (induction time and/or stability time).

Delimiting stop criteria

Editable only if more than one stop criterion has been enabled, otherwise inactive.

Oil, PVC	
Selection	Stop once one criterion has been fulfilled Stop once all the criteria have been fulfilled
Default value	Stop once one criterion has been fulfilled
Biodiesel	
Selection	Stop once one criterion has been fulfilled
	Stop once all the criteria have been fulfilled
Default value	Stop once all the criteria have been fulfilled

Stop once one criterion has been fulfilled

If this option is selected, the determination is stopped as soon as one stop criterion is met.

Stop once all the criteria have been fulfilled

If this option is selected, then the determination is ended as soon as all selected stop criteria have been met.

Sensors

Conductivity sensor assignment

on | off (Default value: off)

If this check box is activated, a conductivity sensor has to be assigned to the respective measuring position before each time a determination is started. A conductivity sensor can only be used once in the process.

Selection	on off	
Selection	on orr	

on

If the conductivity sensor assignment is enabled, the cell constant for the assigned sensor is saved in the instrument from the configuration for the measuring position being used when starting a determination. Thus, this cell constant is the basis for calculating the conductivity until the start of the next determination. The conductivity sensor being used is reserved during the determination, i.e. it cannot be used for another determination or cell constant determination. Manual input of the cell constant is not possible during the determination.

off

If the conductivity sensor assignment is disabled, a cell constant of 1.1/cm is saved in the instrument for the measuring position being used when starting a determination. This value is the basis for calculating the conductivity until the start of the next determination.

5.5.2 Table of temperature correction values

If a temperature sensor is not available for the temperature correction determination, the following approximations can be entered:

Table 2 Temperature correction values for 892 Professional Rancimat and 893 Professional Biodiesel Rancimat. Condition: 6 g silicone oil, gas = air

Setpoint temperature (°C)	Temperature correc- tion value (°C) for gas flow = 10 L/h	Temperature correction value (°C) for gas flow = 20 L/h
80	0.7	1.1
90	0.8	1.3
100	0.8	1.4
110	0.9	1.5
120	1.0	1.6
130	1.1	1.7
140	1.1	1.8
150	1.2	1.9
160	1.2	2.0

5.6 Evaluation subwindow

Table 3 Temperature correction values for 895 PVC Thermomat. Condition: 5 q silicone oil, qas = nitrogen

Setpoint temperature (°C)	Temperature correction value (°C) for gas flow = 7 L/h	
160 - 200	0.8	

5.6 Evaluation subwindow

5.6.1 Evaluation - General

Subwindow: **Method** ► **Evaluation**

The automatic evaluations for the standard results and calculations for user-defined results as well as the output and export of results are defined in this subwindow. Results can also be monitored. The left side contains the symbols for the areas whose tabs are displayed on the right portion of the subwindow. The following areas are displayed:



Parameters (see Chapter 5.6.2, page 272)



Results (see Chapter 5.6.3, page 275)



Documentation (see Chapter 5.6.4, page 282)

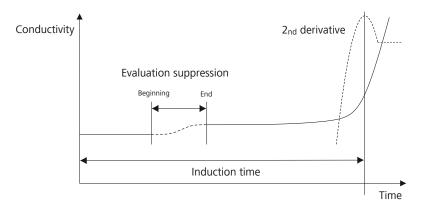
5.6.2 Evaluation - Parameters

5.6.2.1 Parameter - Induction time

Tab: Method ► Evaluation ► Parameters ► Induction time

The induction time is the **time to the break point** of the *conductivity* vs. *time* curve recorded using the instrument. The induction time is a characteristic for the oxidation stability of the sample being examined.

For the automatic determination of the induction time, the 2nd derivative of the measured curve is used, which exhibits a maximum at the break point. To enable detection of a break point, certain criteria must be fulfilled with regard to the height and width of the peak in the 2nd derivative. The break point can also be determined manually as the intersection point of the two tangents at the extended straight branches of the curve.



With certain samples, it may occur that the conductivity slightly rises in steps long before the actual induction time (e.g. through side reactions or with volatile compounds). To prevent this rise from being evaluated as an endpoint, the user can suppress the evaluation for the desired range.

Evaluate induction time

If this check box is activated, the induction time is determined automatically. The induction time can be used as variable **IND** in calculation formulas.

Oil, biodiesel		
Selection	on off	
Default value	on	
PVC		
Selection	on off	
Default value	off	

Evaluation suppression Start

Time from the start of the determination to the start of the evaluation suppression.

Input range	0.0 - 99,999.9 h
Default value	0.0 h

Evaluation suppression End

Time from the start of the determination to the end of the evaluation suppression.

Input range	0.0 - 99,999.9 h
Default value	0.0 h

Evaluation sensitivity

This value defines the minimum value which the maximum of the curve of the 2nd derivative has to reach in order to be accepted as induction time.

5.6 Evaluation subwindow

The default value of **1.0** will lead to the correct result for most applications. Smaller values will cause the acceptance of smaller maximums of the 2nd derivative. Higher values require a higher maximum.

Input range	0.1 - 9,999.9
Default value	1.0

Calculate standard time

If this check box is activated, the standard time is calculated automatically (see Glossary, page 448). The standard time can be used as variable **STD** in calculation formulas.

Selection	on off
Default value	off

Target temperature

Target temperature for the calculation of the standard time.

Input range	-100.0 - 300.0 °C
Default value	97.8 °C

Temperature coefficient

The standard time is calculated using the temperature coefficient created in the **Configuration** program part and the configured target temperature (see Chapter 6.7, page 365).

A temperature coefficient can be selected only if **Calculate standard time = on**.

Selection	'Temperature coefficient' 'empty'
Default value	'empty'

'Temperature coefficient'

Selection of a temperature coefficient saved in the configuration.

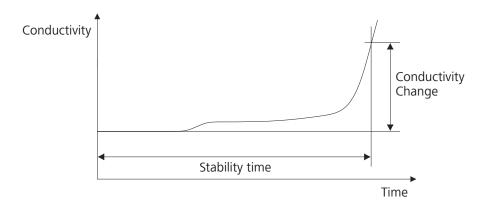
'empty'

The standard value is 'empty', if a temperature coefficient is not available in the configuration. Otherwise, the first temperature coefficient from the alphabetically ordered list is always entered.

5.6.2.2 Parameter - Stability time

Tab: Method ► Evaluation ► Parameters ► Stability time

The stability time is the time which is necessary in order to attain a specified **Conductivity change**.



Evaluate stability time

If this check box is activated, the stability time is determined automatically. The stability time can be used as variable **STAB** in calculation formulas.

Oil, biodiesel		
Selection	on off	
Default value	off	
PVC		
Selection	on off	
Default value	on	

Conductivity change

Conductivity change for the determination of the stability time.

Input range	1 - 400 μS/cm (Increment: 1)
Default value	50 μS/cm

5.6.3 Evaluation - Results

5.6.3.1 Results - User-defined results

Tab: Method ► Evaluation ► Results ► User-defined results

Additional results defined by the user that are automatically included in the calculation at the end of the determination are defined on this tab. These results are made available as variables for calculations within the method just like the standard results.

Table of user-defined results

The non-editable table shows a list of user-defined results. Double-clicking on a line opens the **Define result** dialog window for defining the user-defined results (see Chapter 5.6.3.2, page 276). The most important properties for the result selected in the table are shown on the right portion of the tab.

5.6 Evaluation subwindow



Move result upward (modifies sequence).



Move result downward (modifies sequence).

[Edit]

Opens the following menu items:

New	Opens the Define result dialog window (see Chapter 5.6.3.2, page 276). The new user-defined result is added to the end of the table (the same action as double-clicking on the last line). A maximum of 25 user-defined results can be defined.
Properties	Open the Define result dialog window (see Chapter 5.6.3.2, page 276) and edit user-defined result (same action as double-clicking on the line).
Delete	Deletes the selected result.

Formula

Displays the formula for the selected result.

Description

Displays the description for the selected result.

5.6.3.2 Defining result

Dialog window: **Method** ► **Evaluation** ► **Results** ► **User-defined results** ► [Edit] ► **New.../Properties...** ► **Define result**

Result name

Name of the user-defined result. The name has to be unique within the method.

Entry	1 - 40 characters
Default value	'empty'

Properties

Formula

Calculation formula, which can either be edited directly or can be created using the formula editor after pressing (see Chapter 2.4, page 20). The formula defines the type (**Number**, **Text**, **Date/Time**) of the result.

Unit

Unit of the calculated result for the output (text only).

Entry	64 characters
Selection	h s min days m y μS/cm °C
Default value	h

Decimal places

Selection of the number of decimal places the user-defined result is to be displayed with in the report and the result view of the database (internally the result is always saved with the highest possible number of decimal places). This parameter is ignored for results of **Text** or **Date/Time** type.

Input range	0 - 6	
Default value	1	

Assignment

Assignment of the result to one of the 25 possible result columns **RS01** - **RS25** in the determination overview where the result is entered. Only the columns that are still open are provided.

Selection	first unallocated result variable RS01 - RS25
Default value	first unallocated result variable

Description

Freely selectable description of the user-defined result.

Entry	1,024 characters
Default value	'empty'

5.6.3.3 Results - Statistics

Tab: Method ► Evaluation ► Results ► Statistics

This tab defines which results of multiple determinations are to be statistically evaluated automatically.

Statistically covered results

This non-editable table defines which results of multiple determinations are to be statistically evaluated automatically. Double-clicking on a line opens the **Define statistics** dialog window for defining the statistics (see Chapter 5.6.3.4, page 278).

[Edit]

Opens the following menu items:

New	Open the Define statistics dialog window for defining statistics (see Chapter 5.6.3.4, page 278). Add a new line to the end of the table (same action as double-clicking the last line).

5.6 Evaluation subwindow

Properties	Open the Define statistics dialog window for defining the statistics (see Chapter 5.6.3.4, page 278) and edit a line (same action as double-clicking a line).
Delete	Deletes the selected lines.

5.6.3.4 Defining statistics

Dialog window: Method ► Evaluation ► Results ► Statistics ► [Edit] ► New.../Properties... ► Define statistics

Result name

Name of the result that is to be evaluated while being monitored. Using the symbol opens the **Select result** dialog window, where the desired result can be selected (see Chapter 5.6.3.5, page 279).

Selection

'Result variable'

Statistics

List of statistical variables to be calculated.

Mean value

on | off (Default value: on)

Is marked as as **mean value** in the **Statistical function** column.

Absolute standard deviation

on | off (Default value: off)

Is marked as as **ASD** in the **Statistical function** column.

Relative standard deviation

on | off (Default value: on)

Is marked as as **RSD** in the **Statistical function** column.

Minimum

on | off (Default value: off)

Is marked as as **Min** in the **Statistical function** column.

Maximum

on | off (Default value: off)

Is marked as as **Max** in the **Statistical function** column.

5.6.3.5 Selecting a result

Dialog window: Method ➤ Evaluation ➤ Results ➤ Statistics/Monitoring ➤ [Edit] ➤ New.../Properties... ➤ Select result

Variables

Select the desired result variables (see Chapter 2.4.3.3, page 25) from all of the automatically calculated results and from the user-defined results.

Description

Description of the result variables selected under **Variables**.

5.6.3.6 Results - Monitoring

Tab: Method ▶ Evaluation ▶ Results ▶ Monitoring

This tab defines which results are to be monitored. The following rules apply for this:

- Each result can only be monitored **once**.
- Only results of type **number** can be monitored.
- The results are always monitored **after** evaluation. The determination does not have to be finished. As soon as the results of a determination are recalculated in a run, the newly calculated results are monitored.

Table of monitored results

The non-editable table shows a list of the results calculated in the method (result and result name). Double-clicking on a line opens the **Define monitoring** dialog window for defining monitoring (see Chapter 5.6.3.7, page 280). The most important properties for the result selected in the table are shown on the right portion of the tab.

[Edit]

Opens the following menu items:

New	Opens the Define monitoring dialog window for defining monitoring (see Chapter 5.6.3.7, page 280). The new result to be monitored is added to the end of the table (the same action as double-clicking on the last line). At most, the 3 standard results (induction time, stability time and standard time) and 25 user-defined results can be monitored.	
Properties	Open the Define monitoring dialog window for defining monitoring (see Chapter 5.6.3.7, page 280) and edit result monitoring (same action as double-clicking a line).	
Delete	Deletes the selected result.	

5.6 Evaluation subwindow

Limit

Lower limit

Displays the lower limit value for the selected result.

Upper limit

Displays the upper limit value for the selected result.

Message

Displays the message to be sent when the limit values for the selected result are exceeded.

Action

Displays the action to be triggered automatically when the limit values for the selected result are exceeded.

5.6.3.7 Defining monitoring

Dialog window: Method ► Evaluation ► Results ► Monitoring ► [Edit] ► New.../
Properties... ► Define monitoring

Result name

Name of the result that is to be evaluated while being monitored. Using the symbol opens the **Select result** dialog window, where the desired result can be selected (see Chapter 5.6.3.5, page 279).

Limit

Lower limit

Lower limit value for the selected result which can either be edited directly or can be created using the formula editor after pressing [+].

Input range	-1.00 E+99 - 1.00 E+99 'Unit of the result'
Default value	0.00 'Unit of the result'

Upper limit

Upper limit value for the selected result which can either be edited directly or can be created using the formula editor after pressing .

Input range	-1.00 E+99 - 1.00 E+99 'Unit of the result'
Default value	0.00 'Unit of the result'

Message

Displays the message to be sent when the limit values for the selected result are exceeded.

The text editor for entering or changing the message is opened with or by double-clicking on the text field. The message defined here is output if the lower limit value is undershot or the upper limit value is exceeded.

Entry Text (unlimited)

Message by e-mail

on | off (Default value: off)

The message is sent to the address defined under **[E-mail...]** if this check box is activated. The message is sent in text format.

[E-mail...]

[E-mail...] opens the **Send e-mail** window (see Chapter 2.6.1, page 63).

Acoustic signal

on | off (Default value: off)

If this check box is activated, an acoustic signal will be emitted.

Action

If the lower limit value is not reached or if the upper limit value is exceeded for the monitored result, then one of the following actions will be executed automatically:

Selection	Document message only Display and docu-	
	ment message	
Default value	Display and document message	

Document message only

The message that the result is outside the limit values is saved automatically in the determination.

Display and document message

A message is displayed and you can select whether you want to continue the determination or cancel it. If the determination is continued, the message that the result is outside the limit values is saved automatically in the determination.

5.6 Evaluation subwindow



NOTE

The act of going beyond the limits is available for calculation formulas as a variable, 'Result identification'.OVF, for the monitored result (number: **0** = result within limit values, **1** = result outside limit values).

5.6.4 Evaluation - Documentation

5.6.4.1 Documentation - Report

Tab: Method ➤ Evaluation ➤ Documentation ➤ Report

This tab shows which report template is used to generate reports for the determinations in this method and where these reports are output. The report is output as soon as the determination is complete.

Report table

The non-editable table shows a list of reports that are output at the end of the determination. The table can have a maximum of 10 lines. Double-clicking a line opens the **Define report** dialog window for defining the report (see Chapter 5.6.4.2, page 282).

[Edit]

Opens the following menu items:

New Properties	Opens the Define report dialog window for defining the report (see Chapter 5.6.4.2, page 282). Adds a new line at the end of the table (same action as double-clicking the last line [*]). Open the Define report dialog window for defining the report (see Chapter 5.6.4.2, page 282) and edit a line (same action as double-clicking a line).
Сору	Copies the selected lines to the clipboard.
Insert	Insert all lines from the clipboard above the selected line in the report table.
Cut	Copies the selected lines to the clipboard and deletes them.
Delete	Deletes the selected lines.

5.6.4.2 Defining reports

Dialog window: Method ► Evaluation ► Documentation ► Report ► [Edit] ► New...

/ Properties... ► Define report

This dialog window defines which report template is used to generate reports for the determination in this method and where these reports are output. The report is output as soon as the determination is complete.

Report template

Report template

Selection of the report template with which the report is to be generated.

Selection	'Template name'	

Report output

Printer

on | off (Default value: off)

If this check box is activated, the report is printed on the selected printer.

Selection	Default printer Printer name
Default value	Default printer

Default printer

The report will be printed on the default Windows printer defined for the client.

Printer name

The report will be printed on the default Windows printer with the specified name defined for the client.

PDF file

on | off (Default value: off)

If this check box is activated, the report is output as a PDF file. The desired directory can be selected and a name for the PDF file can be entered by means of the symbol. When output, the date and time are automatically attached to this name in a **YYYY-MM-DD_hh-mm-ss** format.

Send e-mail

on | off (Default value: **off**)

If this check box is activated, then the report is produced not only as a PDF file but also as an attachment to the address defined under **[E-mail...]**.

[E-mail...]

The **Send e-mail** dialog window opens with **[E-mail...]** (see Chapter 2.6.1, page 63).

5.6 Evaluation subwindow

5.6.4.3 **Documentation - Database**

Tab: Method ➤ Evaluation ➤ Documentation ➤ Database

This tab defines which databases the determination data is stored in. At the same time, whether and to which applications the determination data is to be exported automatically can be defined.

Database

The non-editable table shows a list of databases where the determinations are saved. Double-clicking on a line opens the **Select database** (see Chapter 5.6.4.4, page 285) dialog window.

[Edit]

Opens the following menu items:

New	Opens the Select database dialog window for defining the database (see Chapter 5.6.4.4, page 285). Adds a new line to the end of the table (same action as double-clicking the last line).
Properties	Open the Select database dialog window for defining the database (see Chapter 5.6.4.4, page 285) and edit a line (same action as double-clicking a line).
Delete	Deletes the selected lines.

Automatic export

The non-editable table shows a list of the automatic export. Double-clicking a line opens the dialog window for selecting the export settings (see Chapter 5.6.4.5, page 285).

[Edit]

Opens the following menu items:

New	Opens the Select export template dialog window for defining the database (see Chapter 5.6.4.5, page 285). Adds a new line to the end of the table (same action as double-clicking the last line).
Properties	Open the Select export template dialog window for defining the database (see Chapter 5.6.4.5, page 285) and edit a line (same action as double-clicking a line).
Delete	Deletes the selected lines.

5.6.4.4 Selecting a database

Dialog window: Method ► Evaluation ► Documentation ► Database ► Select database ► [Edit] ► New... / Properties... ► Select database

Database

Selecting the database to which the data is to be transferred.

Selection 'Database name'

5.6.4.5 Selecting an export template

Dialog window: Method ► Evaluation ► Documentation ► Database ► Automatic export ► [Edit] ► New... / Properties... ► Select export template

Export template

Selection of the export template for the data export (see Chapter 4.4.3, page 156).

Selection 'Template name'

5.7 Properties subwindow

5.7.1 Properties - General

Subwindow: **Method** ▶ **Properties**

Sample data, graphics properties from the graphics shown in the **Work-place** program part and comments are defined in this subwindow. The left side contains the symbols for the areas whose tabs are displayed on the right portion of the subwindow. The following areas are displayed:



Sample data (see Chapter 5.7.2, page 285)



Graphics (see Chapter 5.7.3, page 289)



Comments (see Chapter 5.7.4, page 295)

5.7.2 Properties - Sample data

5.7.2.1 Sample data - Table

Subwindow section: **Method** ▶ **Properties** ▶ **Sample data**

The **Sample data** area shows the sample data used and monitored in the method and the data's fixed values in table form. The table contains the following columns:

5.7 Properties subwindow

Name

Designation of the sample data variable (cannot be changed).

Type

Sample data variable type.

Fixed value

Fixed assigned value for the sample data variable.

Used

Shows whether the sample data variable is used in the method or not.

Monitoring

Shows whether the sample data variable is monitored in the method or not.

Comment

Optional comment on the sample data variables.

[Edit]

Open the **Configure sample data input - 'Name'** dialog window for defining sample data input (see Chapter 5.7.2.2, page 286) and edit a line (same action as double-clicking a line).

5.7.2.2 Configuring sample data input

Dialog window: Method ► Properties ► Sample data ► [Edit] ► Configuring sample data input - 'Name'

Used

on | off (Default value: off)

If this check box is activated, the additional **Info #** information is used in the method and displayed on the workplace.



NOTE

The **Ident** sample data variable is always used in a method; this means its use cannot be disabled.

Name

Designation of the sample data variable. The name cannot be changed.

Type

Definition of the variable type.

Selection	Text Number Date/Time
Default value	Text

Fixed value

on | off (Default value: off)

If this check box is activated, the sample data variable can be assigned a fixed value. For variables of **Date/Time** type, the date has to be entered in the dialog window **Select date** (see Chapter 2.5.1, page 60). If text templates are defined for the sample data variables (see Chapter 3.7.1, page 92), they can be selected in the input field.

7	pe = N	umber
- /	DC - N	uiiibci

Type - Number	
Input range	-1.0E99 - 1.0E99
Type = Text	
Entry	100 characters
Type = Date/Time	
Selection	'Date'

Comment

Optional comment on sample data variable.

Entry	1000 characters	
•		

Monitoring

on | off (Default value: off)

If this check box is activated, whether the variable is valid and whether the limit values are maintained is checked during the start test. Monitoring cannot be enabled for sample data variables of **Text** type.

Lower limit

Lower limit for the variable.

The input of the limit value depends on the sample data variable selected.

Upper limit

Upper limit for the variable.

The input of the limit value depends on the sample data variable selected.

Message

The message options can only be edited if monitoring is switched on.

5.7 Properties subwindow

The text editor for entering or changing the message is opened with or by double-clicking on the text field. The message defined here is displayed in addition to the standard message, "The value for the 'Sample date name' sample date is outside acceptable limits.", when falling below the lower limit value or exceeding the upper limit value.

entry rext (unifficed)	Entry	Text (unlimited)	
-------------------------------	-------	------------------	--

Message by e-mail

on | off (Default value: off)

The message is sent to the address defined under **[E-mail...]** when this check box is activated. The message is sent in text format.

[E-mail...]

[E-mail...] opens the **Send e-mail** window (see Chapter 2.6.1, page 63).

Acoustic signal

on | off (Default value: off)

If this check box is activated, then an acoustic signal will be emitted.

Action

The actions can only be edited if monitoring is switched on.

If at the start test it is found that the limit values have been exceeded, then one of the following actions will be triggered automatically:

Selection	Document message only Display and docu-	
	ment message Do not start the determina-	
	tion	
Default value	Display and document message	

Document message only

The standard message and the message text defined under **Message** are saved in the determination automatically.

Display and document message

A message appears showing the standard message and the message text defined under **Message**.

Do not start the determination

The determination is not started. The following message must be confirmed with **[OK]**.

5.7.3 Properties - Graphics

5.7.3.1 Graphics - Axes

Tab: Method ► Properties ► Graphics ► Axes

x axis



NOTE

The settings for the x axis are used for displaying the live curve in the **Workplace** program part and for displaying the curve for the saved determination in the **Database** program part.

Axis label

Freely definable axis label.

Selection	auto User-defined text
Default value	auto

auto

The unit is used as a label with **auto**.

User-defined text

User-defined text can be entered.

Default view

Defining the standard display for the x axis.

Selection	Show all Range
Default value	Show all

Show all

The entire x axis from **0 - recording time** is displayed.

Range

Only the specified x axis area between **from** and **to** is displayed.

from

Initial value for scaling the x axis.

Input range	0 - 9,999
Default value	0

to

End value for scaling the x axis.

Input range	0 - 9,999
Default value	24

5.7 Properties subwindow

y1 Axis



NOTE

The settings for the y1 axis are used for displaying the live curve in the **Workplace** program part and for displaying the curve for the saved determination in the **Database** program part.

Axis label

Freely definable axis label.

Selection	auto User-defined text
Default value	auto

auto

The unit is used as a label with **auto**.

User-defined text

User-defined text can be entered.

Default view

Defining the standard display for the y1 axis.

Selection	Show all Range
Default value	Show all

Show all

The entire y1 axis from **0** - the recording time is displayed.

Range

Only the specified y1 axis area between **from** and **to** is displayed.

from

Initial value for scaling the y1 axis.

Input range	0 - 999	
Default value	0	

to

End value for scaling the y1 axis.

Input range	0 - 999
Default value	400

y2 Axis



NOTE

The settings for the y2 axis are used for displaying the curve for the saved determination in the **Database** program part.

Display the curve of the 2nd derivative

If this check box is activated, the curve for the 2nd derivative and the second y axis are displayed in the **Database** program part after measurement.

If **Display the curve of the 2nd derivative** is disabled, the line for evaluation sensitivity and the second y axis are not displayed. However, the **Evaluation sensitivity** check box remains activated on the **Display** tab if it was activated previously. The evaluation sensitivity color and the line thickness can be selected, but the selection does not have any effect on the display.

Oil, biodiesel

0, 2.00		
Selection	on off	
Default value	on	
PVC		
Selection	on off	
Default value	off	

5.7.3.2 Graphics - Display

Tab: Method ▶ Properties ▶ Graphics ▶ Display

Curve

Measurement curve



NOTE

The settings for the measurement curve are used for displaying the live curve in the **Workplace** program part and for displaying the curve for the saved determination in the **Database** program part.

Selection of the color to be used for graphically displaying the measurement curve.

Selection	green 12 additional colors
Default value	green

5.7 Properties subwindow

Line thickness

Input range	1 - 10 pixels
Default value	1 pixels

Induction time

on | off (Default value: on)



NOTE

These settings are used for displaying the live curve in the **Workplace** program part and for displaying the curve for the saved determination in the **Database** program part.

Selection of the color to be used for graphically displaying the induction time.

Selection	red 12 additional colors
Default value	red

Line thickness

Input range	1 - 10 pixels	
Default value	1 pixels	

Stability time

on | off (Default value: on)



NOTE

These settings are used for displaying the live curve in the **Workplace** program part and for displaying the curve for the saved determination in the **Database** program part.

Selection of the color to be used for graphically displaying the stability time.

Selection	black 12 additional colors
Default value	black

Line thickness

Input range	1 - 10 pixels	
Default value	1 pixels	

Evaluation sensitivity

on | off (Default value: off)



NOTE

These settings are used for displaying the curve for the saved determination in the **Database** program part.

Selection of the color to be used for graphically displaying evaluation sensitivity.

Selection	light blue 12 additional colors
Default value	light blue

Line thickness

Input range	1 - 10 pixels	
Default value	1 pixels	

2nd derivative



NOTE

These settings are used for displaying the curve for the saved determination in the **Database** program part.

If the option for displaying the induction time is enabled, then the curve for the 2nd derivative is displayed in the selected color automatically. If the option for displaying the induction time is disabled, then the curve for the 2nd derivative is not displayed.

Selection	dark blue 12 additional colors
Default value	dark blue

Line thickness

Input range	1 - 10 pixels	
Default value	1 pixels	

Tangents



NOTE

These settings are used for displaying the curve for the saved determination in the **Database** program part.

Selection of the color to be used for graphically displaying the tangents.

Selection	dark gray 12 additional colors
Default value	dark gray

Line thickness

Input range	1 - 10 pixels	
Default value	1 pixels	

Graph

Background



NOTE

These settings for the background are used for displaying the live curve in the **Workplace** program part and for displaying the curve for the saved determination in the **Database** program part.

Clicking on the symbol opens the **Select color** dialog window (see Chapter 2.5.4, page 62).

Axes



NOTE

The settings for the axes are used for displaying the live curve in the **Workplace** program part and for displaying the curve for the saved determination in the **Database** program part.

Selection of the color to be used for displaying the axes.

Selection	black 12 additional colors
Default value	black

Line thickness

Input range	1 - 10 pixels	
Default value	1 pixels	

Grid

on | off (Default value: off)



NOTE

The settings for the grid are used for displaying the live curve in the **Workplace** program part and for displaying the curve for the saved determination in the **Database** program part.

If this check box is activated then a grid, whose color can be selected, is shown against the background.

Selection	light gray 12 additional colors
Default value	light gray

5.7.4 Properties - Comments

5.7.4.1 Comments - Application note

Tab: Method ▶ Properties - Comments ▶ Application note

Start the text editor to enter or change the application note with by double-clicking into the text field (see Chapter 2.5.2, page 60).

The application note for the method is opened in the **Workplace** program part using the symbol on the block-specific toolbar (see Chapter 3.3, page 70).

5.7.4.2 Comments - Method comment

Tab: Method ▶ Properties - Comments ▶ Method comment

A comment displayed in the method table (see Chapter 5.2.2, page 247) is entered for the method on this tab.

6.1 Configuration - General

6.1.1 Configuration - Definition

Program part: Configuration

Definition

The term **Configuration** is used in **StabNet** to refer to all comprehensive settings for devices, sensors and temperature coefficients with regards to methods. Included in the configuration are also security settings, user administration, Audit Trail and templates (export templates, control chart templates and e-mail templates).

Organization

All configuration data is saved in the **configuration database**. In the case of local server systems (**Stab Net Full**), this is to be found in the Programs directory of the computer on which the program was installed. In the case of client/server systems (**StabNet Multi**), the configuration database is saved centrally on the server and contains all of the configuration data of all computers (clients) which are connected to this server.

6.1.2 Configuration - User interface

Program part: Configuration

Configuration symbol



Clicking on the configuration symbol in the vertical bar at the left opens the **Configuration** program part while, at the same time, the configuration symbol is shown in color.

Elements

The user interface of the **Configuration** program part comprises the following elements:

- Configuration-specific menu bar.
- Configuration-specific toolbar.
- Main window in which up to 3 subwindows can be displayed.

6.1.3 Configuration - Menu bar

6.1.3.1 Configuration - Main menus

Program part: Configuration

The menu bar in the **Configuration** program part contains the following main items:

- Configuration File menu
 Export, import, backup, restore configuration data.
- Configuration View menu
 Change layout, load view, save view, quick access to subwindows.
- Configuration Tools menu
 User administration, security settings, program administration, Audit
 Trail, templates, options.
- Help menu
 Open program help, display program information.

6.1.3.2 Configuration - File menu

Program part: Configuration

Export	Export configuration data (see Chapter 6.3.1.1, page 328).
Import	Import configuration data (see Chapter 6.3.1.2, page 329).
Backup ►	
Automatically	Backup configuration data automatically (see Chapter 6.3.2.1, page 330).
Manually	Backup configuration data manually (see Chapter 6.3.2.2, page 331).
Print (PDF) ▶	
User administra- PDF tion	Output user administration data as PDF file (see Chapter 6.2.1.1, page 304).
PDF Security settings	Output security settings as PDF file (see Chapter 6.2.2.1, page 313).
Logout	Log out user (see Chapter 2.2.3, page 13)
Exit	Exit the program.

6.1.3.3 Configuration - View menu

Program part: Configuration

Load view	Load a saved configuration view (see Chapter 4.1.7.3, page 103).	
Save view	Save current configuration view (see Chapter 4.1.7.4, page 103).	
Quick access	Open a subwindow not contained in the current configuration view.	
☑ Toolbar	Switch the toolbar display on/off.	

6.1.3.4 Configuration - Tools menu

Program part: **Configuration**

User administra- tion	Manage users and groups of users with access permissions, signature permissions and options (see Chapter 6.2.1.1, page 304).	
Security settings Options for login, password protection, Audit Trail and electronic signature of the Chapter 6.2.2.1, page 313).		
Program administra- tion	General settings for local server and client/server settings (see Chapter 6.2.3.1, page 322).	
Audit Trail	Open the Audit Trail (see Chapter 6.4, page 337).	
Templates ►		
E-mail tem-		
plates	Create templates for sending e-mails (see Chapter 6.3.3.1, page 333).	
Options	Set program options (see Chapter 6.3.4, page 335).	

6.1.3.5 Help menu

Program part: Workplace / Database / Method / Configuration

StabNet Help	Open StabNet Help.
About	Display information about the program and the installation.

6.1.4 Configuration - Toolbar

Program part: **Configuration**

<u> </u>	Manage users and groups of users with access permissions, signature permissions and options (see Chapter 6.2.1.1, page 304).

@	Manage security settings with options for login, password protection, Audit Trai and electronic signature (see Chapter 6.2.2.1, page 313).	
•	Open the Audit Trail (see Chapter 6.4, page 337).	
Ø.	Log out user (see Chapter 2.2.3, page 13).	
₽	Modify layout of loaded configuration view (see Chapter 4.1.7.2, page 102).	
	Load a saved configuration view (see Chapter 4.1.7.3, page 103).	
	Save current configuration view (see Chapter 4.1.7.4, page 103).	
2	Open StabNet Help.	

6.1.5 Configuration - Subwindows

Program part: Configuration

Selection

The following subwindows can be displayed in the main window:

- Devices
 Display of the automatically recognized devices.
- Sensors
 Display of the data for all defined sensors.
- Temperature coefficients
 Display of the Q10 factors and Arrhenius coefficients of different samples.

Presentation

The subwindows can be enlarged or made smaller to suit by dragging the separating bar between the windows.

By clicking on the button \square above at the right, the subwindows can be maximized so that only one subwindow is displayed in the main window. The original view of all subwindows is restored when the \square button in the maximized subwindow is clicked on again.

6.1.6 Configuration - Functions

Program part: Configuration

The following functions can be carried out in the **Configuration** program part:

Views

• Change the layout of the configuration view

Load configuration view

- Save configuration view
- Rename configuration view
- Delete configuration view

User administration

- Manage user groups
- Access permissions
- Signatures
- Options
- Users

Security settings

- Login/Password protection
- Audit Trail/Changes
- Electronic signature
- Default reasons

Audit Trail

Audit Trail

Program administration

- Backup directories
- Clients
- Licenses

Export/Import of configuration data

- Export configuration data
- Import configuration data

Backup/Restore configuration data

- Backup configuration data automatically
- Backup configuration data manually
- Restore configuration data

Templates

■ E-mail templates

Options

General program properties

6.1.7 Views

6.1.7.1 Views - General

Program part: Configuration/Database /

Definition

The contents and design of the main window in the **Database** and **Configuration** program parts is called a **View**. The following elements belong to a view:

- Number, arrangement, sequence and size of the subwindows.
- Representation within the individual subwindows, i.e. column sequence, column width, sorting and filter.

Functions

The following functions are possible for views:

- Changing the layout
 Define the number, arrangement and sequence of the subwindows for the current view.
- Save view
 Save current view.
- Load view
 Load a saved view.
- Rename view
 Rename a saved view.
- Delete view
 Delete a saved view.

Save automatically

If the corresponding item under **Save on closing** is activated under **Options** on the **Save** tab, then the current view will be saved automatically when the program is closed.

Load automatically

The standard procedure is that the view saved when the program is terminated will be loaded automatically the next time that the program is opened. As an alternative, a default view can be defined for each user group that is loaded automatically the first time that the program part is opened.

The standard procedure is that the view with the following subwindows is opened with the very first program start:

- ConfigurationDevices, Sensors, Temperature coefficients
- Database
 Determination overview, Curves, Information, Results

6.1 Configuration - General

6.1.7.2 Changing the layout

Dialog window: **Database/Configuration** ► **View** ► **Change layout...** ► **Change layout**

The **Change layout** dialog window is opened with the symbol or the **View** ► **Change layout...** menu item.

Select layout

Selection of a graphical symbol for the number, arrangement and sequence of the subwindows.

Selection	Selection of the possible combinations
-----------	--

Available subwindows

Display the subwindows that are still available for displaying the view.

Selection	Selection of the subwindows	
-----------	-----------------------------	--

Displayed subwindows

Display the subwindows that are shown in the view.

Selection Subwindows	Selection	Subwindows	
-----------------------------	-----------	------------	--



Add the selected subwindow to the view.



Remove the selected subwindow from the view.



Move the selected subwindow upward (modifies sequence).



Move the selected subwindow downward (modifies sequence).

6.1.7.3 Loading a view

Dialog window: **Database/Configuration** ► **View** ► **Load view...** ► **Load view**

The **Load view** dialog window is opened with the symbol or the **View Load view...** menu item.

Name

Name of the view to be loaded.

[Rename]

Rename the selected view.

[Delete]

Delete the selected view.

[Load]

Load the selected view.

Load view automatically

The standard procedure is that the view saved when the program is terminated will be loaded automatically the next time that the program is opened. As an alternative, a default view can be defined for each user group that is loaded automatically the first time that the program part is opened.

The standard procedure is that the view with the following subwindows is opened with the very first program start:

ConfigurationDevices, Sensors, Temperature coefficients

Database
 Determination overview, Curves, Information, Results

6.1.7.4 Saving a view

Dialog window: **Database/Configuration** ► **View** ► **Save view...** ► **Save view**

The **Save view** dialog window is opened with the symbol or the **View** ► **Save view...** menu item.

Name

Name under which the view is to be saved.

[Rename]

Rename the selected view.

[Delete]

Delete the selected view.

[Save]

Save the view under the given name. The saved views are globally valid and available for client/server systems.

Save view automatically

The current view will be saved automatically when the program is closed if the corresponding item is activated under **Save on closing** on the **Save** tab in the **Options** dialog window in the **Configuration** program part.

StabNet 1.1 •••••• 303

6.2 Administration

6.1.7.5 Renaming a view

Dialog window: **Database/Configuration** ► **View** ► **Load view.../Save view...** ► **[Rename]** ► **Rename view**

To be able to rename a view, either the **Load view** or the **Save view** dialog window must be opened and the **[Rename]** button must be pressed down. The **Rename view** window opens afterwards.

Rename 'Name' view after

entry of a new name for the view.

Entry	50 characters	
-------	---------------	--

6.1.7.6 Deleting a view

Function: **Database/Configuration** ► **View** ► **Load view.../Save view...** ► **[Delete]**

To delete a view, either the **Save view** or **Save view** dialog window must be opened and the **[Delete]** button must be pressed down.

6.2 Administration

6.2.1 User administration

6.2.1.1 User administration

Dialog window: **Configuration ► Tools ► User administration... ► User administration**

Overview

User groups and their users can be managed in the **User administration** dialog window. Access permissions can be defined for menu items and functions for each user group; signature permissions and default views can be defined for individual program parts. In the case of client/server systems, the user administration is globally valid for all connected clients (central user administration).

The three user groups **Administrators** (with the user **Admin1**), **Users** and **Removed users** (each without any users) are automatically created at the time of installation. All groups can be renamed; the **Administrators** group is the only group that cannot be deleted.

The user administration data can be exported and imported. In this way this data can be exchanged between different client/server systems.

The user administration data can be output as a PDF file with the **File ▶ Print (PDF)... ▶ User administration** menu item.

Structure

The **User administration** dialog window is divided into two parts, the size of which can be modified with the mouse. The user groups with their

assigned users are listed in a tree in the left-hand part; the right-hand side shows details of the selected items.

Each user group, with the exception of the **Removed users** group, contains the following items:

Access permissions
 Assign access permissions to the four program parts and their menu

Signatures
 Assign signature permissions for methods and determinations.

Options

Definition of the view for the individual program parts.

UsersDetails regarding user.

Functions

The following functions can be carried out in the **User administration** dialog window:

- Add user groups
- Copy user groups
- Rename user groups
- Delete user groups
- Define access permissions for user groups
- Signature permissions for user groups
- Define options for user groups
- Add user
- Set start password for new user
- Deactivate user
- Activate user
- Remove user

6.2.1.2 User groups

6.2.1.2.1 User groups - Details

Dialog window: Configuration ► Tools ► User administration... ► User administration

If a user group is selected in the left-hand side of the **User administration** dialog window then details of this user group will be shown on the right-hand side together with a table containing all its members.

Group data

Group name

Display of the name of the user group.

6.2 Administration

Description

Description of the user group.

Entry **256 characters**

[Rename group]

Rename the selected user group.

[Delete group]

Delete the selected user group.

[Copy group]

Copy the selected user group.

[Add group]

Add a new user group.

Group members

The table showing the group members contains information about all members of the selected user group. The table can neither be edited nor sorted.

User

Short name of the user.

Full name

Full name of the user.

Status

Current user status.

Selection	enabled disabled	

enabled

The user can log in as usual.

disabled

The user can no longer log in. The administrator must first assign him/her the status **enabled** and provide him/her with a new start password.

[Add user]

Add a new user to the user group.

6.2.1.2.2 User administration - Access permissions

Dialog window: Configuration ► Tools ► User administration... ► User administration

If the **Access rights** item is highlighted for a user group in the left-hand part of the **User administration** dialog window, then the access permissions of this group for program parts, menu items and functions will be shown as a tree in the right-hand side of the window and can be modified there. If one item is deactivated, then all the subitems belonging to it will also be automatically deactivated. If a subitem, e.g. the **Tools** menu is deactivated in the configuration, then the box for the configuration is colored gray. Blocked functions are deactivated for the particular users, i.e. shown in gray.

Meaning of the symbols:

_	Expand view	Р	Program part
•	Collapse view	М	Menu item
И	Full access to function(s)	F	Function
И	Limited access to function(s)		
	No access to function(s)		



NOTE

All access permissions are switched on as default settings in the **Administrators** group and cannot be modified.

6.2.1.2.3 User administration - Signatures

Dialog window: Configuration ► Tools ► User administration... ► User administration

If the **Signatures** item is highlighted for a user group in the left-hand part of the **User administration** dialog window, then the rights of this group will be shown in the right-hand part and can be modified there.

Permissions for methods

Signature level 1

on | off (Default value: off)

If this check box is activated, then users in this user group can sign methods electronically at level 1.

 6.2 Administration

Signature level 2 (Lock)

on | off (Default value: off)

If this check box is activated, then users in this user group can sign methods electronically at level 2 and at the same time lock them against further modifications.

Delete signatures level 2

on | off (Default value: off)

If this check box is activated, then users in this user group can delete all signatures at level 2. This enables the method to be edited again.

Permissions for determinations

Signature level 1

on | off (Default value: off)

If this check box is activated, then users in this user group can sign determinations electronically at level 1.

Signature level 2 (Lock)

on | off (Default value: off)

If this check box is activated, then users in this user group can sign determinations electronically at level 2 and at the same time lock them against further modifications.

Delete signatures level 2

on | off (Default value: **off**)

If this check box is activated, then users in this user group can delete all signatures at level 2. This enables the determination to be edited again.

Permissions for Audit Trail

Delete records

on | off (Default value: off)

If this check box is activated, then users in this user group can confirm the deletion of Audit Trail entries with their signature.



NOTE

All signature permissions are switched on as default settings in the **Administrators** group, but they can also be switched off.

Executable methods

Only methods with signature level 2

on | off (Default value: off)

If this check box is activated, then only methods with signature level 2 can be started at the workplace by users in this user group.

6.2.1.2.4 User administration - Options

Dialog window: Configuration ► Tools ► User administration... ► User administration

If the **Options** item is highlighted for a user group in the left-hand part of the **User administration** dialog window, then options for this group will be shown in the right-hand part and can be modified there.

Default database view

Selection of the view that will open in the **Database** program part as the default setting when the user logs in.

Selection	Selection of the defined database views
-----------	---

Default configuration view

Selection of the view that will open in the **Configuration** program part as the default setting when the user logs in.

Default method group

Selection of the method group to be opened as the default setting for opening and saving methods.

Selection	Selection of the defined method groups

6.2.1.2.5 Adding a user group

Dialog window: Configuration ► Tools ► User administration... ► User administration ► [Add group] ► Add group

In order to add a new user group with default settings, an existing group must be selected and either the context-sensitive **Add group** menu item or the **[Add group]** button must be pressed. Afterwards, the **Add group** dialog window opens.

Group name

Name of the new group.

Entry 24 characters

6.2 Administration

A new group with default settings is created under this name with **[OK]**; it does not contain any users. The **Description** field and the table of group members are empty.

6.2.1.2.6 Copying a user group

Dialog window: Configuration ► Tools ► User administration... ► User administration ► [Copy group] ► Copy group

In order to copy a user group and save it under a new name, an existing group must be selected and either the context-sensitive menu item **Copy group** or the **[Copy group]** button must be pressed. The **Copy group** dialog window is then opened.

Group name

Name of the new group.

Entry

24 characters

Pressing **[OK]** creates a new group under this name that has the same properties (access permissions, signature permissions, etc.) as the selected group; it does not contain any users. The **Description** field and the table of group members are empty.

6.2.1.2.7 Renaming a user group

Dialog window: Configuration ► Tools ► User administration... ► User administration ► [Rename group] ► Rename group

In order to rename a selected user group, either the context-sensitive menu item **Rename group** or the **[Rename group]** button must be pressed. The **Rename group** dialog window is then opened.

Group name

Entry of the new group name.

Entry

24 characters

6.2.1.2.8 Deleting a user group

Function: Configuration ► Tools ► User administration... ► User administration ► [Delete group]

In order to delete a selected user group, either the context-sensitive menu item **Delete group** or the **[Delete group]** button must be pressed. The group is then deleted.



NOTE

Deleting user groups is only possible if the group no longer contains any users.

6.2.1.3 User

6.2.1.3.1 User - Details

Dialog window: Configuration ► Tools ► User administration... ► User administration

If a user in a user group is selected in the left-hand side of the **User administration** dialog window, then details of this user will be shown on the right-hand side.

User

Display of the short name of the user that must be entered in the **User** field at the time of login. This name is defined when a new user is created and cannot be subsequently modified.

Full name

Full name of the user.

Entry	256 characters	
-------	----------------	--

Status

Display of the current status of the user. Only users of the **Administrators** group can modify the status.

Selection enabled disabled removed	
--	--

enabled

Users with the **enabled** status can log in as usual. An exception is the first login after the change of status from **disabled** or **removed** to **enabled**. If this is the case, then a **Start password** must be assigned with which this user can log in again.

disabled

Users in the **disabled** status can no longer log in. They will be automatically set to this status as soon as the number of login attempts defined in the **Security settings** has been exceeded.

removed

Users in the **removed** status can no longer log in. If the set status of a user is changed from **enabled** or **disabled** to **removed**, then the user will automatically be moved to the **Removed users** group. If the status of a removed user is changed back to **enabled** or **disabled**, then a dialog window will appear for selecting the group to which the user is to be assigned.

Start password

The invisible start password is displayed with 6 * characters which must be entered by a new user the first time that new user logs in or after a

 6.2 Administration

change in status from **disabled** or **removed** to **enabled**. The administrator must assign a new start password when adding a new user or when there is a change in status to **enabled**. If the user has logged in with the start password and then entered a new password afterwards, then the start password will be deleted once again.

Entry **50 characters**

[Set start password]

Opens the **Start password** dialog window. This button is active only for users with **enabled** status. If a user has forgotten his password, then the Administrator can assign a new start password.

User group

Current user group. The administrator can modify the group assignment of the user. The user is automatically moved to the new group. A user can also be moved to a new group with Drag&Drop.

Selection Selection of the defined user groups

Remarks

Possibility to enter additional information for the user (e.g. function, address).

Entry 1000 characters

6.2.1.3.2 Adding a user

Dialog window: Configuration ► Tools ► User administration... ► User administration ► [Add user] ► Add user

There are two possible ways to add a new user:

- Select a user group and then the context-sensitive menu item Add user.
- Select a user group and press the [Add user] button.

The dialog window **Add user** is then opened in both cases.

User

Short name of the new user that must be used to log in at program start. After the name has been entered, a **Start password** must be issued with which the user is entered in the list of users.

Entry **24 characters**

6.2.1.3.3 Setting a start password

Dialog window: Configuration ► Tools ► User administration... ► User administration ► [Set start password] ► Start password

A start password can be assigned for the selected user with the **[Set start password]** button in the **User administration** dialog window. It is active only for newly created users or for those who once again have had their status set to **enabled**. The **Start password** dialog window opens.

Start password

Entry of a new start password. Password options are not used for the start password.

Entry	50 characters	
-------	---------------	--

Confirm password

Confirmation of the start password.

Entry	50 characters	
-------	---------------	--

6.2.2 Security settings

6.2.2.1 Security settings

Dialog window: **Configuration** ► **Tools** ► **Security settings...** ► **Security settings**

Overview

Parameters for login, password protection, Audit Trail and electronic signatures can be configured in the **Security settings** dialog window. They are used primarily to ensure that work is performed in accordance with the safety requirements contained in FDA Guidance 21 CFR Part 11.

With client/server systems, the security settings are globally valid for all connected clients.

Security settings can be exported and imported. This means that these settings can be exchanged between different client/server systems.

Settings according to 21 CFR Part 11

on | off (Default value: off)

If this check box is activated, then the FDA default settings pursuant to 21 CFR Part 11 will be activated on all tabs. At the same time, those check boxes which are required to be switched on pursuant to 21 CFR Part 11 will be displayed against a gray background, i.e. they can no longer be edited.

Tabs

The security settings are configured on the following tabs:

StabNet 1.1 •••••• 313

6.2 Administration

- Login/Password protection
 Settings for login and password protection
- Audit Trail/Changes
 Activation/deactivation of the Audit Trail and comments when methods, determinations or sample data are modified
- SignaturesOptions for electronic signatures
- Default reasons
 Definition of reasons for signing and modifying methods, determinations and sample data.

6.2.2.2 Login/Password protection

Tab: Configuration ➤ Tools ➤ Security settings... ➤ Security settings ➤ Login/Password protection

Definition is made on the **Login/Password protection** tab as to whether the user must log in with name only or with name and password and how the password must be monitored and constructed.

Login policies

Enforce login with user name

If this check box is activated, then every time that the program starts, the login window will appear in which the user must enter his/her user name. If this check box is deactivated, no login is necessary and the user logged in under Windows will be adopted as the user name. If this is the case, then all subsequent parameters are deactivated.

Selection	on off
Default value	off
	FDA default setting: on (can no longer be edited)

Enforce login with password

If this check box is activated, then every time there is a program start the login window will appear in which the user must enter not only his or her user name, but also a password. If this check box is deactivated, then all of the subsequent parameters are deactivated.

Selection	on off
Default value	off
	FDA default setting: on (can no longer be edited)

Password monitoring by StabNet

If this check box is activated, then the password will be monitored by **StabNet** in accordance with the subsequent parameters.

Selection	on off
Default value	on

Password monitoring by Windows

If this check box is activated, then the password will be monitored in accordance with the parameters defined in Windows. The parameters for password protection are in this case inactive.

Selection on | off
Default value off



CAUTION

In order to prevent an unwanted login by means of the **Guest** user category that is defined by default in Windows when performing password monitoring with Windows, it is imperative that this also be assigned a password or (even better) be deactivated.



CAUTION

If this option is switched on, then the user names in **Windows** and **StabNet** must necessarily match, because otherwise the user will no longer be able to log in to **StabNet**. In order to ensure this, once this selection has been made, the **Test login** dialog window (see Chapter 6.2.2.3, page 318) appears in which the logged-in user must log in with his or her Windows password. If this test login fails, then the **Security settings** dialog window will remain open.



NOTE

For Windows 2000, proceed as follows for password monitoring by Windows:

- Start/Execute "secpol.msc".
- 2. Under "Local Policies/User Rights Assignment", activate the "Act as part of the operating system" policy for all desired user groups.
- 3. Restart the computer.

Maximum number of login attempts

If this check box is activated, then a user will be set to the **disabled** status as soon as the number of login attempts defined here has been exceeded. A user with the **disabled** status can no longer log in. The counter for the login attempts is reset for the respective user once he or she has logged in successfully.

6.2 Administration

Selection	on off
Default value	off
	FDA default setting: on (can no longer be edited)
Input range	2 - 5
Default value	3

Message by e-mail

If this check box is activated, then an e-mail will be sent to the address defined under **[E-mail...]** as soon as the defined number of login attempts has been exceeded.

Selection	on off	
Default value	off	

[E-mail...]

This button opens the **Send e-mail** dialog window (see Chapter 6.2.2.7, page 321) for defining the e-mail parameters.

Logout policies

New login only for same user

Activating this check box ensures that only the same user can log in again after a manual logout. Users with administrator rights can always log in. If this option is enabled, then the following option is switched on automatically and inactive.

Selection	on off
Default value	off



NOTE

If the automatic logout is switched on (see page 316), then only the same user or a user with administrator rights can log in again, no matter what the setting for this option is.

Automatic logout after

If this check box is activated, then the user will be logged out automatically when no operating functions have been carried out with the keyboard or the mouse within this time. After this automatic logout, only a member of the same user group as the one to which the previously logged-off user belongs or a user with administrator rights can log in again.

Selection	on off	
Default value	off	

Input range	1 - 60 min
Default value	10 min

Password policies



NOTE

If the **Password monitoring by Windows** check box is activated, then the parameters for password protection are inactive. Compliance with the directives pursuant to 21 CFR Part 11 must then be ensured by the administrator in Windows.

If the **Password monitoring by Windows** check box is activated, then the parameters for password protection are inactive. Compliance with the recommended settings must then be ensured by the administrator in Windows.

Enforce unique password

Activating this check box ensures that a user can use a given password only once.

Selection	on off
Default value	off
	FDA default setting: on (can no longer be edited)

Enforce use of special characters

Activating this check box ensures that the password must contain at least one special character (@, #, \sim etc.).

Selection	on off
Default value	off

Minimum password length

Activating this check box ensures that the password must contain the indicated number of characters.

Selection	on off
Default value	off
	FDA default setting: on (can no longer be edited)
Input range	1 - 10 Characters
Default value	6 Characters

Passwords expire every

Activating this check box ensures that the user must enter a new password before the validity period expires. When a user logs in whose password will expire within the next 10 days, a corresponding message will

6.2 Administration

appear. If the validity period has expired, the user can only log in if he changes the password.

Selection	on off
Default value	off
	FDA default setting: on (can no longer be edited)
Input range	1 - 999 Days
Default value	365 Days

6.2.2.3 Test login for password monitoring by Windows

Tab: Configuration ► Tools ► Security settings... ► Security settings ► Login/Password protection ► Test login

If the **Password monitoring by Windows** option (see Chapter 6.2.2.2, page 314) is activated, then the Windows password of the user must be entered in this dialog window. The test login is used to check whether the user name matches the Windows user name.

User

Display of the current user name.

Password

Entry of the Windows password.

It is only when the test login is successful that the **Password monitoring by Windows** can be used.

6.2.2.4 Audit Trail/Modifications

Tab: Configuration ➤ Tools ➤ Security settings... ➤ Security settings ➤ Audit Trail/Modifications

The recording of the Audit Trail is switched on and off on the **Audit Trail/Modifications** tab. When a method, determination or sample data is modified, it can also be defined whether or not a reason and a comment must be given for the modification.

Audit Trail

Enable Audit Trail

If this check box is activated, then all program actions will be automatically recorded that are defined as Audit Trail actions.

Selection	on off
Default value	off
	FDA default setting: on (can no longer be edited)

Modifications

Comment on modification of methods

If this check box is activated, then each time that a method is modified a modification reason and a modification comment must be entered that will then be displayed in the method and shown in the method history. The reason and comments are also recorded in the Audit Trail.

Selection	on off
Default value	off
	FDA default setting: on (can no longer be edited)

Comment on modification of determinations

If this check box is activated, then each time that a determination is modified a modification reason and a modification comment must be entered that will then be saved in the determination and displayed in the database in the **Information** subwindow on the **Determination** tab. The reason and comments are also recorded in the Audit Trail.

Selection	on off
Default value	off
	FDA default setting: on (can no longer be edited)

Comment on modification of sample data (live)

If this check box is activated, then each time that a determination is modified a modification reason and a modification comment must be entered that will then be saved in the determination and displayed in the database in the **Information** subwindow on the **Sample** tab. The reason and comments are also recorded in the Audit Trail.

Selection	on off
Default value	off
	FDA default setting: on (can no longer be edited)

6.2.2.5 Signatures

Tab: Configuration ► Tools ► Security settings... ► Security settings ► Signatures

The parameters for the electronic signature can be configured on the **Signatures** tab.

Inactivity delay

If this check box is activated, then the dialog window for signing will be automatically closed when the entered time limit has expired.

Selection	on off	
Default value	off	

StabNet 1.1 ------ 319

6.2 Administration

Input range	1 - 60 min
Default value	10 min

Remove password after signature

If this check box is activated, then the password must be entered again after each signature.

Selection	on off
Default value	off
	FDA default setting: on (can no longer be edited)

Sign each determination/method separately

If this check box is activated, then each determination selected in the determination overview must be signed individually.

Selection	on off
Default value	off
	FDA default setting: on (can no longer be edited)

6.2.2.6 Default reasons

Tab: Configuration ► Tools ► Security settings... ► Security settings ► Default reasons

The reasons which must be entered when signing methods and determinations or when modifying methods, determinations and sample data are defined on the **Default reasons** tab.

Category

Selection of the category for which the reasons are to be defined.

Selection	Signature level 1 Signature level 2 Modifi-
	cation of methods Modification of determi-
	nations Modification of sample data
Default value	Signature level 1

Reasons

Display of the reasons defined for the selected category.

Entry 50 characters



Move text upward (modifies sequence).



Move text downward (modifies sequence).

[New]

Add a new reason.

[Edit]

Edit the selected reason.

[Delete]

Delete the selected reason.

6.2.2.7 Send e-mail

Dialog window: Configuration ► Tools ► Security settings... ► Security settings ► Login/Password protection ► [E-mail...] ► Send e-mail

E-mail address

E-mail address of the recipient.

Entry	200 characters	
-------	----------------	--

Subject

Title for describing the message.

Entry	200 characters	
-------	----------------	--

Message

The message defined here is sent as an e-mail when the maximum permitted number of login attempts has been exceeded.

The text editor for entering or changing the message is opened with or by double-clicking into the text field.



Sender

E-mail address

E-mail address of the sender.

Entry 200 characters	Entry	200 characters	
----------------------	-------	----------------	--

SMTP Server

Address of the SMTP mail server.

Entry	200 characters

Port

Port number of the SMTP mail server.

Input range	1 - 65536	
Default value	25	

6.2 Administration

Authentication

on | off (Default value: off)

Check box for activating the authentication of the sender when sending the e-mail or selection of the authentication method.

Selection	SMTP SMTP after POP
Default value	SMTP

POP server

Address of the POP mail server.

F .	
Entry	200 characters

Port

Port number of the POP mail server.

Input range	1 - 65536
Default value	110

User

Name of the user for access to mail server. The name need not match the Windows user name.

Entry	200 characters
,	

Password

Password for the access to the mail server. This password need not match the Windows password.

Entry 200 characters

6.2.2.8 Printing configuration reports (PDF)

Dialog window: File ▶ Print (PDF)... ▶ Security settings ▶ Print configuration report (PDF)

The security settings can be output as a PDF file with the **File ▶ Print** (**PDF**)... ▶ **Security settings** menu item.

6.2.3 Program administration

6.2.3.1 Program administration

Dialog window: **Configuration ► Tools ► Program administration**

Overview

Backup directories and licenses can be managed in the **Program administration** dialog window.

Tabs

The parameters for program administration are defined on the following tabs:

Backup directories
 List of the defined backup directories.

Clients
 List of computers on which StabNet is installed.

Licenses
 List of installed licenses with number of clients. This tab is only shown on the server of a client/server installation.

6.2.3.2 Backup directories

6.2.3.2.1 Backup directories

Tab: Configuration ► Tools ► Program administration ► Backup directories

Table with the defined backup directories. Click on the column title to sort the table according to the selected column in either ascending or descending order. The **Default backup directory** directory is created during installation.



NOTE

The following buttons are only active when **StabNet** is running on the server, they are inactive for the individual clients.

[New]

Add a new backup directory (see Chapter 6.2.3.2.2, page 324).

[Edit]

Edit the selected backup directory (see Chapter 6.2.3.2.3, page 324).

[Delete]

Delete the selected backup directory.



NOTE

The **Default backup directory** cannot be deleted.

6.2 Administration

6.2.3.2.2 Creating a new backup directory

Dialog window: Configuration ► Tools ► Program administration ► Backup directories ► [New] ► New backup directory

Name

Name for the backup directory.

Entry **50 characters**

Directory

Entry or selection (with $\boxed{\dots}$) of the path for the backup directory.

Entry **1000 characters**



NOTE

If the backup directory is on a network drive, the backup date should be added manually to the **Backup name** when backing up because the backup date information is not available when the directory is restored.



NOTE

Make sure that you have read and write permission for the selected directory.

6.2.3.2.3 Editing the backup directory

Dialog window: Configuration ► Tools ► Program administration ► Backup directories ► [Edit] ► Edit backup directory

Name

Name for the backup directory.

Entry **50 characters**



NOTE

The **Default backup directory** created during installation cannot be renamed.

Directory

Entry or selection (with \bigcirc) of the path for the backup directory.

Entry

1000 characters



NOTE

If the backup directory is on a network drive, the backup date should be added manually to the **Backup name** when backing up because the backup date information is not available when the directory is restored.



NOTE

Make sure that you have read and write permission for the selected directory.

6.2.3.3 Clients

Tab: Configuration ► Tools ► Program administration ► Clients

Table with information about the computers on which **StabNet** is installed. The table cannot be edited. Click on the column title to sort the table according to the selected column in either ascending or descending order.

Client ID

Display of the ID for the client that was entered during the client/server installation.

Computer name

Display of the name of the computer on which the client is installed.

Status

Display as to whether **StabNet** has been started on the client (**active**) or not (**inactive**).



NOTE

The content of the **Clients** tab can also be displayed via the **Clients** shortcut in the **..\Metrohm\stabnet\bin** directory (available only on the server) if **StabNet** is not running.

6.2 Administration

6.2.3.4 Adding licenses

Dialog window: Configuration ► Tools ► Program administration ► Licenses ► [Add licenses] ► Add licenses

The Tools ➤ Program administration ➤ Licenses ➤ [Add licenses] menu in the Configuration program part opens the Add licenses dialog window in which the new license code can be entered.

License code

Entry of the license code.

6.2.3.5 Licenses

Tab: Configuration ► Tools ► Program administration ► Licenses

Table with the licenses that are installed on the server (for **StabNet Multi**) or on the local server (for **StabNet Full**). The table cannot be edited. Click on the column title to sort the table according to the selected column in either ascending or descending order.



NOTE

In client/server systems, this tab is visible only on the server and only for members of the **Administrators** user group.

License code

Shows the entered license code.

Number of clients

Shows the number of clients that have been enabled with the license code.

[Add licenses]

Add new, additional licenses. The **Add licenses** dialog window opens (see Chapter 6.2.3.4, page 326).



NOTE

Starting with Windows Vista, Microsoft has introduced the UAC (User Account Control), which permits running tasks either as non-administrator or as administrator (without changes of user, switching off or similar). This function can, however, cause difficulties with client/server installations of **StabNet** on computers with Windows Vista or Windows 7. Therefore, to add additional licenses, proceed as follows:

For new installations

To enter additional licenses, you must start the program as an administrator (right-click on the program icon and select **Run as administrator** there). If you then add the license code for additional licenses in the usual way, then the **license.mlic** file in the **C: \Program Files\Metrohm\'Program name'\bin** directory will contain both license codes.

For existing installations

First of all, the license.mlic file in the C:\Users\'User'\AppData \Local\VirtualStore\Program Files\Metrohm\'Program name'\bin directory must be deleted. This file must not be present in the VirtualStore of any user — you must check to make sure this is the case, and any such files which may be found must be deleted. Afterwards, you must start the program as an administrator (right-click on the program icon and select Run as administrator there). If you then add the license code for additional licenses in the usual way, then the license.mlic file in the C:\Program Files\Metrohm \'Program name'\bin directory will contain both license codes.

Additional information on this topic can be found in the installation manual, which is saved in the **C:\Program Files\Metrohm\StabNet \doc** directory.

6.3 Configuration data

6.3 Configuration data

6.3.1 Export/Import

6.3.1.1 Exporting configuration data

Dialog window: Configuration ► File ► Export... ► Export configuration data

File ► Export... opens the **Export configuration data** dialog window in which the following parts of the configuration database can be selected for export:

Devices

on | off (Default value: **on**)

Export configuration data for devices (see Chapter 6.5, page 352).

Sensors

on | off (Default value: on)

Export configuration data for sensors (see Chapter 6.6, page 355).

Temperature coefficients

on | off (Default value: on)

Export temperature coefficients (see Chapter 6.7, page 365).

Export templates

on | off (Default value: **on**)

Export saved export templates (see Chapter 4.4.3, page 156).

Control chart templates

on | off (Default value: on)

Export saved control chart templates (see Chapter 4.4.2.1, page 151).

E-mail templates

on | off (Default value: on)

Export saved e-mail templates (see Chapter 6.3.3.1, page 333).

Security settings

on | off (Default value: on)

Export security settings (see Chapter 6.2.2.1, page 313).

User administration

on | off (Default value: on)

Export user administration (see Chapter 6.2.1.1, page 304).

[OK]

The **Save** dialog window for saving data, in which the name and directory for the export file must be entered, opens. The selected configuration data is then saved in a file with the extension **.mcfg**.

6.3.1.2 Importing configuration data

Dialog window: Configuration ► File ► Import... ► Import configuration data

The **Import configuration data** dialog window, in which the following parts of the configuration database can be selected for import, is opened with **File ► Import...** after selection of the *.mcfg file that is to be imported:



NOTE

Data that is not present in the export file cannot be selected.

Devices

on | off (Default value: on)

Import configuration data for devices (see Chapter 6.5, page 352).

Sensors

on | off (Default value: on)

Import configuration data for sensors (see Chapter 6.6, page 355).

Temperature coefficients

on | off (Default value: **on**)

Import temperature coefficients (see Chapter 6.7, page 365).

Export templates

on | off (Default value: on)

Import saved export templates (see Chapter 4.4.3, page 156).

StabNet 1.1 •••••• 329

6.3 Configuration data

Control chart templates

on | off (Default value: on)

Import saved control chart templates (see Chapter 4.4.2.1, page 151).

E-mail templates

on | off (Default value: on)

Import saved e-mail templates (see Chapter 6.3.3.1, page 333).

Security settings

on | off (Default value: on)

Import security settings (see Chapter 6.2.2.1, page 313).

User administration

on | off (Default value: on)

Import user administration (see Chapter 6.2.1.1, page 304).

[OK]

The selected data is imported.

6.3.2 Backup/Restore

6.3.2.1 Backing up configuration data automatically

Dialog window: Configuration ► File ► Backup ► Automatically ► Backup configuration data automatically

Automatic backup

on | off (Default value: off)

If this check box is activated, then the configuration database is saved automatically to the defined backup directory at the desired time interval. The entire configuration database (including method groups and methods) is saved at this time.

If this check box is deactivated, then the following parameters cannot be edited.

Last backup

Display of date and time of the last configuration data backup.

Next backup

Date and time at which the next backup is to be carried out. opens the **Next backup** window to select the date (see Chapter 2.5.1, page 60).

Default value	Last backup + 1 month

Interval

Entry of the time interval after which an automatic backup will take place. With each automatic or manual backup, the interval entered here will be added to the date of **Last backup** and shown in the **Next backup** field.

Input range	1 - 999
Default value	1
Selection	day(s) week(s) Month(s) year(s)
Default value	Month(s)

Backup directory

Selection of a pre-defined backup directory (see Chapter 6.2.3.2.1, page 323).



NOTE

Make sure that you have read and write permission for the selected directory.

6.3.2.2 Backing up configuration data manually

Dialog window: Configuration ► File ► Backup ► Manually ► Backup configuration data manually

Backup target

Backup directory

Selection of a pre-defined backup directory (see Chapter 6.2.3.2.1, page 323).



NOTE

Make sure that you have read and write permission for the selected directory.

Backup name

Selection of an already existing name or entry of a new name for the backup file. If an existing backup file is selected, it will be overwritten.

6.3 Configuration data

Entry	50 characters	
Selection	'Backup name'	



NOTE

If the backup directory is located on a network drive, then the date of the backup should be added to the **Backup name**, because the information regarding the backup date is not available when the information is restored.

[Start]

Start the manual backup of the complete configuration database (including method groups and methods).

6.3.2.3 Restoring configuration data

Dialog window: Restore configuration data

Backup directory

Selection of a directory predefined in the program administration that contains the backed-up configuration database.

Backup name

Selection of a backup file.

Selection	'Backup files'	
Selection	Dackup illes	

Backup date

Display of the moment at which the configuration database was backed up. This information is not available if the backup file is located on a network drive.

Database name

Display of the name of the configuration database. If the backup file is located on a network drive, this information is not available.

Size

Display of the size of the configuration database in KB.

Save as

Display of the name under which the configuration database will be restored.

[Start]

Start to restore the configuration database. After the start, a progress bar appears in the window. When the backup has been completed, the dialog window closes automatically.

6.3.3 Templates

6.3.3.1 E-mail templates

6.3.3.1.1 Managing e-mail templates

Dialog window: Configuration ► Tools ► Templates ► E-mail templates... ► E-mail templates

The saved e-mail templates are displayed in a table in the **E-mail tem- plates** dialog window. The table cannot be edited, but with a click on the column title the table can be sorted according to the selected column in either ascending or descending order.

Name

Name of the e-mail template.

Recipient

E-mail address of the recipient.

The **[Edit]** menu below the list of e-mail templates or a right-click on the table opens a menu with the following menu items:

New	Create new template. The Edit e-mail template window opens in which a new template can be defined (see Chapter 2.6.3, page 64).
Properties	Edit the selected template. The Edit e-mail template window opens in which the template can be edited (see Chapter 2.6.3, page 64).
Сору	Copy the selected template and save it under the name Copy of 'Template name' .
Delete	Delete the selected template.
Send test E-mail	Send test e-mail with the selected e-mail template.

6.3.3.1.2 Editing e-mail templates

Dialog window: Configuration ► Tools ► Templates ► E-mail templates... ► E-mail templates ► New... / Properties... ► Edit e-mail template

E-mail template

Name of the e-mail template.

Entry	16 characters	

6.3 Configuration data

Recipient

E-mail address

E-mail address of the recipient.

Entry **200 characters**

Sender

E-mail address

E-mail address of the sender.

Entry	200 characters

SMTP server

Address of the SMTP mail server.

Port

Port number of the SMTP mail server.

Input range	1 - 65536	
Default value	25	

Authentication

on | off (Default value: off)

Check box for activating the authentication of the sender when sending the e-mail or selecting the authentication method.

Selection	SMTP SMTP after POP
Default value	SMTP

POP server

Address of the POP mail server.

Entry	3 - 200 characters

Port

Port number of the POP mail server.

Input range	1 - 65536	
Default value	110	

User

Name of the user for access to mail server. The name need not match the Windows user name.

Entry	2 - 50 characters

Password

Password for the access to the mail server. This password need not match the Windows password.

Entry

50 characters

6.3.4 Options

6.3.4.1 Options - Overview

Dialog window: Configuration ► Tools ► Options... ► Options

General program properties can be set on the following tabs under **Tools ▶ Options..**:

General
 Selection of the dialog language.

Save
 Saves settings on exiting the program.

PDF Settings for PDF files.

6.3.4.2 Options - General

Tab: Configuration ➤ Tools ➤ Options... ➤ Options ➤ General

Dialog language

Dialog language

Selection of the dialog language.

Selection German | English | Additional languages (dependent on installed language patches)



NOTE

The program must be restarted for the modified setting to become effective.

6.3.4.3 Options - Save

Tab: Configuration ► Tools ► Options... ► Options ► Save

Save on closing

Here a definition can be made as to which settings are to be saved when the program is exited. If the option is **activated**, the current view with its settings will be saved automatically when the program is exited. If the option is **deactivated**, then any modifications that may have been made to the view will not be saved and at the next program start the original, manually saved view will be loaded.

StabNet 1.1 •••••• 335

6.3 Configuration data

Workplace settings

on | off (Default value: on)

Activating/deactivating the saving of the loaded method and the actions at the end of the determination.

Database settings

on | off (Default value: on)

Activates/deactivates the saving of the database view when exiting.

Configuration settings

on | off (Default value: **on**)

Activates/deactivates the saving of the configuration view when exiting.

6.3.4.4 Options - PDF

Tab: Configuration ► Tools ► Options... ► Options ► PDF

Security permissions for PDF files

Content copying or extraction allowed

on | off (Default value: on)

If this check box is deactivated, then content cannot be copied or removed from the PDF file.

Printing allowed

on | off (Default value: on)

If this check box is deactivated, then the PDF file cannot be printed.

Adding or changing comments allowed

on | off (Default value: **on**)

If this check box is deactivated, then comments and form fields can neither be added nor changed.

Modifying the document allowed

on | off (Default value: on)

If this check box is deactivated, then no changes can be made to the PDF file.

6.4 Audit Trail

6.4.1 Audit Trail - General

6.4.1.1 Audit Trail - Definition

Program window: Configuration ► Tools ► Audit Trail... ► Audit Trail

Definition

The term **Audit Trail** means the FDA-compliant protocolling of all user actions with which data is generated, modified or deleted in **StabNet**. Each of these actions is saved as a line in the Audit Trail table together with the date, time and name of the logged-in user.

Organization

All Audit Trail data is saved in the configuration database and can be backed up and restored together with this database. In **local server systems** (**StabNet Full**), this is stored in the program directory of the computer on which the program has been installed. In **client/server systems** (**StabNet Multi**), the Audit Trail data is stored centrally on the server and contains all the actions taking place on all the computers (clients) that are connected to this server.

Configuration

Recording the Audit Trail actions can be switched on and off in the Security settings (see Chapter 6.2.2.4, page 318). If the recommended settings are activated with the **[Set]** button, then the following conditions will be observed:

- Complete record of all actions with which data is created, modified or deleted in **StabNet**.
- Specification of date, time, time zone and name of the logged-in user (short name and full name) for each action.
- Mandatory entry of a comment by the user in the event of modifications of methods, determinations and sample data (only live modifications).

6.4.1.2 Audit Trail - User interface

Program window: Configuration ➤ Tools ➤ Audit Trail... ➤ Audit Trail

Elements

The user interface of the **Audit Trail** program window comprises the following elements:

- Menu bar
- Toolbar
- Filter selection
- Audit Trail table

6.4 Audit Trail

Navigation bar

6.4.1.3 Audit Trail - Menu bar

6.4.1.3.1 Audit Trail - Main menus

Program window: Configuration ► Tools ► Audit Trail... ► Audit Trail

The menu bar in the **Audit Trail** program window contains the following main items:

■ File

Print, export, archive, delete Audit Trail.

View

Update table, define column display.

Filter

Define and use special filters and quick filters.

■ Tools

Monitor Audit Trail.

Help

Open program help, display program information.

6.4.1.3.2 Audit Trail - File menu

Program window: **Configuration ► Tools ► Audit Trail... ► Audit Trail**

PDF Print (PDF)	Output Audit Trail data sets as PDF file (see Chapter 6.4.3.5, page 350).	
Export	Export Audit Trail data sets (see Chapter 6.4.3.2, page 348).	
Archive	Archive Audit Trail data sets (see Chapter 6.4.3.3, page 348).	
Delete	Delete archived Audit Trail data sets (see Chapter 6.4.3.4, page 349).	
Close	Close the Audit Trail window.	

6.4.1.3.3 Audit Trail - View menu

Program window: **Configuration ► Tools ► Audit Trail... ► Audit Trail**

Opposition	Update Audit Trail table (see Chapter 6.4.2.4, page 343).
Column display	Define columns for the Audit Trail table (see Chapter 6.4.2.2, page 341).

6.4.1.3.4 Audit Trail - Filter menu

Program window: Configuration ► Tools ► Audit Trail... ► Audit Trail

Last filter	Apply the last quick or special filter again (see Chapter 6.4.3.1.2, page 343).
Quick filter	Apply the quick filter (see Chapter 6.4.3.1.3, page 344).

Special filter	Define and apply a special filter (see Chapter 6.4.3.1.4, page 344).
Remove filter	Remove the current filter (see Chapter 6.4.3.1.5, page 348).

6.4.1.3.5 Audit Trail - Tools menu

Program window: Configuration ► Tools ► Audit Trail... ► Audit Trail

Monitoring	Define Audit Trail table monitoring (see Chapter 6.4.3.6, page 351).
Installation Log	Open the folder with the log files of the installation.
Verify export / archive	Check the checksum of an exported or archived Audit Trail file (see Chapter 6.4.3.7, page 351).

6.4.1.3.6 Audit Trail - Help menu

Program window: **Configuration ► Tools ► Audit Trail... ► Audit Trail**

StabNet Help	Open StabNet Help.
About	Display information about the program and the installation.

6.4.1.4 Audit Trail - Toolbar

Program window: **Configuration ► Tools ► Audit Trail... ► Audit Trail**

PDF	Output Audit Trail data sets as PDF file (see Chapter 6.4.1.3.2, page 338).	
₹5	Apply the last quick or special filter again (see Chapter 6.4.3.1.2, page 343).	
₹,	Apply the quick filter (see Chapter 6.4.3.1.3, page 344).	
3	Define and apply a special filter (see Chapter 6.4.3.1.4, page 344).	
½	Removes the current filter (see Chapter 6.4.3.1.5, page 348).	
ð	Update Audit Trail table (see Chapter 6.4.2.4, page 343).	
?	Opening program help.	

6.4 Audit Trail

6.4.2 Audit Trail - Table

6.4.2.1 Audit-Trail - Table

Program window: Configuration ► Tools ► Audit Trail... ► Audit Trail

Open

The Audit-Trail table is opened in the **Configuration** program part with **Tools ► Audit Trail...** or with the **2** symbol.

Contents

In the Audit Trail table, the following information regarding user actions is displayed in the default settings:

Type

Symbol for characterizing the action:



Information about the action, which is neither relevant to the security nor has modified any data.



Information about the action that is either relevant to the security or was modified with the data.



Information about errors or incorrect actions. The line numbers of these actions are shown in addition against a red background.

Date

Date, time and time zone of the action.

User

Short name of the logged-in user.

Full name

Full name of the logged-in user.

Client

Name of the client on which the action was carried out or which is affected by the action.

Category

Program part to which the action belongs.

Action

Short description of the action.

Details

Detailed information about the action.

Archived

Shows whether the action has already been archived or not (only archived actions can be deleted).

Unwanted columns can be removed with the **View ► Column display...** menu item (see Chapter 6.4.2.2, page 341).

Updating

As long as the **Audit Trail** dialog window remains open, modifications in the table that are caused by ongoing user actions will not be displayed automatically. The table must either be updated or resorted or filtered with **View Dpdate**.

Table view

The Audit Trail table cannot be edited. Click on the column title to sort the table according to the selected column in either ascending or descending order. The table view can be adapted with the left mouse button as follows:

Drag the margin between column titles:

Sets the column width

Double-click on the margin between column titles:
 Sets the optimal column width

Drag the column title:

Moves the column to the required location

6.4.2.2 Audit Trail - Column display

Dialog window: Audit Trail ► View ► Column display... ► Column display

The **Column display** dialog window is opened with **View ► Column display...**. Here the columns can be defined which are to be displayed in the Audit Trail table.

Columns available

Display of all the fields that can be displayed as columns in the Audit Trail table.

Columns displayed

Display of all the fields that are displayed as columns in the Audit Trail table. Double-clicking on a column name moves the respective column to the left-hand side (available columns).

6.4 Audit Trail



Add the selected column to the table.



Remove the selected column from the table.



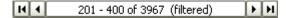
Modify the sequence of the displayed columns by moving the selected column up.



Modify the sequence of the displayed columns by moving the selected column down.

6.4.2.3 Audit Trail - Navigation bar

Program window: Configuration ► Tools ► Audit Trail... ► Audit Trail



The navigation bar shown beneath the Audit Trail table is used for navigating through extensive tables in which not all the entries can be shown at the same time. It contains the following elements:

И

Jumps to first set of entries in the Audit Trail table.

•

Returns to previous set of entries in the Audit Trail table.

```
201 - 400 of 3967 (filtered)
```

Display of the selected set of #### - #### entries in the Audit Trail table. If the table has not been filtered, then the total number of entries will also appear. If the table has been filtered, then the total number of filtered entries will appear with the info (filtered).

F

Moves to next set of entries in the Audit Trail table.

ы

Jumps to last set of entries in the Audit Trail table.

6.4.2.4 Updating Audit Trail

Menu item: Audit Trail ► View ► Update

The Audit Trail table is updated with the **View Dpdate** menu item or with the **symbol**.



NOTE

The Audit Trail table is automatically updated when it is opened, but not afterwards.

6.4.3 Audit Trail - Functions

6.4.3.1 Filtering the Audit Trail

6.4.3.1.1 Audit Trail - Filter selection

Program window: Configuration ➤ Tools ➤ Audit Trail... ➤ Audit Trail

The following possibilities exist for filtering entries in the Audit Trail table:

Filter

Selection of the filter with which the Audit Trail table is to be filtered.

Selection	All entries Quick filter Temporary filter 'Fil-
	ter name'
Default value	All entries

All entries

The table is shown unfiltered.

Quick filter

The table is filtered according to the most recently defined quick filter (see Chapter 6.4.3.1.3, page 344).

Temporary filter

The table is filtered according to the special filter that was most recently defined but not yet saved (see Chapter 6.4.3.1.4.1, page 344).

'Filter name'

The table is filtered according to the selected and saved special filter (see Chapter 6.4.3.1.4.1, page 344).

6.4.3.1.2 Audit Trail - Last filter

Menu item: Audit Trail ▶ Filter ▶ Last filter

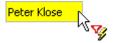
The most recently applied filter is reactivated with the **Filter ► Last filter** menu item or with the **S** symbol in the **Audit Trail** program window.

6.4 Audit Trail

6.4.3.1.3 Audit Trail - Quick filter

Menu item: Audit Trail ► Filter ► Quick filter

A rapid filtration can be carried out in accordance with the content of the selected table field using the **Filter** • **Quick filter** menu item or the symbol in the **Audit Trail** program window. After this function has been selected, the field in which the cursor is located will have a colored background when navigating within the Audit Trail table. At the same time, the following special filter symbol appears:



Double-clicking with the left mouse button on the field selected in the table will cause its contents to be set as the filter criterion, and this filter will be applied directly to the table.



NOTE

The quick filter can be applied again within the filtered table, so that the number of entries can be limited step by step.

6.4.3.1.4 Audit Trail - Special filter

6.4.3.1.4.1 Special filter table

Dialog window: Audit Trail ► Filter ► Special filter... ► Special filter - Database 'ConfigDB'

The Filter ➤ Special filter... menu item or the symbol in the Audit

Trail program window is used to open the Special filter - Database

'ConfigDB' dialog window for the definition of user-specific filters.

Filter

Selection of the filter to be loaded for editing. An empty table with the name **New filter** is loaded per default.

Selection	'Filter name' New filter	
Default value	New filter	

[Save filter]

Open the **Save filter** dialog window in which the filter criteria entered in the table can be saved as a special filter under the required name (see Chapter 6.4.3.1.4.3, page 347).

[Delete filter]

The currently loaded special filter will be deleted.

Table view

The overview table shows all the defined filter criteria and cannot be directly edited. The table view can be adapted with the left mouse button as follows:

Drag the margin between column titles:

Sets the column width

Double-click on the margin between column titles:
 Sets the optimal column width

For the meaning of the columns, see (see Chapter 6.4.3.1.4.2, page 345).

Menu items

The **[Edit]** menu beneath the filter table contains the following menu items:

Edit line	Open the Edit filter criterion %1 dialog window in which the filter conditions of the line selected in the table can be edited(see Chapter 6.4.3.1.4.2, page 345).
Insert new line	Insert a new empty line above the line selected in the table. The Edit filter criterion # dialog window will then open automatically (see Chapter 6.4.3.1.4.2, page 345).
Cut lines	Transfer the selected lines to the clipboard.
Copy lines	Copy the selected lines to the clipboard.
Paste lines	Paste lines from the clipboard above the selected line.
Delete lines	Delete the selected lines.

[Apply filter]

Apply the filter conditions to the Audit Trail table.

6.4.3.1.4.2 Special filter - Editing filter criterions

Dialog window: Audit Trail ➤ Filter ➤ Special filter... ➤ Special filter - Database 'ConfigDB' ➤ [Edit] ➤ Edit line ➤ Edit filter criterion #

[Edit] ► **Edit line** is used to open the **Edit filter criterion #** dialog window in which the filter criterion selected in the filter table can be edited.

Link

Selection of the type of link (logical operator) with the preceding filter condition.

Selection	AND OR	
Default value	AND	

6.4 Audit Trail

Field

Selection of the field according to which the filtering is to be carried out.

Selection	Last 10 selected fields	
Selection	Last 10 selected fields	

[More...]

Opens the **Filter - Field selection** dialog window in which all fields according to which filtration can be performed are listed in the form of a tree. A field can be applied in the filter condition by highlighting it and closing the dialog window with **[OK]**.

Condition

Type

Selection of the type of format for columns in which several types are possible. In the case of columns with a fixed type, this will only be indicated.

Selection	Text Number Date
Default value	Text

Operator

Selection of the comparison operator for the filter criterion.

for fields of the 'Text' type

Selection	= <> empty not empty
Default value	=

for fields of the 'Number' type

Selection	= <> < > <= >= invalid out of limits
Default value	=

for fields of the 'Date' type

, ,	21
Selection	= <> < > <= >= Today
Default value	=



NOTE

If selection is made for the **Date** column of the **Operator Today**, then filtration will be carried out in accordance with the current date. A range in days (**-9999 - 9999**) can also be defined in the **Comparative value** field, according to which filtration should be carried out starting from the current date.

Comparative value

Selection or entry of the comparative value for the filter criterion.

for fields of the 'Text' type

Entry **250 characters**** can be used as a wildcard for any strings.

for fields of the 'Number' type

Entry **Numerical value**

for fields of the 'Date' type

opens the **Select date** window to select the date (see Chapter 2.5.1, page 60).

for fields of type 'Date' and 'Operator = Today'

Input range -9999 - 9999
Default value 0

Match case

on | off (Default value: off)

If this option is activated, then upper/lower case will be differentiated when filtering fields with **Type** = **Text**.

Use asterisk (*) as wildcard

on | off (Default value: off)

If this option is activated, then the asterisk * is used as a placeholder for any character strings when filtering fields for which **Type** = **Text**.

6.4.3.1.4.3 Special filter - Saving a filter

Dialog window: Audit Trail ➤ Filter ➤ Special filter... ➤ Special filter - Database 'ConfigDB' ➤ [Save filter] ➤ Save filter

The **[Save filter]** button is used to open the **Save filter** dialog window for saving a special filter.

Filter name

Name under which the special filter is to be saved.

Entry **50 characters**

[Save]

Save the filter under the given name.



NOTE

The filters are saved globally in the configuration database and are therefore available for all clients.

6.4 Audit Trail

6.4.3.1.5 Audit Trail - Removing a filter

Menu item: Audit Trail ▶ Filter ▶ Remove filter

The most recently applied filter is removed again with the Fil-

ter ► Remove filter menu item or with the symbol in the Audit Trail program window and all entries are displayed.

6.4.3.2 Exporting the Audit Trail

Dialog window: Audit Trail ➤ File ➤ Export... ➤ Export Audit Trail

The **Export Audit Trail** dialog window opens with the **File ► Export...** menu item.

Save file as

Entry or selection (with) of the complete path and the file name for saving the export file.

Entry	1000 characters	
-------	-----------------	--

Selection

Selection	All records Selected records
Default value	All records

All records

All the entries from the filtered Audit Trail table are exported.

Selected records

Only the entries selected in the Audit Trail table will be exported.



NOTE

Audit Trail entries are exported in text format and cannot be imported back into the Audit Trail table. The export file contains a checksum which makes it possible to verify whether the file has been modified later on.

6.4.3.3 Archiving the Audit Trail

Dialog window: Audit Trail ► File ► Archive... ► Archive Audit Trail

The **Archive Audit Trail** dialog window opens with the **File** • **Archive...** menu item.

Target directory

Entry or selection (with w) of the directory in which the Audit Trail entries are to be archived.

	1000 alana atawa	
Fntrv	1000 characters	
L. 1 C. y	1000 characters	

Selection

Selection	All records Records until
Default value	All records

All records

All entries from the filtered Audit Trail table will be archived.

Records until

Only data sets from the Audit Trail table up to the selected date will be archived.



NOTE

Archiving Audit Trail entries is identical to exporting them, i.e. the Audit Trail entries are stored in text format and cannot be imported back into the Audit Trail Table. The difference between this and exporting is that the archived entries can be highlighted in the **Archived** column and then deleted. The archive file contains a checksum which makes it possible to verify whether the file has been modified later on.

6.4.3.4 Deleting the Audit Trail

Dialog window: Audit Trail ► File ► Delete ► Delete Audit Trail

The **Delete Audit Trail** dialog window opens with the **File** ▶ **Delete** menu item.

Selection

Selection	All archived records Archived records until
Default value	All archived records

All archived records

All of the entries that are already archived will be deleted from the Audit Trail table.

Archived records until

Only the archived entries that were created by the selected date entry will be deleted from the Audit Trail table.

User 1

User

Short name of the first user who has the permission to delete Audit Trail entries.

Entry	24 characters

6.4 Audit Trail

Password

Password of the first user who has the permission to delete Audit Trail entries.

Entry **24 characters**

User 2

User

Short name of the second user who has the permission to delete Audit Trail entries.

Entry	24 characters
Littiy	24 Characters

Password

Password of the second user who has the permission to delete Audit Trail entries.

	24 characters	
⊢ntr\/	24 characters	
Liitiy	Z+ characters	

6.4.3.5 Printing the Audit Trail

Dialog window: Audit Trail ► File ► Print (PDF)... ► Print Audit Trail (PDF)

The **Print Audit Trail (PDF)** dialog window opens with the **File** ▶ **Print (PDF)...** menu item or the symbol in the **Audit Trail** program window.

Selection

Selection	All records Selected records
Default value	Selected records

All records

All the entries from the filtered Audit Trail table will be printed.

Selected records

Only the entries selected in the Audit Trail table will be printed.

Orientation

Selection	Portrait Landscape
Default value	Portrait

Portrait

Output of the Audit Trail table in portrait format.

Landscape

Output of the Audit Trail table in landscape format.

[OK]

The Audit Trail table is output in the chosen format as a PDF file that is opened directly in Acrobat Reader, from where it can then be printed out or saved.

6.4.3.6 Monitoring the Audit Trail

Dialog window: Audit Trail ► Tools ► Monitoring ► Audit Trail monitoring

The **Audit Trail monitoring** dialog window opens with the **Tools ► Monitoring** menu item.

Monitor number of entries

on | off (Default value: **on**)

If this check box is activated, then the number of entries in the Audit Trail table will be monitored.

Maximum number

Maximum number of entries allowed in the Audit Trail table. An error message appears if this number is exceeded.

Input range	10 - 500000	
Default value	100000	

6.4.3.7 Verifying the Audit Trail

Dialog window: Audit Trail ► Tools ► Verify export / archive ► Verify audit trail export / archive

The **Tools** ➤ **Verify export / archive** menu item is used to open the **Verify audit trail export / archive** dialog window in which the checksum of a file that is exported from the Audit Trail or archived can be checked.

Select file

Entry or selection (with $\overline{ }$ of the file that is to be verified.

[Verify]

Trigger the verification of the selected file.

Result

The result of the checksum verification is displayed.

6.5 Devices subwindow

6.5 Devices subwindow

6.5.1 Devices - General

Subwindow: ▶ Devices

The **Devices** subwindow contains the device table with all of the automatically recognized devices and is always shown in the **Configuration** program part, i.e. it cannot be removed from the Configuration view. The subwindow can be enlarged and reduced as required; it can also be maximized.

Devices connected to the PC via USB are automatically recognized at the start of the program and entered in the device table. If the connection between PC and device or the power supply is interrupted, then the device will remain in the device table with **not ok** status. If it is reconnected then it will be recognized automatically by its serial number and again assigned to the existing device entry. This causes the status to change to **ok**.

6.5.2 Device table

6.5.2.1 Device table - User interface

Subwindow: **Configuration** ► **Devices**

Contents

The following information about automatically recognized devices is shown in the device table by default:

Device name

Designation of the device.

Device type

Type of device.

Device serial number

Serial number of the device.

Status

Device status. A device that is ready has the status **ok** shown in green, a device that is not ready has the **not ok** status shown in red.

Set to work

Date on which the device was added to the device table.

Next GLP test

Date on which the next GLP test is due. If GLP monitoring is switched on and the set date is before the current date (i.e. the GLP test has not yet been carried out) then the date will be shown in red.

Remarks

Remarks about the device.



NOTE

Lines that contain red entries will also show the line number with a red background.

As soon as a determination is started at a workplace, the device being used for this purpose will be occupied, i.e. it cannot be used or configured at a different workplace until the determination has been finished. The line for an occupied device is shown in gray letters.

Table view

The device table cannot be edited directly. Click on the column title to sort the table according to the selected column in either ascending or descending order. The table view can be adapted with the left mouse button as follows:

- Sets the column width
 Drag the margin between column titles
- Sets the optimal column width
 Double-click on the margin between column titles
- Moves the column to the required location
 Drag the column title

Functions

The **[Edit]** menu beneath the device table contains the following menu items:

Delete	Delete the selected device. Only devices in the not ok status can be deleted (see Chapter 6.5.2.2, page 354).
Properties	Edit the selected device (see Chapter 6.5.3, page 355).
Column display	Define columns for the device table (see Chapter 6.5.2.3, page 354).
Print (PDF)	Output of the device table as a PDF file (see Chapter 6.5.2.4, page 355).
Initialize	Initialize the selected device.

6.5 Devices subwindow

6.5.2.2 Deleting a device

Menu item: Configuration ▶ Devices ▶ [Edit] ▶ Delete

The device selected in the device table is deleted with **[Edit]** ▶ **Delete**.



NOTE

Only devices in the **not ok** status can be deleted (i.e. devices that are not connected).

6.5.2.3 Devices - Column display

Dialog window: Configuration ➤ Devices ➤ [Edit] ➤ Column display... ➤ Column display

The **Column display** dialog window is opened with **[Edit] Column display...**. Here you can define the columns that are to be shown in the device table.

Columns available

Display of all the fields that can be shown as columns in the device table.

Columns displayed

Display of all the fields that will be shown as columns in the device table. In the default settings, the **Device name**, **Device type**, **Device serial number**, **Status**, **Set to work**, **Next GLP test** and **Remarks** columns are displayed. The **Device name** and **Device type** columns are always present and cannot be removed.



Add the selected column to the table.



Remove the selected column from the table.



Modify the sequence of the displayed columns by moving the selected column up.



Modify the sequence of the displayed columns by moving the selected column down.

6.5.2.4 Printing the list of devices

Dialog window: Configuration ▶ Devices ▶ [Edit] ▶ Print (PDF)... ▶ Print list of devices (PDF)

The **Print list of devices (PDF)** dialog window is opened with **[Edit]** ▶ **Print (PDF)...**.

Orientation

Selection	Portrait Landscape
Default value	Portrait

Portrait

Output of the device table in portrait format.

Landscape

Output of the device table in landscape format.

[OK]

The device table is shown in the required format as a PDF file and can be opened directly in Acrobat Reader, where it can then be printed out and/ or saved.

6.5.3 Device properties

Dialog window: Configuration ➤ Devices ➤ [Edit] ➤ Properties... ➤ Properties - 'Device type' - 'Device name'

The Properties window is opened with the **[Edit] ▶ Properties...** menu item in the **Devices** subwindow for the device selected in the device table in which the parameters of the device can be edited. Properties can be set for the following devices:

- 892 Professional Rancimat
- 893 Professional Biodiesel Rancimat
- 895 Professional PVC Thermomat

6.6 Sensors subwindow

6.6.1 Sensors - General

Subwindow: **Configuration ► Sensors**

Sensors subwindow

The **Sensors** subwindow contains the Sensor table with all manually added sensors. It can be shown in the **Configuration** program part as a part of the Configuration view or (if not present in the user interface) in a separate window with **View** ▶ **Quick access**. The subwindow can be enlarged and reduced as required; it can also be maximized.

6.6 Sensors subwindow

6.6.2 Sensor table

6.6.2.1 Sensor table - User interface

Subwindow: **Configuration** ► **Sensors**

Contents

The following information about the configured sensors is displayed as the default settings in the sensor table:

Sensor name

Name of the sensor.

Sensor type

Type of the sensor.

Cell constant

Cell constant of the conductivity sensor.

Set to work

Date on which the sensor was set to work for the first time.

Expiry date

Expiry date of the sensor. If sensor monitoring is switched on and if the set date is before the current date (i.e. the working life has expired) then the date will be shown in red.

Next calibration

Date on which the next cell constant calibration is to be carried out.

Additional columns from the Sensor properties can be displayed with the **Edit ► Column display...** menu item.



NOTE

Lines that contain red entries will also show the line number with a red background.

Table view

The sensor table cannot be edited directly. Click on the column title to sort the table according to the selected column in either ascending or descending order. The table view can be adapted with the left mouse button as follows:

• Sets the column width

Drag the margin between column titles

Sets the optimal column width Double-click on the margin between column titles

Moves the column to the required location
 Drag the column title with left mouse button held pressed down.

Functions

The Edit menu beneath the sensor table contains the following menu items:

New ▶	Selection of the sensor type that is to be newly created (see Chapter 6.6.2.2, page 357).
Conductivity sensor	Add conductivity sensor.
Temperature sensor	Add temperature sensor.
Delete	Delete the selected sensor (see Chapter 6.6.2.3, page 357).
Properties	Edit the properties of the selected sensor (see Chapter 6.6.3.1, page 359).
Column display	Define columns for the sensor table (see Chapter 6.6.2.4, page 357).
Print (PDF)	Output sensor table as PDF file (see Chapter 6.6.2.5, page 358).

6.6.2.2 Adding a new sensor

Menu item: Configuration ➤ Sensors ➤ [Edit] ➤ New... ➤ 'Sensor type'

New conductivity sensors and temperature sensors must always be created and configured manually with the **[Edit] ► New...** menu and the selection of the sensor type.

After the sensor type has been selected, the **Sensor** - dialog window is opened for the editing of the data of the new sensor (see Chapter 6.6.3.2, page 359). All fields have the default settings at this time.

6.6.2.3 Deleting a sensor

Menu item: Configuration ► Sensors ► [Edit] ► Delete

The sensor selected in the table can be deleted with the **[Edit] ► Delete** menu item.

6.6.2.4 Sensors - Column display

Dialog window: Configuration ► Sensors ► [Edit] ► Column display... ► Column display

The **[Edit]** Column display... menu item is used to open the Column display dialog window for selecting the columns that are to be displayed in the Sensor table and for defining their sequence.

6.6 Sensors subwindow

Columns available

Display of all fields which can be displayed as columns in the overview table for the sensors.

Columns displayed

Display of all fields which are displayed as columns in the overview table for the sensors. In the default settings, the **Sensor name**, **Sensor type**, **Cell constant**, **Set to work**, **Expiry date** and **Next calibration** columns are displayed in this sequence. **Sensor name** and **Sensor type** are fixed in place and cannot be removed.

[>>]

Add the selected column to the table.

[<<]

Remove the selected column from the table.

[1]

Modify the sequence of the displayed columns by moving the selected column up.

[\]

Modify the sequence of the displayed columns by moving the selected column down.

6.6.2.5 Printing the sensor list

Dialog window: Configuration ► Sensors ► [Edit] ► Print (PDF)... ► Print list of sensors (PDF)

The **Print list of sensors (PDF)** dialog window is opened with **[Edit]** ▶ **Print (PDF)...**.

Orientation

Selection of the printing orientation.

Selection	Portrait Landscape
Default value	Portrait

Portrait

Output of the sensor table in portrait format.

Landscape

Output of the sensor table in landscape format.

[OK]

The sensor table is shown in the required format as a PDF file and can be opened directly with Acrobat Reader, where it can then be printed out and/or saved.

6.6.3 Sensor properties

6.6.3.1 Editing the sensor properties

Dialog window: Configuration ➤ Sensors ➤ [Edit] ➤ Properties... ➤ Sensor - 'Name'

The Properties window is opened with the **[Edit]** ▶ **Properties...** menu item in the **Sensors** subwindow for the sensor selected in the sensor table in which the parameters of the sensor can be edited. It consists of the following tabs:

Sensor type = Temperature sensor

Sensor

General information about the sensor, such as sensor name, sensor type, set to work, etc.

Calibration data
 Information about the calibration of the temperature sensor.

Sensor type = Conductivity sensor

Sensor

General information about the sensor, such as sensor name, sensor type, set to work, etc.

Calibration data

Information about the calibration of the conductivity sensor.

Limit values
 Definition of limits monitoring of the cell constant.

6.6.3.2 Properties - Sensor

Tab: Configuration ► Sensors ► [Edit] ► Properties... ► Sensor - 'Sensor name'

Sensor name

Name of the sensor.

Freely selectable name for the sensor.

Entry	24 characters

Sensor type

Display of the selected sensor type. (**Conductivity sensor** or **Temperature sensor**).

Order number

Order number of the sensor.

Entry	24 characters	
Default value	'empty'	

Sensor serial number

Serial number of the sensor.

6.6 Sensors subwindow

Entry	10 characters	
Default value	'empty'	

Comment

Possibility of entering remarks about the sensor.

Entry	24 characters
Default value	'empty'

Set to work

The current date is entered automatically in this field at the time a new sensor is entered or applied. When editing an existing sensor, the date can

be selected by pressing in the Calendar help window. The start-up date is used for sensor monitoring (**Set to work** + **Working life** = **Expiry date**).

Sensor monitoring

on | off (Default value: off)

The working life of the sensor is monitored when this check box is activated.

Working life

Working life of the sensor in days. If a value is entered here, then the **Expiry date** will be automatically adapted.

Input range	0 - 999 Days
Default value	999 Days

Expiry date

Expiry date of the sensor. The date can be selected by pressing in the **Select date** dialog window (see Chapter 2.5.1, page 60). After a date has been entered, the value for the **Working life** will be automatically adapted.

Default value	Set to work+ 999 days	
---------------	-----------------------	--

Message

Message by e-mail

on | off (Default value: off)

The message is sent to the address defined under **[E-mail...]** when this check box is activated. The message is sent in text format.

[E-mail...]

[E-mail...] opens the **Send e-mail** window (see Chapter 2.6.1, page 63).

Acoustic signal

on | off (Default value: off)

If this check box is activated, an acoustic signal will be emitted

Action

If during monitoring it is found that the validity period of the sensor has expired, then one of the following actions will be triggered automatically during the start test:

Selection	Document message only Display and docu-
	ment message Do not start the determina-
	tion
Default value	Display and document message

Document message only

The message that the validity period of the sensor has been exceeded will be automatically saved in the determination.

Display and document message

A message is displayed and you can select whether you want to continue the determination or cancel it. If the determination is continued, then the message that the validity period of a sensor has been exceeded will be automatically saved in the determination.

Do not start the determination

The determination is not started. The following message must be confirmed with **[OK]**.

6.6.3.3 Properties - Calibration data (conductivity sensor)

Tab: Configuration ➤ Sensors ➤ [Edit] ➤ Properties... ➤ Calibration data

Cell constant

The value of the cell constants of the conductivity sensor can be determined automatically with the cell constant determination (see Chapter 3.5, page 86) or entered manually. This is possible only if no determination is running.

Input range	0.10 - 10.00 /cm (Increment: 0.01)
Default value	1.10 /cm

Conductivity of standard solution

Display of the conductivity of the standard solution (see Chapter 3.5, page 86) that is specified during the cell constant determination. If the **Cell constant** is entered manually, then ----- will be entered here automatically.

6.6 Sensors subwindow

Temperature of standard solution

Display of the temperature of the standard solution (see Chapter 3.5, page 86) that is specified during the cell constant determination. If the **Cell constant** is entered manually, then ----- will be entered here automatically.

Calibration date

Shows the date and time of the last calibration.

The start-up date is used for calibration data monitoring (**Calibration** date + **Calibration** interval = **Next calibration**).

Calibration method

Display of the method with which the cell constant was determined (**manual** with manual entry, **auto** with automatic cell constant determination).

User

Display of the user who was logged in during the manual entry of the cell constant or at the time of the start of the automatic cell constant determination.

Device name

Name of the device that was used to carry out the cell constant determination.

Device serial number

Serial number of the device that was used to carry out the cell constant determination.

Position

Display of the position at which the cell constant was automatically determined.

Calibration data monitoring

on | off (Default value: **off**)

If this check box is activated, then the validity period of the cell constant is monitored.

Calibration interval

Validity period of the cell constant in days. If a value is entered here, then the date for **Next calibration** will be automatically adapted.

Input range	0 - 999 Days
Default value	999 Days

Next calibration

Date on which the next cell constant determination must be carried out.

The date can be selected by pressing in the **Select date** dialog window. After the date has been entered, the value for **Calibration interval** will be automatically adapted.

Default value Calibration date+ 999 days

Message

Message by e-mail

on | off (Default value: off)

The message is sent to the address defined under **[E-mail...]** when this check box is activated. The message is sent in text format.

[E-mail...]

[E-mail...] opens the **Send e-mail** window (see Chapter 2.6.1, page 63).

Acoustic signal

on | off (Default value: off)

If this check box is activated, an acoustic signal will be emitted

Action

If during monitoring it is found that the validity period of the cell constants has expired, then one of the following actions will be triggered automatically during the start test:

Selection	Document message only Display and docu-
	ment message Do not start the determina-
	tion
Default value	Display and document message

Document message only

The message that the validity period of the cell constants has been exceeded will be automatically saved in the determination.

Display and document message

A message is displayed and you can select whether you want to continue the run or cancel it. If the run is continued, the message that the validity period of the cell constants has been exceeded is automatically saved in the determination.

Do not start the determination

The determination is not started. The following message must be confirmed with **[OK]**.

6.6 Sensors subwindow

6.6.3.4 Properties - Calibration data (temperature sensor)

Tab: Configuration ► Sensors ► [Edit] ► Properties... ► Calibration data

Calibration point 1

Temperature

Manual entry of the temperature.

Input range	-250.0 - 999.9 °C (Increment: 0.1)
Default value	0.0 °C

Resistance

Manual entry of the resistance.

Input range	0.000 - 999.999 Ohm (Increment: 0.001)
Default value	'empty' Ohm

Calibration point 2

Temperature

Manual entry of the temperature.

Input range	-250.0 - 999.9 °C (Increment: 0.1)
Default value	100.0 °C

Resistance

Manual entry of the resistance.

Input range	0.000 - 999.999 Ohm (Increment: 0.001)
Default value	'empty' Ohm

Calibration point 3

Temperature

Manual entry of the temperature.

Input range	-250.0 - 999.9 °C (Increment: 0.1)
Default value	200.0 °C

Resistance

Manual entry of the resistance.

Input range	0.000 - 999.999 Ohm (Increment: 0.001)
Default value	'empty' Ohm

User

Display of the user who was logged in during the entry of the calibration data.

6.6.3.5 **Properties - Limit values**

Tab: Configuration ➤ Sensors ➤ [Edit] ➤ Properties... ➤ Limit values



NOTE

This tab only appears for sensors of the **Conductivity sensor** type.

Cell constant monitoring

on | off (Default value: off)

If this check box is activated, then the value of the cell constant for the conductivity sensor is monitored.

Lower limit

Lower limit value for the cell constant.

Input range	0.10 - 10.00 /cm (Increment: 0.01)
Default value	0.90 /cm

Upper limit

Upper limit value for the cell constant.

Input range	0.10 - 10.00 /cm (Increment: 0.01)
Default value	1.30 /cm

6.7 Temperature coefficients subwindow

6.7.1 Temperature coefficients - General

Subwindow: **Configuration** ▶ **Temperature coefficients**

Temperature coefficients subwindow

The **Temperature coefficients** subwindow can be displayed in the **Configuration** program part as a part of the Configuration view or (if not present in the user interface) in a separate window with **View** ▶ **Quick access**. The subwindow can be enlarged and reduced as required; it can also be maximized.

6.7.2 Temperature coefficients table

6.7.2.1 Table of temperature coefficients - User interface

Subwindow: **Configuration** ▶ **Temperature coefficients**

Contents

In the default settings, the following information regarding the temperature coefficients is shown in the table of temperature coefficients:

StabNet 1.1 •••••• 365

Name

Name of the temperature coefficient.

Type

Type of the temperature coefficient.

Q10 factor

Value of the Q10 factor.

Arrhenius coefficient

Value of the Arrhenius coefficient.

Assignment date

Date and time of last value assignment.

User

User who undertook the assignment of values.

Expiry date

Expiry date of the temperature coefficient.

Table view

The temperature coefficients table cannot be edited directly. Click on the column title to sort the table according to the selected column in either ascending or descending order. The table view can be adapted with the left mouse button as follows:

Sets the column width

Drag the margin between column titles

Sets the optimal column width

Double-click on the margin between column titles

Moves the column to the required location
 Drag the column title

Functions

The **[Edit]** menu beneath the table of the temperature coefficients contains the following menu items:

New ►	Add a new temperature coefficient (see Chapter 6.7.2.2, page 367).
Arrhenius	Add the Arrhenius coefficient.
Q10	Add the Q10 factor.
Delete	Delete the selected temperature coefficient (see Chapter 6.7.2.3, page 367).

Properties... Edit the selected temperature coefficient (see Chapter 6.7.3.1, page 368).

Column display... Define the columns for the table of temperature coefficients (see Chapter

Define the columns for the table of temperature coefficients (see Chapter 6.7.2.4, page 367).

Print (PDF)... Output the table of temperature coefficients as a PDF file (see Chapter 6.7.2.5, page 368).

6.7.2.2 Adding a new temperature coefficient

Menu item: Configuration ► Temperature coefficients ► [Edit] ► New...

A new temperature coefficient is added manually to the temperature coefficients table with **[Edit]** ▶ **New...** ▶ **Arrhenius** or

[Edit] ► **New...** ► **Q10**. The Properties window then opens automatically for editing the temperature coefficient. After the Properties window has been closed, the temperature coefficient will be entered in the temperature coefficients table. The parameters can be modified at any time with **[Edit]** ► **Properties...**.

6.7.2.3 Deleting a temperature coefficient

Menu item: Configuration ► Temperature coefficients ► [Edit] ► Delete

The temperature coefficient selected in the table is deleted with **[Edit] ▶ Delete**.

6.7.2.4 Temperature coefficients - Column display

Dialog window: Configuration ► Temperature coefficients ► [Edit] ► Column display... ► Column display

The **Column display** window is opened with **[Edit] Column display...**. Here you can define the columns that are to be shown in the table of temperature coefficients.

Columns available

Display of all the fields that can be displayed as columns in the table of temperature coefficients.

Columns displayed

Display of all the fields that are displayed as columns in the table of temperature coefficients. In the default settings, the Name, Type, Value, Default factor, Assignment date, Assignment method, User and Expiry date columns are displayed. The Name column is always present and cannot be removed.

>>

Add the selected column to the table.

StabNet 1.1 ----- 367



Remove the selected column from the table.



Modify the sequence of the displayed columns by moving the selected column up.



Modify the sequence of the displayed columns by moving the selected column down.

6.7.2.5 Printing the list of temperature coefficients

Menu item: Configuration ► Temperature coefficients ► [Edit] ► Print (PDF)... ► Printing the list of temperature coefficients (PDF)

The **Printing the list of temperature coefficients (PDF)** dialog window is opened with **[Edit]** ▶ **Print (PDF)**....

Orientation

Selection	Portrait Landscape
Default value	Portrait

Portrait

Output of the table of the temperature coefficients in portrait format.

Landscape

Output of the table of the temperature coefficients in landscape format.

[OK]

The table of the temperature coefficients is shown in the required format as a PDF file and can be opened directly with Acrobat Reader; it can then be printed and/or saved.

6.7.3 Temperature coefficients - Properties

6.7.3.1 Temperature coefficient - Editing the properties

Dialog window: Configuration ➤ Temperature coefficients ➤ [Edit] ➤ Properties... ➤ Temperature coefficient - 'Name'

The parameters for the selected temperature coefficient are defined.

The Properties window is opened with the **[Edit]** ▶ **Properties...** menu item in the **Temperature coefficients** subwindow for the temperature coefficient selected in the table in which the parameters of the temperature coefficient can be edited:

Type = Arrhenius

• Temperature coefficient

Type = Q10

• Temperature coefficient

6.7.3.2 Properties - Temperature coefficient (Arrhenius)

Tab: Configuration ➤ Temperature coefficients ➤ [Edit] ➤ Properties... ➤ Temperature coefficient - 'Name' ➤ Temperature coefficients

Name

Name of the temperature coefficient.

Entry	40 characters	

Type

Display of the temperature coefficient type (**Arrhenius**).

Arrhenius coefficient

Value of the Arrhenius coefficient

Input range	10 - 1,000,000 (Increment: 1)
Default value	11000

Comment

Remarks on the temperature coefficient.

Entry	40 characters
Default value	'empty'

Assignment method

Display as to whether the assignment of values took place manually or by adoption from the extrapolation. If the value was entered manually, **manual** is displayed; if it was adopted using the **[Save coefficient]** button in the **Extrapolation** dialog window, then from extrapolation is displayed.

User

The user who was logged in during value assignment or who entered the value manually.

Assignment date

Display of the date and time of the last value assignment. The current date is entered automatically in this field at the time a new temperature coefficient is entered. The assignment date is used for the monitoring of the temperature coefficients (**Assignment date** + **Working life** = **Expiry date**).

Monitoring the temperature coefficient

on | off (Default value: off)

If this check box is activated, then the working life of the temperature coefficient is monitored.

Working life

The working life of the temperature coefficient in days. If a value is entered here then the **Expiry date** will be automatically adapted.

Input range	0 - 999 Days
Default value	999 Days

Expiry date

Expiry date of the temperature coefficient. The date can be selected by pressing in the **Select date** dialog window. After a date has been entered, the value for the **Working life** will be automatically adapted.

Default value Date of assignment + 999 days

Message

Message by e-mail

on | off (Default value: off)

If this option is activated, the message is sent to the address defined under **[E-mail...]**. The message is sent in text format.

[E-mail...]

[E-mail...] opens the **Send e-mail** window (see Chapter 2.6.1, page 63).

Acoustic signal

on | off (Default value: off)

If this option is activated, an acoustic signal will be emitted

Action

If during monitoring it is found that the working life of the temperature coefficient has expired, then one of the following actions will be triggered automatically at the time of start test:

Selection	Document message only Display and docu-
	ment message Do not start the determina-
	tion
Default value	Display and document message

Document message only

The message that the working life of the temperature coefficient has expired will be automatically saved in the determination.

Display and document message

A message is displayed and you can select whether you want to continue the run or cancel it. If the run is continued, then the message that the working life of the temperature coefficient has expired will be saved automatically in the determination.

Do not start the determination

The determination is not started. The following message must be confirmed with **[OK]**.

6.7.3.3 Properties - Temperature coefficient (Q10)

Tab: Configuration ➤ Temperature coefficients ➤ [Edit] ➤ Properties... ➤ Temperature coefficient - 'Name' ➤ Temperature coefficients

Name

Name of the temperature coefficient.

Entry	40 characters
-)	

Type

Display of the temperature coefficient type (Q10).

Q10 factor

Value of the Q factor

Input range	0.001 - 100 (Increment: 0.001)
Default value	2

Comment

Remarks on the temperature coefficient.

Entry	40 characters
Default value	'empty'

Assignment method

Display as to whether the assignment of values took place manually or by adoption from the extrapolation. If the value was entered manually, **manual** is displayed; if it was adopted using the **[Save factor]** button in the **Extrapolation** dialog window, then from extrapolation is displayed.

User

The user who was logged in during value assignment or who entered the value manually.

Assignment date

Display of the date and time of the last value assignment. The current date is entered automatically in this field at the time a new temperature coefficient is entered. The assignment date is used for the monitoring of the

temperature coefficients (Assignment date + Working life = Expiry date).

Monitoring the temperature coefficient

on | off (Default value: off)

If this check box is activated, then the working life of the temperature coefficient is monitored.

Working life

The working life of the temperature coefficient in days. If a value is entered here then the **Expiry date** will be automatically adapted.

Input range	0 - 999 Days
Default value	999 Days

Expiry date

Expiry date of the temperature coefficient. The date can be selected by pressing in the **Select date** dialog window. After a date has been entered, the value for the **Working life** will be automatically adapted.

Default value **Date of assignment + 999 days**

Message

Message by e-mail

on | off (Default value: off)

If this option is activated, the message is sent to the address defined under **[E-mail...]**. The message is sent in text format.

[E-mail...]

[E-mail...] opens the **Send e-mail** window (see Chapter 2.6.1, page 63).

Acoustic signal

on | off (Default value: off)

If this option is activated, an acoustic signal will be emitted

Action

If during monitoring it is found that the working life of the temperature coefficient has expired, then one of the following actions will be triggered automatically at the time of start test:

Selection	Document message only Display and docu-
	ment message Do not start the determina-
	tion
Default value	Display and document message

Document message only

The message that the working life of the temperature coefficient has expired will be automatically saved in the determination.

Display and document message

A message is displayed and you can select whether you want to continue the run or cancel it. If the run is continued, then the message that the working life of the temperature coefficient has expired will be saved automatically in the determination.

Do not start the determination

The determination is not started. The following message must be confirmed with **[OK]**.

StabNet 1.1 ------ 373

7.1 892 Professional Rancimat

7 Devices

7.1 892 Professional Rancimat

7.1.1 Device properties

The parameters for the 892 Professional Rancimat are defined on the following tabs:

- General
 - General device information such as device name, device type, serial number, etc.
- Gas flow Information about the pump as well as filter and molecular sieve monitoring.
- Temperature correction
 Results of the temperature correction determined in the workplace.
- GLP
 Information on GLP tests and GLP monitoring.

7.1.1.1 Properties - General

Tab: Configuration ➤ Devices ➤ [Edit] ➤ Properties... ➤ Properties - 'Device type' - 'Device name' ➤ General

General properties of the device are displayed on the **General** tab.

Device name

Name of the device, can be freely defined by the user. This name will be shown on the device display after StabNet has been started. If the name is changed in StabNet, the new device name will be shown on the display.

Entry	50 characters
Default value	Device type number_#

Device type

Shows the device type.

Program version

Shows the program version of the device.

[Update]

Opens the dialog window **Load new program version** (see Chapter 7.1.1.5, page 379).

This button is displayed only with devices/instruments that have their own firmware. It is only active if the device or instrument has an old program version not supported by **StabNet** itself.

7 Devices

Device serial number

Shows the serial number of the device.

Set to work

Shows the date on which the device was automatically added to the device table.

Remarks

Remarks about the device.

Entry	1,000 characters
Default value	'empty'

7.1.1.2 Properties - Gas flow

Tab: Configuration ➤ Devices ➤ [Edit] ➤ Properties... ➤ Properties - 'Device type' - 'Device name' ➤ Gas flow

Internal pump

on | off (Default value: **on**)

Activates/deactivates gas supply with internal pump. If the internal pump is deactivated, an external gas supply must be connected to the "**Air / N2** in" connection.

Monitoring the filter

on | off (Default value: off)

If this check box is activated, the operating hours of the filter are monitored

Operating hours - Limit

Maximum permitted operating hours of the filter. If this value is exceeded, the message or action defined below will be triggered.

Input range	0 - 99,999
Default value	99,999

Operating hours - Current value

Shows the number of operating hours of the filter to date. If this limit value is exceeded, then the current value will be displayed in **red**.

[Reset]

Resets the current value for the filter to **0**.

7.1 892 Professional Rancimat

Monitoring the molecular sieve

on | off (Default value: off)

If this check box is activated, then the operating hours of the molecular sieve will be monitored.

Operating hours - Limit

Maximum permitted operating hours of the molecular sieve. If this value is exceeded, then the message or action defined below will be triggered.

Input range	0 - 99,999
Default value	99,999

Operating hours - Current value

Shows the number of operating hours to date of the particular molecular sieve. If the limit value is exceeded, the current value is displayed in **red**.

[Reset]

Resets the current value for the molecular sieve to **0**.

Message

Defines how the information regarding the time of the next service is to be communicated.

Message by e-mail

on | off (Default value: off)

If this option is activated, the message is sent to the address defined under **[E-mail...]**. The message is sent in text format.

[E-mail...]

[E-mail...] opens the **Send e-mail** window (see Chapter 2.6.1, page 63).

Acoustic signal

on | off (Default value: off)

If this check box is activated, then an acoustic signal will be emitted.

Action

If during monitoring it is found that the service interval has expired, then one of the following actions will be triggered automatically during the start test:

Selection	Document message only Display and docu-
	ment message Do not start the determina-
	tion
Default value	Display and document message

7 Devices

Document message only

The message that the service interval has expired will be automatically saved in the determination.

Display and document message

A message is displayed and you can select whether you want to continue the run or cancel it. If the run is continued, then the message that the service interval has expired will be automatically saved in the determination.

Do not start the determination

The determination is not started. The following message must be confirmed with **[OK]**.

7.1.1.3 Properties - Temperature correction

Tab: Configuration ➤ Devices ➤ [Edit] ➤ Properties... ➤ Properties - 'Device type' - 'Device name' ➤ Temperature correction

The **Temperature correction** tab contains a table with the results of the temperature correction of block A or B determined in the workplace. The table contains the following columns:

Sample temperature

Sample temperature from the method with which the determination of the temperature correction was carried out.

Gas flow

Gas flow from the method with which the determination of the temperature correction was carried out.

Block

Block (A or B) in which the temperature correction was determined.

Measured value

Temperature correction measured value.

Date

Date and time of the temperature correction determination.

User

Short name of the user who performed the determination of the temperature correction.

Comment

Comment on the determination of the temperature correction.

7.1 892 Professional Rancimat

Sensor name

Name of the sensor which was used to determine the temperature correction.

7.1.1.4 Properties - GLP

Tab: Configuration ➤ Devices ➤ [Edit] ➤ Properties... ➤ Properties - 'Device type' - 'Device name' ➤ GLP

Last GLP test

Date of the last GLP test. This date can be selected by clicking on the **Select date** dialog window (see Chapter 2.5.1, page 60).

Comment on GLP test

Comment regarding the GLP test.

Entry	1,000 characters
=	1,000 01101101010

Monitoring of GLP validity

on | off (Default value: off)

If this check box is activated, then the time interval for the GLP test is monitored.

Monitoring cannot be switched on until after a date has been entered in the "GLP test date" field.

GLP test interval

Time interval to next GLP test. If a value is entered here then the date in the **Next GLP test** field will be adjusted automatically.

Input range	1 - 999 days	
	-	
Default value	999 days	

Next GLP test

Date on which the next GLP test is to be carried out. The date can be selected by pressing in the **Select date** dialog window (see Chapter 2.5, page 60). After the date has been entered, the **GLP test interval** field will be adjusted automatically.

Default value	Last GLP test + 999 days	
---------------	--------------------------	--

Message

The message options can only be edited if monitoring is switched on.

7 Devices

Message by e-mail

on | off (Default value: off)

The message is sent to the address defined under **[E-mail...]** if this check box is activated. The message is sent in text format.

[E-mail...]

[E-mail...] opens the **Send e-mail** window (see Chapter 2.6.1, page 63).

Acoustic signal

on | off (Default value: off)

If this check box is activated, then an acoustic signal will be emitted.

Action

The actions can only be edited if monitoring is switched on.

If during monitoring it is found that the validity period has expired, then one of the following actions will be triggered automatically during the start test:

Selection	Document message only Display and docu-
	ment message Do not start the determina-
	tion
Default value	Display and document message

Document message only

The message that the validity period has expired will be automatically saved in the determination.

Display and document message

A message is displayed and you can select whether you want to continue the run or cancel it. If the run is continued, then the message that the validity period has expired will be automatically saved in the determination.

Do not start the determination

The determination is not started. The following message must be confirmed with **[OK]**.

7.1.1.5 Dialog window Load new program version

Dialog window: Configuration ► Devices ► [Edit] ► Properties... ► Properties - 'Device type' - 'Device name' ► [General ► Update] ► Load new program version

If it is discovered that the device to be connected has an old program version not supported by StabNet, then it must be updated. Select the device from the device table. Open the Properties window with **Edit** ▶ **Properties...**. On the **General** tab, click on **[Update]** to open the **Load new program version** dialog window.

7.1 892 Professional Rancimat

Old version

Shows the old device program version.

New version

Shows the new device program version.

[Load]

Loads the new program version. A progress bar is shown during loading.

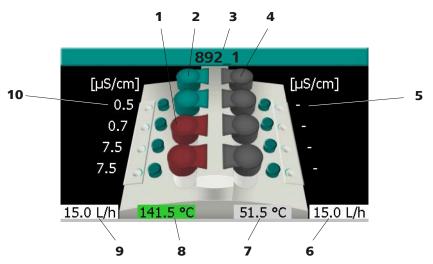


NOTE

Make sure that the device is not manipulated or switched off during the loading process and follow the instructions shown.

7.1.2 Device display

The following information is shown on the device display: measured conductivity value, heating block temperature, gas flow.



1 Measuring vessel cover red This measuring position is not available for a determination (determination is running or multiple determination has not yet been completed).

2 Measuring vessel cover green

A determination can be started on this measuring position.

3 Device name

Shows the device name.

7 Devices

4	Measuring vessel cover gray
	This measuring position is not available for starting a determination (device not connected to computer or no method loaded).
5	Conductivity display
	Conductivity cannot be displayed (no sensor connected or no valid measuring signal).
6	Gas flow display block B
	Shows the gas flow measured on block B (gray background: gas flow switched off; white background: gas flow switched on).
7	Temperature display block B
	Shows the temperature measured on block B (gray background: heater switched off; red background: temperature not reached; green background: temperature reached).
8	Temperature display block A
	Shows the temperature measured on block A (gray background: heater switched off; red background: temperature not reached; green background: temperature reached).
9	Gas flow display block A
	Shows the gas flow measured on block A (gray background: gas flow switched off; white background: gas flow switched on).
10	Conductivity display
	Shows the conductivity measurement.

7.2 893 Professional Biodiesel Rancimat

7.2.1 Device properties

The parameters for the 893 Professional Biodiesel Rancimat are defined on the following tabs:

- General
 General device information such as device name, device type, serial number, etc.
- Gas flow Information about the pump as well as filter and molecular sieve monitoring.
- *Temperature correction*Results of the temperature correction determined in the workplace.
- GLP
 Information on GLP tests and GLP monitoring.

7.2.1.1 Properties - General

Tab: Configuration ➤ Devices ➤ [Edit] ➤ Properties... ➤ Properties - 'Device type' - 'Device name' ➤ General

General properties of the device are displayed on the **General** tab.

Device name

Name of the device, can be freely defined by the user. This name will be shown on the device display after StabNet has been started. If the name is changed in StabNet, the new device name will be shown on the display.

Entry	50 characters
Default value	Device type number_#

Device type

Shows the device type.

Program version

Shows the program version of the device.

[Update]

Opens the dialog window **Load new program version** (see Chapter 7.1.1.5, page 379).

This button is displayed only with devices/instruments that have their own firmware. It is only active if the device or instrument has an old program version not supported by **StabNet** that can be updated by **StabNet** itself.

Device serial number

Shows the serial number of the device.

Set to work

Shows the date on which the device was automatically added to the device table.

Remarks

Remarks about the device.

Entry	1,000 characters
Default value	'empty'

7.2.1.2 Properties - Gas flow

Tab: Configuration ➤ Devices ➤ [Edit] ➤ Properties... ➤ Properties - 'Device type' - 'Device name' ➤ Gas flow

7 Devices

Internal pump

on | off (Default value: on)

Activates/deactivates gas supply with internal pump. If the internal pump is deactivated, an external gas supply must be connected to the "**Air / N2** in" connection.

Monitoring the filter

on | off (Default value: off)

If this check box is activated, the operating hours of the filter are monitored.

Operating hours - Limit

Maximum permitted operating hours of the filter. If this value is exceeded, the message or action defined below will be triggered.

Input range	0 - 99,999
Default value	99,999

Operating hours - Current value

Shows the number of operating hours of the filter to date. If this limit value is exceeded, then the current value will be displayed in **red**.

[Reset]

Resets the current value for the filter to **0**.

Monitoring the molecular sieve

on | off (Default value: **off**)

If this check box is activated, then the operating hours of the molecular sieve will be monitored.

Operating hours - Limit

Maximum permitted operating hours of the molecular sieve. If this value is exceeded, then the message or action defined below will be triggered.

Input range	0 - 99,999
Default value	99,999

Operating hours - Current value

Shows the number of operating hours to date of the particular molecular sieve. If the limit value is exceeded, the current value is displayed in **red**.

[Reset]

Resets the current value for the molecular sieve to **0**.

StabNet 1.1 •••••• 383

Message

Defines how the information regarding the time of the next service is to be communicated.

Message by e-mail

on | off (Default value: off)

If this option is activated, the message is sent to the address defined under **[E-mail...]**. The message is sent in text format.

[E-mail...]

[E-mail...] opens the **Send e-mail** window (see Chapter 2.6.1, page 63).

Acoustic signal

on | off (Default value: off)

If this check box is activated, then an acoustic signal will be emitted.

Action

If during monitoring it is found that the service interval has expired, then one of the following actions will be triggered automatically during the start test:

Selection	Document message only Display and docu-
	ment message Do not start the determina-
	tion
Default value	Display and document message

Document message only

The message that the service interval has expired will be automatically saved in the determination.

Display and document message

A message is displayed and you can select whether you want to continue the run or cancel it. If the run is continued, then the message that the service interval has expired will be automatically saved in the determination.

Do not start the determination

The determination is not started. The following message must be confirmed with **[OK]**.

7.2.1.3 Properties - Temperature correction

Tab: Configuration ➤ Devices ➤ [Edit] ➤ Properties... ➤ Properties - 'Device type' - 'Device name' ➤ Temperature correction

The **Temperature correction** tab contains a table with the results of the temperature correction of block A or B determined in the workplace. The table contains the following columns:

7 Devices

Sample temperature

Sample temperature from the method with which the determination of the temperature correction was carried out.

Gas flow

Gas flow from the method with which the determination of the temperature correction was carried out.

Block

Block (A or B) in which the temperature correction was determined.

Measured value

Temperature correction measured value.

Date

Date and time of the temperature correction determination.

User

Short name of the user who performed the determination of the temperature correction.

Comment

Comment on the determination of the temperature correction.

Sensor name

Name of the sensor which was used to determine the temperature correction.

7.2.1.4 Properties - GLP

Tab: Configuration ➤ Devices ➤ [Edit] ➤ Properties... ➤ Properties - 'Device type' - 'Device name' ➤ GLP

Last GLP test

Date of the last GLP test. This date can be selected by clicking on in the **Select date** dialog window (see Chapter 2.5.1, page 60).

Comment on GLP test

Comment regarding the GLP test.

Entry **1,000 characters**

Monitoring of GLP validity

on | off (Default value: off)

If this check box is activated, then the time interval for the GLP test is monitored.

Monitoring cannot be switched on until after a date has been entered in the "GLP test date" field.

GLP test interval

Time interval to next GLP test. If a value is entered here then the date in the **Next GLP test** field will be adjusted automatically.

Input range	1 - 999 days
Default value	999 days

Next GLP test

Date on which the next GLP test is to be carried out. The date can be selected by pressing in the **Select date** dialog window (see Chapter 2.5, page 60). After the date has been entered, the **GLP test interval** field will be adjusted automatically.

D - f 4	1 + CLD + +
Default value	Last GLP test + 999 days

Message

The message options can only be edited if monitoring is switched on.

Message by e-mail

on | off (Default value: off)

The message is sent to the address defined under **[E-mail...]** if this check box is activated. The message is sent in text format.

[E-mail...]

[E-mail...] opens the **Send e-mail** window (see Chapter 2.6.1, page 63).

Acoustic signal

on | off (Default value: off)

If this check box is activated, then an acoustic signal will be emitted.

Action

The actions can only be edited if monitoring is switched on.

If during monitoring it is found that the validity period has expired, then one of the following actions will be triggered automatically during the start test:

7 Devices

Selection	Document message only Display and docu-
	ment message Do not start the determina-
	tion
Default value	Display and document message

Document message only

The message that the validity period has expired will be automatically saved in the determination.

Display and document message

A message is displayed and you can select whether you want to continue the run or cancel it. If the run is continued, then the message that the validity period has expired will be automatically saved in the determination.

Do not start the determination

The determination is not started. The following message must be confirmed with **[OK]**.

7.2.1.5 Dialog window Load new program version

Dialog window: Configuration ► Devices ► [Edit] ► Properties... ► Properties - 'Device type' - 'Device name' ► [General ► Update] ► Load new program version

If it is discovered that the device to be connected has an old program version not supported by StabNet, then it must be updated. Select the device from the device table. Open the Properties window with **Edit** ▶ **Properties...**. On the **General** tab, click on **[Update]** to open the **Load new program version** dialog window.

Old version

Shows the old device program version.

New version

Shows the new device program version.

[Load]

Loads the new program version. A progress bar is shown during loading.



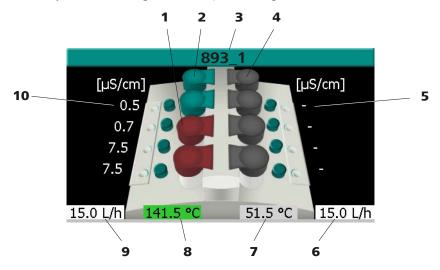
NOTE

Make sure that the device is not manipulated or switched off during the loading process and follow the instructions shown.

StabNet 1.1 ----- 387

7.2.2 Device display

The following information is shown on the device display: measured conductivity value, heating block temperature, gas flow.



1 Measuring vessel cover red

This measuring position is not available for a determination (determination is running or multiple determination has not yet been completed).

2 Measuring vessel cover green

A determination can be started on this measuring position.

3 Device name

Shows the device name.

4 Measuring vessel cover gray

This measuring position is not available for starting a determination (device not connected to computer or no method loaded).

5 Conductivity display

Conductivity cannot be displayed (no sensor connected or no valid measuring signal).

6 Gas flow display block B

Shows the gas flow measured on block B (gray background: gas flow switched off; white background: gas flow switched on).

7 Temperature display block B

Shows the temperature measured on block B (gray background: heater switched off; red background: temperature not reached; green background: temperature reached).

7 Devices

8 Temperature display block A

Shows the temperature measured on block A (gray background: heater switched off; red background: temperature not reached; green background: temperature reached).

9 Gas flow display block A

Shows the gas flow measured on block A (gray background: gas flow switched off; white background: gas flow switched on).

10 Conductivity display

Shows the conductivity measurement.

7.3 895 Professional PVC Thermomat

7.3.1 Device properties

The parameters for the 895 Professional PVC Thermomat are defined on the following tabs:

General

General device information such as device name, device type, serial number, etc.

- Temperature correction
 Results of the temperature correction determined in the workplace.
- GLP
 Information on GLP tests and GLP monitoring.

7.3.1.1 Properties - General

Tab: Configuration ➤ Devices ➤ [Edit] ➤ Properties... ➤ Properties - 'Device type' - 'Device name' ➤ General

General properties of the device are displayed on the **General** tab.

Device name

Name of the device, can be freely defined by the user. This name will be shown on the device display after StabNet has been started. If the name is changed in StabNet, the new device name will be shown on the display.

Entry	50 characters
Default value	Device type number_#

Device type

Shows the device type.

Program version

Shows the program version of the device.

[Update]

Opens the dialog window **Load new program version** (see Chapter 7.1.1.5, page 379).

This button is displayed only with devices/instruments that have their own firmware. It is only active if the device or instrument has an old program version not supported by **StabNet** that can be updated by **StabNet** itself.

Device serial number

Shows the serial number of the device.

Set to work

Shows the date on which the device was automatically added to the device table.

Remarks

Remarks about the device.

Entry	1,000 characters
Default value	'empty'

7.3.1.2 Properties - Temperature correction

Tab: Configuration ➤ Devices ➤ [Edit] ➤ Properties... ➤ Properties - 'Device type' - 'Device name' ➤ Temperature correction

The **Temperature correction** tab contains a table with the results of the temperature correction of block A or B determined in the workplace. The table contains the following columns:

Sample temperature

Sample temperature from the method with which the determination of the temperature correction was carried out.

Gas flow

Gas flow from the method with which the determination of the temperature correction was carried out.

Block

Block (A or B) in which the temperature correction was determined.

Measured value

Temperature correction measured value.

Date

Date and time of the temperature correction determination.

7 Devices

User

Short name of the user who performed the determination of the temperature correction.

Comment

Comment on the determination of the temperature correction.

Sensor name

Name of the sensor which was used to determine the temperature correction.

7.3.1.3 Properties - GLP

Tab: Configuration ➤ Devices ➤ [Edit] ➤ Properties... ➤ Properties - 'Device type' - 'Device name' ➤ GLP

Last GLP test

Date of the last GLP test. This date can be selected by clicking on in the **Select date** dialog window (see Chapter 2.5.1, page 60).

Comment on GLP test

Comment regarding the GLP test.

Entry	1,000 characters
,	•

Monitoring of GLP validity

on | off (Default value: off)

If this check box is activated, then the time interval for the GLP test is monitored.

Monitoring cannot be switched on until after a date has been entered in the "GLP test date" field.

GLP test interval

Time interval to next GLP test. If a value is entered here then the date in the **Next GLP test** field will be adjusted automatically.

Input range	1 - 999 days	
Default value	999 days	

Next GLP test

Date on which the next GLP test is to be carried out. The date can be selected by pressing in the **Select date** dialog window (see Chapter 2.5, page 60). After the date has been entered, the **GLP test interval** field will be adjusted automatically.

Default value	Last GLP test + 999 days	

Message

The message options can only be edited if monitoring is switched on.

Message by e-mail

on | off (Default value: off)

The message is sent to the address defined under **[E-mail...]** if this check box is activated. The message is sent in text format.

[E-mail...]

[E-mail...] opens the **Send e-mail** window (see Chapter 2.6.1, page 63).

Acoustic signal

on | off (Default value: off)

If this check box is activated, then an acoustic signal will be emitted.

Action

The actions can only be edited if monitoring is switched on.

If during monitoring it is found that the validity period has expired, then one of the following actions will be triggered automatically during the start test:

Selection	Document message only Display and docu-
	ment message Do not start the determina-
	tion
Default value	Display and document message

Document message only

The message that the validity period has expired will be automatically saved in the determination.

Display and document message

A message is displayed and you can select whether you want to continue the run or cancel it. If the run is continued, then the message that the validity period has expired will be automatically saved in the determination.

Do not start the determination

The determination is not started. The following message must be confirmed with **[OK]**.

7 Devices

7.3.1.4 Dialog window Load new program version

Dialog window: Configuration ▶ Devices ▶ [Edit] ▶ Properties... ▶ Properties - 'Device type' - 'Device name' ▶ [General ▶ Update] ▶ Load new program version

If it is discovered that the device to be connected has an old program version not supported by StabNet, then it must be updated. Select the device from the device table. Open the Properties window with **Edit** ▶ **Properties...**. On the **General** tab, click on **[Update]** to open the **Load new program version** dialog window.

Old version

Shows the old device program version.

New version

Shows the new device program version.

[Load]

Loads the new program version. A progress bar is shown during loading.

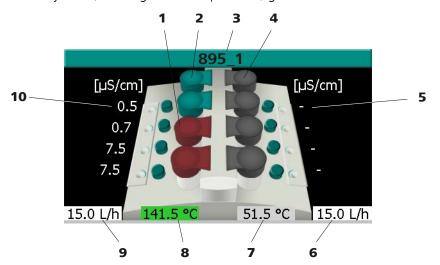


NOTE

Make sure that the device is not manipulated or switched off during the loading process and follow the instructions shown.

7.3.2 Device display

The following information is shown on the device display: measured conductivity value, heating block temperature, gas flow.



1 Measuring vessel cover red

This measuring position is not available for a determination (determination is running or multiple determination has not yet been completed).

2 Measuring vessel cover green

A determination can be started on this measuring position.

3 Device name

Shows the device name.

4 Measuring vessel cover gray

This measuring position is not available for starting a determination (device not connected to computer or no method loaded).

5 Conductivity display

Conductivity cannot be displayed (no sensor connected or no valid measuring signal).

6 Gas flow display block B

Shows the gas flow measured on block B (gray background: gas flow switched off; white background: gas flow switched on).

7 Temperature display block B

Shows the temperature measured on block B (gray background: heater switched off; red background: temperature not reached; green background: temperature reached).

8 Temperature display block A

Shows the temperature measured on block A (gray background: heater switched off; red background: temperature not reached; green background: temperature reached).

9 Gas flow display block A

Shows the gas flow measured on block A (gray background: gas flow switched off; white background: gas flow switched on).

10 Conductivity display

Shows the conductivity measurement.

8 How to proceed?

8.1 Audit Trail

8.1.1 Opening the Audit Trail

How to proceed?

- **1** Select the **Configuration** program part.
- 2 Click on the symbol or the Tools ► Audit Trail... menu item.

 The Audit Trail dialog window opens.
- **3** If required, adjust the column display.

8.1.2 Filtering the Audit Trail

How to proceed?

Opening the "Audit Trail" dialog window

- 1 Select the **Configuration** program part.
- 2 Click on the symbol or the Tools ► Audit Trail... menu item.
 The Audit Trail dialog window opens.

Filtering can now be done via quick filter or special filter in the **Audit Trail** dialog window:

Quick filter

- 1 Click on the symbol or the **Filter** ➤ **Quick filter** menu item.

 After this function has been selected, the field in which the cursor is located will have a yellow background when navigating in the Audit Trail table.
- 2 Double-click on the desired field with the left mouse button.
 The contents of the field selected in the table will be set as a filter criterion and this filter will be applied directly to the table.

 8.1 Audit Trail



NOTE

The quick filter can be applied again within the filtered table, so that the number of entries can be limited step by step.

Defining and using special filters

1 Click on the symbol or the Filter ► Special filter... menu item.

The Special filter - Database 'ConfigDB' dialog window for the definition of user-specific filters opens.

- 2 Click on the Edit ➤ Insert new line menu item.

 The Edit 'New filter' filter criterion dialog window opens.
- **3** Enter the filter criteria and confirm with **[OK]**.
- 4 Click on [Apply filter] in the Special filter Database 'ConfigDB' dialog window.

The table is then filtered.

Defining and saving special filters

- 1 Click on the symbol or the Filter ► Special filter... menu item.

 The Special filter Database 'ConfigDB' dialog window for the definition of user-specific filters opens.
- 2 Click on the Edit ➤ Insert new line menu item.

 The Edit 'New filter' filter criterion dialog window opens.
- **3** Enter the filter criteria and confirm with **[OK]**.
- 4 Click on [Save filter] in the Special filter Database 'ConfigDB' dialog window.

The **Save filter** dialog window opens.

5 Enter a name in the **Filter name** field.

6 Click on [Save].

The special filter is saved with the desired name.

Using special filters

1 In the **Special filter - Audit Trail** dialog window, select the desired special filter from the **Filter** selection list.

The table is then filtered.

8.1.3 Exporting the Audit Trail

How to proceed?

- **1** Select the **Configuration** program part.
- 2 Click on the symbol or the Tools ► Audit Trail... menu item.

 The Audit Trail dialog window opens.
- **3** If desired, filter the Audit Trail table.
- 4 If desired, select the Audit Trail entries to be exported.
- 5 Click on the **File ► Export...** menu item.

The **Export Audit Trail** dialog window opens.

- **6** Enter or select the directory and file name for saving the export file under **Save file as**.
- 7 Select the desired option (All records or Selected records) under Selection.
- 8 Click on [OK].

The selected Audit Trail data sets are then exported.



NOTE

Audit Trail entries are archived in text format. They cannot be imported back into the Audit Trail table.

8.1 Audit Trail

8.1.4 Archiving the Audit Trail

How to proceed?

1 Select the **Configuration** program part.

2 Click on the symbol or the Tools ► Audit Trail... menu item.

The Audit Trail dialog window opens.

3 Click on the File ► Archive... menu item.

The Archive Audit Trail dialog window opens.

- **4** Enter or select the directory and file name for saving the archive file under **Save file as**.
- Select the desired option (**All records** or **Records until** including date selection) under **Selection**.
- 6 Click on [OK].

The selected Audit Trail data sets will be archived in text format.



NOTE

Archiving Audit Trail entries is identical to exporting, i.e. the Audit Trail entries are stored in text format. They cannot be imported back into the Audit Trail table. The difference between this and exporting is that the archived entries can be highlighted in the **Archived** column and then deleted.



NOTE

The text files generated by archiving are no longer protected and can be tampered with. If it is necessary to ensure that these files are archived in an unaltered condition, then a suitable external backup or archiving program must be used.

8.1.5 Deleting the Audit Trail

How to proceed?



NOTE

Audit Trail entries can only be deleted if they have previously been archived.

- 1 Select the **Configuration** program part.
- 2 Click on the symbol or the Tools ► Audit Trail... menu item.

 The Audit Trail dialog window opens.
- **3** Archive desired Audit Trail entries.
- 4 Click on the File ➤ Delete menu item.The Delete Audit Trail dialog window opens.
- 5 Select the desired option (All archived records or Archived records until including date selection) under Selection.
- **6** User 1: Enter **User** and **Password**.
- 7 User 2: Enter **User** and **Password**.
- 8 Click on [OK].

The selected, archived Audit Trail data sets are then deleted.

StabNet 1.1 ----- 399

8.2 Backup

8.2 Backup

8.2.1 Backing up a database

How to proceed?

General

The **determination databases** that, in contrast to the **configuration database**, can be generated by the user and contain the determination data, are referred to as databases in **StabNet**. Included among such determination data are the method data used for the determination, the measured data generated during the determination and the results calculated from it.

In local server systems (**StabNet Full**), the databases are stored on the drives managed by the computer and are only available to those users registered on that computer who have the appropriate access permission. In client/server systems (**StabNet Multi**) the databases are stored on drives managed centrally by the server and are globally available throughout the entire client/server system, i.e., all users with the appropriate access rights can use these databases.



NOTE

Each determination database has to be backed up separately. Afterwards, it is recommended that all backed-up files also be copied to an external directory or to a CD/DVD.

Backing up a database manually

- 1 Select the **Database** program part.
- 2 Click on the 2 icon or the File ➤ Database manager... menu item.

The **Database manager** dialog window opens.

- **3** Select the database.
- 4 Click on [Backup] in the Database manager dialog window.

 The Backup database 'Database name' dialog window opens.
- **5** Select the directory for the backup in the **Backup directory** field.

6 Select or enter the name for the backup file. If an existing backup file is selected, it will be overwritten.



NOTE

If the backup directory is on a network drive, the backup date should be added to the **Backup name** field, because the backup date information is not available when the data is restored.

7 Click on [Start].

The manual backup of the database is started and the database is backed up to the selected directory.

Backing up a database automatically

- 1 Select the **Database** program part.
- 2 Click on the 2 icon or the File ➤ Database manager... menu item.

The **Database manager** dialog window opens.

- 3 Select the desired database and click on [Properties].

 The Properties Database 'Database name' dialog window opens for editing the database properties.
- 4 On the **General** tab, enter a comment on the database in the **Comment** field.
- 5 On the **Backup** tab, activate the **Backup monitoring** check box.
- **6** Enter an **Interval** for backup monitoring or a date for the next backup in the **Next backup** field.
- 7 Activate the **Start backup automatically** check box.
- 8 Select the directory for the backup in the **Backup directory** field.
- 9 Click on [OK].

8.2 Backup

The **Properties - Database - 'Database name'** dialog window closes and the database is backed up automatically to the selected directory at the desired moment.

8.2.2 Restoring a database

How to proceed?

- 1 Select the **Database** program part.
- 2 Click on the 2 icon or the File ➤ Database manager... menu item.

The **Database manager** dialog window opens.

- 3 Click on [Restore] in the Database manager dialog window.
 The Restore databases dialog window opens.
- 4 Select the directory in which the desired database was backed up in the **Backup directory** field.
- **5** Select the name for the desired backup file in the **Backup name** list box.
- **6** Under **Save as** enter the name under which the database is to be restored.
- 7 Click on [Start].

The database restoring is started.



NOTE

Existing databases cannot be overwritten, i.e., they must first be deleted so that the database can be restored under its old name.

8.2.3 Backing up configuration data

How to proceed?

General

The configuration data is saved in **StabNet** in the **Configuration database**. The configuration data includes all settings that apply to all methods, i.e. settings for devices, sensors, temperature coefficients as well as templates, **Security settings** (see Chapter 6.2.2.1, page 313) and **User administration** (see Chapter 6.2.1.1, page 304).

In local server systems (**StabNet Full**), the configuration database is located in the program directory of the computer on which the program has been installed. In client/server systems (**StabNet Multi**), the configuration database is stored centrally on the server and contains all the configuration data of all computers (clients) that are connected to this server.



NOTE

It is strongly recommended that the configuration database be backed up periodically.

Backing up configuration data manually

- **1** Select the **Configuration** program part.
- 2 Click on the File ► Backup ► Manually menu item.

 The Backup configuration data manually dialog window opens.
- **3** Select the directory for the backup in the **Backup directory** field.
- Select or enter a new name for the backup file in the **Backup name** list box. If an existing backup file is selected, it will be overwritten.



NOTE

If the backup directory is on a network drive, then the date of the backup should be added to the **Backup name**, because the backup date information is not available when the data is restored.

5 Click on [Start].

The manual backup is started and the configuration database is backed up to the selected directory.

Backing up configuration data automatically

- **1** Select the **Configuration** program part.
- 2 Click on the **File ► Backup ► Automatically** menu item.

8.2 Backup

The **Backup configuration data automatically** dialog window opens.

- **3** Activate the **Automatic backup** check box.
- 4 Enter an **Interval** for backup monitoring or a date for the next backup in the **Next backup** field.
- **5** Select the directory for the backup in the **Backup directory** field.
- 6 Click on [OK].

The **Backup configuration data automatically** dialog window closes and the configuration database will be backed up automatically to the selected directory at the desired moment.

8.2.4 Restoring configuration data

How to proceed?

StabNet Full

- 1 Exit StabNet.
- 2 Start the **ConfigRestore.exe** file in the ...**StabNet\bin** program directory.

The **Restore configuration data** dialog window opens.

- 3 Select the directory in which the configuration database was backed up in the **Backup directory** field.
- Select or enter a name for the desired backup file in the **Backup** name list box.
- 5 Click on [Start].

The restoring of the configuration database is started.

StabNet Multi

1 Make sure that **StabNet** is closed on all clients connected to the server and on the server itself.

2 Start the **ConfigRestore.exe** file in the ...**StabNet\bin** program directory on the server.

The **Restore configuration data** dialog window opens.

- Select the directory in which the configuration database was backed up in the **Backup directory** field.
- 4 Select or enter a name for the desired backup file in the **Backup** name list box.
- 5 Click on [Start].

The restoring of the configuration database is started.

8.2.5 Backing up methods

How to proceed?

General

Methods are stored in the configuration database and are globally accessible for all clients. This means that in order to back up methods the configuration data must be backed up manually or automatically. Another possible way is to export the methods and then to store these files outside of **StabNet**.

Backing up configuration data manually

- **1** Select the **Configuration** program part.
- 2 Click on the File ➤ Backup ➤ Manually menu item.

 The Backup configuration data manually dialog window opens.
- **3** Select the directory for the backup in the **Backup directory** field.
- Select or enter a new name for the backup file in the **Backup name** list box. If an existing backup file is selected, it will be overwritten.



NOTE

If the backup directory is on a network drive, then the date of the backup should be added to the **Backup name**, because the backup date information is not available when the data is restored.

8.2 Backup

5 Click on [Start].

The manual backup is started and the configuration database is backed up to the selected directory.

Backing up configuration data automatically

- 1 Select the **Configuration** program part.
- 2 Click on the File ► Backup ► Automatically menu item.
 The Backup configuration data automatically dialog window opens.
- **3** Activate the **Automatic backup** check box.
- **4** Enter an **Interval** for backup monitoring or a date for the next backup in the **Next backup** field.
- **5** Select the directory for the backup in the **Backup directory** field.
- 6 Click on [OK].

The **Backup configuration data automatically** dialog window closes and the configuration database will be backed up automatically to the selected directory at the desired moment.

Exporting methods

- 1 Select the **Method** program part.
- 2 Click on the icon or the File ► Method manager... menu item.

 The Method manager dialog window opens.
- **3** Select the desired **Method group**.
- 4 Select the desired methods.
- 5 Click on the Edit ► Export... menu item.
 The Select directory for export dialog window opens.

6 Select the desired directory for the export files and click on **[OK]**. The selected methods are each exported in a file named **'Method name'.rmet**.



NOTE

The exported methods are stored uncoded but with a checksum. If a file stored in this manner is tampered with, then it cannot be imported again.

8.3 Determinations

8.3.1 Starting a determination

How to proceed?

Starting a determination

- 1 Select the **Workplace** program part.
- 2 Select the **Method** that is to be used for carrying out the determination from the desired method group.
- **3** Start the heater.
- **4** Start the gas flow.
- 5 Click on [Start].

The determination is started and the live curve is displayed.

8.3.2 Searching for determinations

How to proceed?

- 1 Select the **Database** program part.
- 2 Click on the symbol or the File ► Open... menu item.
 The Open database dialog window opens.
- 3 Select the desired database or enter the name in the **Database** name field.

8.3 Determinations

4 Click on [Open].

The data sets of the selected database are displayed in the **Determination overview**.

5 Click on the symbol or the **Determinations** ➤ **Search...** menu item.

The **Search - Database 'Database name'** dialog window opens.

- **6** Enter or select desired search terms and search options.
- 7 Click on [Search next].

The next determination containing the search term is highlighted in the **Determination overview**.

8.3.3 Filtering determinations

How to proceed?

Opening a database

- 1 Select the **Database** program part.
- 2 Click on the symbol or the File ► Open... menu item.

The **Open database** dialog window opens.

- 3 Select the desired database or enter the name in the **Database** name field.
- 4 Click on [Open].

The data sets of the selected database are displayed in the **Determination overview**.

Filtering can now be done via quick filter or special filter in the **Determination overview** window.

Quick filter

1 Click on the 🤡 symbol or the **Filter ► Quick filter** menu item.

After this function has been selected, the field in which the cursor is located will have a yellow background when navigating in the determination table.

2 Double-click on the desired field with the left mouse button.

The contents of the field selected in the table will be set as a filter criterion and this filter will be applied directly to the table.



NOTE

The quick filter can be applied again within the filtered table, so that the number of entries can be limited step by step.

Defining and using special filters

- 1 Click on the symbol or the Filter ► Special filter... menu item.

 The Special filter Database 'Name' dialog window for the definition of user-specific filters opens.
- 2 Click on the Edit ► Insert new line menu item.
 The Edit 'New filter' filter criterion dialog window opens.
- **3** Enter the filter criteria and confirm with **[OK]**.
- 4 Click on [Apply filter] in the Special filter Database 'Name' dialog window.

The table is then filtered.

Defining and saving special filters

- 1 Click on the symbol or the Filter ► Special filter... menu item.

 The Special filter Database 'Name' dialog window for the definition of user-specific filters opens.
- 2 Click on the Edit ► Insert new line menu item.
 The Edit 'New filter' filter criterion dialog window opens.
- **3** Enter the filter criteria and confirm with **[OK]**.

8.3 Determinations

4 Click on [Save filter] in the Special filter - Database 'Name' dialog window.

The Save filter dialog window opens.

- 5 Enter a name in the **Filter name** field.
- 6 Click on [Save].

The special filter is saved with the desired name.

Using special filters

1 In the **Special filter - Audit Trail** dialog window, select the desired special filter from the **Filter** selection list.

The table is then filtered.

8.3.4 Displaying determinations of a batch

How to proceed?

- 1 Select the **Database** program part.
- 2 Click on the **ib** symbol or the **File** ▶ **Open...** menu item.

The **Open database** dialog window opens.

- 3 Select the desired database or enter the name in the **Database** name field.
- 4 Click on [Open].

The data sets of the selected database are displayed in the **Determination overview**.

5 Select the desired batch in the **Batch** field.

The table shows the determinations of the batch.

8.3.5 Signing a determination

How to proceed?

Selecting a determination

1 Select the **Database** program part.

Click on the symbol or the File ► Open... menu item.
The Open database dialog window opens.

- 3 Select the desired database or enter the name in the **Database** name field.
- 4 Click on [Open].

The data sets of the selected database are displayed in the **Determination overview**.

5 Select the desired determination.

Signature 1



NOTE

Determinations can only be signed at level 1 if the user belongs to a user group with the corresponding permission (see Chapter 6.2.1.2.3, page 307).

1 Click on the symbol or the **Determinations** ➤ **Sign** ➤ **Signature** 1... menu item.

The **Signature Level 1** window opens. If the selected determination can be signed, **Signature possible** is displayed in the **Info** field.

- 2 Enter or select User, Password, Reason and Comment.
- 3 Click on [Sign].

The selected determination will be signed at level 1.

8.3 Determinations



NOTE

Determinations that have been signed at level 1 can be reprocessed and deleted. If the modified determination is saved as a new determination version, then all existing signatures will be deleted automatically, i.e. the determination must be signed again.

Signature 2



NOTE

Determinations can only be signed at level 2 if the user belongs to a user group with the corresponding permission (see Chapter 6.2.1.2.3, page 307).

1 Click on the symbol or the **Determinations** ► **Sign** ► **Signature** 2... menu item.

The **Signature Level 2** window opens. If the selected determination can be signed, **Signature possible** is displayed in the **Info** field.

- 2 Enter or select User, Password, Reason and Comment.
- 3 Click on [Sign].

The selected determination will be signed at level 2.



NOTE

Determinations signed at level 2 are **locked**, i.e. they can neither be reprocessed nor deleted. In order to be able to edit such determinations again the signatures at level 2 must first be deleted.

8.3.6 Exporting determinations

How to proceed?

Defining an export template

1 Select the **Database** program part.

2 Click on the **Tools ► Templates ► Export templates...** menu item.

The **Export templates** window opens.

3 Click on the **Edit ► New...** menu item.

The **Export templates – 'New file'** window opens.

- **4** Define the properties of the new export template.
- 5 Click on [OK].

The dialog window closes.

6 Click on [Close].

The **Export templates** dialog window closes.

Selecting determinations

- 1 Select the **Database** program part.
- 2 Click on the symbol or the File ► Open... menu item.

The **Open database** dialog window opens.

- 3 Select the desired database or enter the name in the **Database** name field.
- 4 Click on [Open].

The data sets of the selected database are displayed in the **Determination overview**.

5 Select the desired determinations.

Exporting determinations

1 Click on the **Determinations** ▶ **Export...** menu item.

The **Export determinations** window opens.

8.3 Determinations

- 2 Select the desired option (All filtered data records or All selected data records) under Selection.
- **3** In the **Export template** selection list, select an export template.
- 4 Click on [OK].

The selected determinations are exported into the directory defined in the export template.

8.3.7 Importing determinations

How to proceed?

- 1 Select the **Database** program part.
- 2 Click on the symbol or the File ► Open... menu item.
 The Open database dialog window opens.
- 3 Select the desired database or enter the name in the **Database** name field.
- 4 Click on [Open].

The data sets of the selected database are displayed in the **Determination overview**.

- 5 Click on the **Determinations** ▶ **Import...** menu item. The **Import determinations** window is displayed.
- 7 Click on [Open].

The selected determinations are imported into the open database.



NOTE

Select the desired determinations.

Exported determinations can be imported only in the *.rdet file format.

8.3.8 Deleting determinations

How to proceed?

1 Select the **Database** program part.

Click on the symbol or the File ► Open... menu item.
The Open database dialog window opens.

- 3 Select the desired database or enter the name in the **Database** name field.
- 4 Click on [Open].

The data sets of the selected database are displayed in the **Determination overview**.

- **5** Select the desired determinations.
- 6 Click on the **beta symbol** or the **Determinations** ▶ **Delete** menu item.
- **7** Confirm deleting.

The selected determinations are deleted along with all determination versions.



NOTE

If the **Comment on modification of determinations** option in the **Security settings** is enabled, then the **Modification comment** window will appear before the modification is saved.

8.3.9 Making a determination version current

How to proceed?

- 1 Select the **Database** program part.
- 2 Click on the symbol or the File ► Open... menu item.

The **Open database** dialog window opens.

3 Select the desired database or enter the name in the **Database** name field.

8.3 Determinations

4 Click on [Open].

The data sets of the selected database are displayed in the **Determination overview**.

5 Select the desired determination.

6 Click on the **E** symbol or the **Determinations** ➤ **Show history** menu item.

Only the currently selected determination as well as all the previous versions of this determination will be shown in the determination table.

- **7** Select desired determination that is once again to be made the current determination version.
- 8 Click on the symbol or the **Determinations** ► **Make current** menu item.

The determination version selected in the determination table will again be made the current determination version. This creates a new determination, the version number of which is increased by **+1** compared with the last version to have been saved.

8.3.10 Reprocessing determinations

How to proceed?



NOTE

Determinations signed at level 2 can no longer be reprocessed.

- 1 Select the **Database** program part.
- 2 Click on the symbol or the File ► Open... menu item.
- 3 Select the desired database or enter the name in the **Database** name field.

The data sets of the selected database are displayed in the **Determination overview**.

- **4** Select the desired determinations.
- 5 Click on the symbol or the **Determinations** ➤ **Reprocess...** menu item.

The **Reprocessing** dialog window opens. The first of the selected determinations is displayed.

Modifying sample data

- 1 Select the desired determination in the **Reprocessing table** subwindow.
- 2 Click on the [Edit] ➤ Edit line menu item.

 The Edit line Reprocessing dialog window opens.
- **3** Enter the new value in the **Ident** field.
- 4 Enter the new value in the Info 1 field.
- **5** Enter the new value in the **Info 2** field.
- **6** Enter the new value in the **Info 3** field.
- 7 Click on [Apply].

The new values are displayed in the **Reprocessing table**.

8 Click on [Recalculate].

The selected determinations are recalculated. The results of this recalculation are entered automatically in the **Results** subwindow.

9 Click on **[OK]** in the **Reprocessing** dialog window.

Each determination that has been modified by reprocessing will be saved as a new version with a version number increased by **+1** and the **Reprocessing** dialog window will be closed. This button is disabled for as long as the recalculation has not yet been triggered and if not all the selected determinations were able to be recalculated.

 8.3 Determinations

Changing evaluation parameters

Select the desired area and the desired tab in the **Evaluation** - **Determination from method** # subwindow.

- **2** Modify the evaluation parameters as desired.
- 3 Click on [Recalculate].

The selected determinations are recalculated. The results of this recalculation are entered automatically in the **Results** subwindow.

4 If desired, save the modified method with **Method...** ► **Save as...** under the same name or under a new name.

If the modified method is saved under the name of an existing method then all the earlier method versions will be deleted and a new version with the number **1** will be generated.

5 Click on **[OK]** in the **Reprocessing** dialog window.

Each determination that has been modified by reprocessing will be saved as a new version with a version number increased by **+1** and the **Reprocessing** dialog window will be closed. This button is disabled for as long as the recalculation has not yet been triggered and if not all the selected determinations were able to be recalculated.

Editing a curve evaluation

- **1** Select the desired function in the **Curves** subwindow:
 - Changing induction time

Click on the symbol and keep the left mouse button pressed down to move the induction time controller to the required position.

Setting tangents manually

Click on the symbol and set the tangents for the manual evaluation of the induction time.

- Deleting tangents
- Click on the symbol to delete the manually set tangents.
- Automatic evaluation

Click on the symbol to reactivate automatic evaluation.

2 Click on [Recalculate].

The selected determinations are recalculated. The results of this recalculation are entered automatically in the **Results** subwindow.

3 Click on **[OK]** in the **Reprocessing** dialog window.

Each determination that has been modified by reprocessing will be saved as a new version with a version number increased by **+1** and the **Reprocessing** dialog window will be closed. This button is disabled for as long as the recalculation has not yet been triggered and if not all the selected determinations were able to be recalculated.

8.3.11 Printing a determination report

How to proceed?

- 1 Select the **Database** program part.
- Click on the symbol or the File ► Open... menu item.
 The Open database dialog window opens.
- 3 Select the desired database or enter the name in the **Database** name field.
- 4 Click on [Open].

The data sets of the selected database are displayed in the **Determination overview**. The database name is displayed in the title bar of the program, the number of currently opened databases is displayed in the left upper corner of the database symbol.



NOTE

A maximum of 4 databases can be opened, but only 2 can be displayed at the same time. Databases that are open at the time the program is exited will be automatically opened the next time the program is started.

- **5** Select the desired determinations.
- 6 Click on the **File** ▶ **Print** ▶ **Report...** menu item.

The **Report output** dialog window opens.

 8.3 Determinations

7 Under **Selection**, select desired determinations for report output.

- 8 Select the **Original report template(s)** or **Report template** option under **Report type**.
- 9 Under **Output target**, select the **Printer** and/or **PDF file** check box.



NOTE

If several reports are produced simultaneously as a PDF file, then an index will be automatically appended to the file name.

10 Click on [OK] in the Report output dialog window.

The reports of the selected determinations will be output.

8.3.12 Printing a determination overview

How to proceed?

- 1 Select the **Database** program part.
- Click on the symbol or the File ► Open... menu item.
 The Open database dialog window opens.
- 3 Select the desired database or enter the name in the **Database** name field.
- 4 Click on [Open].

The data sets of the selected database are displayed in the **Determination overview**. The database name is displayed in the title bar of the program, the number of currently opened databases is displayed in the left upper corner of the database symbol.



NOTE

A maximum of 4 databases can be opened, but only 2 can be displayed at the same time. Databases that are open at the time the program is exited will be automatically opened the next time the program is started.

5 Click on the File ▶ Print ▶ Determination overview... menu item.

The Print determination overview (PDF) dialog window opens.

- **6** Under **Selection**, select desired determinations for report output.
- 7 Select the **Portrait** or **Landscape** option under **Orientation**.
- 8 Click on [OK].

The determination overview opens as a PDF file.

8.4 Databases

8.4.1 Opening a database

How to proceed?

- 1 Select the **Database** program part.
- 2 Click on the symbol or the File ➤ Open... menu item.
 The Open database dialog window opens.
- Select the desired database or enter the name in the **Database** name field.
- 4 Click on [Open].

The data sets of the selected database are displayed in the **Determination overview**. The database name is displayed in the title bar of the program; the number of currently opened databases is displayed in the left upper corner of the database symbol.



NOTE

A maximum of 4 databases can be opened, but only 2 can be displayed at the same time. Databases that are open at the time the program is exited will be automatically opened the next time the program is started.

8.4 Databases

8.4.2 Closing a database

How to proceed?

Closing a single database

1 Select the **Database** program part.

2 Click on the symbol or the File ► Close menu item.
The selected database is closed.

Closing all databases

- 1 Select the **Database** program part.
- 2 Click on the **File ► Close all** menu item.

All opened databases will be closed.

8.4.3 Creating a database

How to proceed?

- 1 Select the **Database** program part.
- 2 Click on the 2 symbol or the File ➤ Database manager... menu item.

The **Database manager** dialog window opens.

3 Click on the **Edit ► New...** menu item.

The **New database** dialog window opens.

- **4** Enter a name for the new database.
- 5 Click on [OK].

The **Properties - Database - 'Database name'** dialog window opens for editing the database properties.



NOTE

The database name must be unique in the entire client/server system.

- 6 On the **General** tab, enter a comment on the database in the **Comment** field.
- 7 On the **Access rights** tab, define access permissions for reading and editing the newly created database for the different user groups.
- 8 On the **Backup** tab, define backup monitoring and automatic backup for the newly created database.
- **9** On the **Monitoring** tab, define the monitoring of the size and number of data sets.

8.4.4 Backing up a database

How to proceed?



NOTE

Each determination database has to be backed up separately. Afterwards, it is recommended that all backed-up files also be copied to an external directory or to a CD/DVD.

Backing up a database manually

- 1 Select the **Database** program part.
- 2 Click on the 2 symbol or the File ➤ Database manager... menu

The **Database manager** dialog window opens.

3 Click on [Backup].

The **Backup database 'Name'** window opens.

4 Select the directory for the backup in the **Backup directory** field.

8.4 Databases

Select or enter the name for the backup file in the **Backup name** field. If an existing backup file is selected, it will be overwritten.



NOTE

If the backup directory is on a network drive, the backup date should be added to the **Backup name** field, because the backup date information is not available when the data is restored.

6 Click on [Start].

The manual backup is started and the database is backed up to the selected directory.

Backing up a database automatically

- 1 Select the **Database** program part.
- 2 Click on the 2 symbol or the File ➤ Database manager... menu item.

The **Database manager** dialog window opens.

- **3** Select the desired database.
- 4 Click on [Properties].

The **Properties - Database 'Name'** dialog window opens for editing the database properties.

- On the **General** tab, enter a comment on the database in the **Comment** field.
- **6** Enable the **Backup monitoring** check box on the **Backup** tab.
- Tenter an **Interval** for backup monitoring or a date for the **Next** backup.
- **8** Activate the **Start backup automatically** check box.
- **9** Select the directory for the backup in the **Backup directory** field.

- **10** Click on **[OK]**.
- 11 The **Properties Database 'Name'** dialog window closes.

The database is automatically saved in the selected directory at the desired moment.

8.4.5 Restoring a database

How to proceed?

1 Select the **Database** program part.

2 Click on the 2 symbol or the File ➤ Database manager... menu item.

The **Database manager** dialog window opens.

3 Click on [Restore].

The **Restore databases** dialog window opens.

- 4 Select the directory in the **Backup directory** field in which the desired database was backed up.
- Select or enter the name for the desired backup file in the **Backup** name field.
- **6** Enter the name under **Save as** under which the database is to be restored.
- 7 Click on [Start].

The database restoring is started.



NOTE

Existing databases cannot be overwritten, i.e. they must first be deleted so that the database can be restored under its old name.

8.5 Configuration data

8.4.6 Deleting a database

How to proceed?

1 Select the **Database** program part.

2 Click on the 2 symbol or the File ➤ Database manager... menu item.

The **Database manager** dialog window opens.

- **3** Select the desired database.
- 4 Click on the **Edit** ▶ **Delete** menu item.

The selected database is deleted.



NOTE

Databases that are open cannot be deleted.

8.5 Configuration data

8.5.1 Exporting configuration data

How to proceed?

- 1 Select the **Configuration** program part.
- 2 Click on the **File ► Export...** menu item.

The **Export configuration data** dialog window opens.

- **3** Select the desired configuration data.
- 4 Click on [OK].

The **Export configuration data** dialog window closes and the **Save** dialog window opens.

- Select or enter a name and directory for the export file. If an existing export file is selected, it will be overwritten.
- 6 Click on [Save].

The export of the configuration data is started.

The selected configuration data is then saved in a file with the extension **.rcfg**.

8.5.2 Importing configuration data

How to proceed?

- 1 Select the **Configuration** program part.
- 2 Click on the **File ► Import...** menu item.

The **Open** dialog window opens.

- **3** Select or enter a new name and directory for the *.rcfg import file.
- 4 Click on [Open].

The **Import configuration data** dialog window opens.

5 Select the desired configuration data.



NOTE

Data that is not present in the export file cannot be selected.

6 Click on [OK].

The import is started and the selected configuration data is imported.

8.5.3 Backing up configuration data

How to proceed?



NOTE

It is strongly recommended that the configuration database be backed up periodically.

Backing up configuration data manually

- 1 Select the **Configuration** program part.
- 2 Click on the **File ► Backup ► Manually** menu item.

The **Backup configuration data manually** dialog window opens.

8.5 Configuration data

3 Select the directory for the backup in the **Backup directory** field.

4 Select or enter the name for the backup file in the **Backup name** field. If an existing backup file is selected, it will be overwritten.



NOTE

If the backup directory is on a network drive, the backup date should be added to the backup name, because the backup date information is not available when the data is restored.

5 Click on [Start].

The manual backup is started and the configuration database is backed up to the selected directory.

Backing up configuration data automatically

- 1 Select the **Configuration** program part.
- 2 Click on the File ► Backup ► Automatically menu item.

 The Backup configuration data automatically dialog window opens.
- **3** Activate the **Automatic backup** check box.
- 4 Enter an **Interval** for backup monitoring or a date for the **Next** backup.
- **5** Select a directory for the backup in the **Backup directory** field.
- 6 Click on [OK].

The **Backup configuration data automatically** dialog window closes.

The configuration database is automatically saved in the selected directory at the desired moment.

8.5.4 Restoring configuration data

How to proceed?

StabNet Full

- 1 Exit StabNet.
- 2 Start the **ConfigRestore.exe** file in the ...**StabNet\bin** program directory.

The **Restore configuration data** dialog window opens.

- Select the directory in which the configuration database was backed up in the **Backup directory** field.
- 4 Select or enter the name for the desired backup file in the **Backup** name field.
- 5 Click on [Start].

The restoring of the configuration database is started.

StabNet Multi

- **1** Make sure that **StabNet** is closed on all clients connected to the server and on the server itself.
- 2 Start the **ConfigRestore.exe** file in the ...**VIVA\bin** program directory on the server.

The **Restore configuration data** dialog window opens.

- 3 Select the directory in which the configuration database was backed up in the **Backup directory** field.
- 4 Select or enter the name for the desired backup file in the **Backup** name field.
- 5 Click on [Start].

The restoring of the configuration database is started.

8.6 Methods

8.6 Methods

8.6.1 Opening a method

How to proceed?

1 Select the **Method** program part.

2 Click on the symbol or the File ► Open... menu item.

The **Open method** dialog window opens.

- 3 Select the desired method group in the **Method group** selection list.
- 4 Select the desired method in the table or enter a name in the **Method name** field.
- 5 Click on [Open].

The selected method is opened in the main window in the place of a method that is already opened. The method name is displayed in the title bar of the program; the number of currently opened methods is displayed in the left upper corner of the method symbol.



NOTE

A maximum of 9 methods can be opened but only 1 can be displayed.

8.6.2 Closing a method

How to proceed?

Closing a single method

- **1** Select the **Method** program part.
- 2 Click on the 🗂 symbol or the **File ► Close** menu item.

The selected method will be closed. If the method has been modified, there will be a prompt for confirmation whether the method is to be saved as a new version.

Closing all methods

1 Select the **Method** program part.

2 Click on the **File ► Close all** menu item.

All opened methods will be closed. A prompt for confirmation to save the method as a new version will appear for each method that has been modified.

8.6.3 Creating a method

How to proceed?

- 1 Select the **Method** program part.
- 2 Click on the the symbol or the File ► New... menu item.

The **New method** dialog window opens.

- **3** Select the method template.
- 4 Click on [OK].

The selected method template is opened for editing.

8.6.4 Saving a new method

How to proceed?

Saving a method under the same name

1 Click on the **!** symbol or the **File ▶ Save** menu item.

The existing, selected method is newly saved under its name. A new method version with a new method identification is created.

If the **Comment on modification of methods** check box is activated in the **Security settings**, then the **Modification comment method** dialog window will be displayed before the method is saved.

Saving a method under a new name

1 Click on the **File ► Save as...** menu item.

8.6 Methods

The **Save method** dialog window opens.

- 2 Select the desired method group in the **Method group** selection list.
- 3 Select the desired method in the table or enter a name in the **Method name** field.
- 4 Click on [Save].

The focused method is saved under the desired method name in the selected method group as method version **1**.

If the **Comment on modification of methods** check box is activated in the **Security settings**, then the **Modification comment method** window will be displayed before the method is saved.

8.6.5 Deleting a method

How to proceed?

- 1 Select the **Method** program part.
- 2 Click on the 2 symbol or the File ► Method manager... menu item.

The **Method manager** dialog window opens.

- 3 Select the desired method group in the **Method group** selection list.
- **4** Select the desired method from the table.
- 5 Click on the **Edit** ▶ **Delete...** menu item.

The selected methods with all their method versions are deleted.

If the **Comment on modification of methods** check box is activated in the **Security settings**, then the **Modification comment method** dialog window will be displayed before the method is deleted.



NOTE

Locked methods cannot be deleted.

8.6.6 Exporting a method

How to proceed?

1 Select the **Method** program part.

2 Click on the 2 symbol or the File ► Method manager... menu

The **Method manager** dialog window opens.

- 3 Select the desired method group in the **Method group** selection list.
- **4** Select the desired method from the table.
- Click on the Edit ➤ Export... menu item.The Select directory for export dialog window opens.
- 6 Select the desired directory for the export files and click on **[OK]**.

 The selected methods are each exported in a file named 'Method name'.rmet.



NOTE

The exported methods are stored uncoded but with a checksum. If a file stored in this manner is tampered with, then it cannot be imported again.

8.6.7 Importing a method

How to proceed?

- 1 Select the **Method** program part.
- 2 Click on the 2 symbol or the File ► Method manager... menu item.

The **Method manager** dialog window opens.

Select the desired method group in the **Method group** selection list.

8.6 Methods

4 Click on the **Edit ► Import...** menu item.

The **Select files to import** dialog window opens.

5 Select the files to be imported named 'Method name'.rmet in the desired directory.

6 Click on [OK].

The selected methods are imported into the currently opened method group.

8.6.8 Signing a method

How to proceed?

Selecting the method

- **1** Select the **Method** program part.
- 2 Click on the 2 symbol or the File ➤ Method manager... menu item.

The **Method manager** dialog window opens.

- 3 Select the desired method group in the **Method group** selection list.
- 4 Select the desired method.

Signature 1



NOTE

Methods can be signed at level 1 only if the user belongs to a user group with the corresponding permission (see Chapter 6.2.1.2.3, page 307).

1 Click on the **Sign ► Signature 1...** menu item.

The **Signature Level 1** dialog window opens. If the selected method can be signed, **Signature possible** is displayed in the **Info** field.

- 2 Enter or select User, Password, Reason and Comment.
- 3 Click on [Sign].

The selected method will be signed at level 1.



NOTE

Methods can be signed more than once at level 1 and can also be edited and deleted. If the edited method is saved as a new method version, all the signatures will be automatically deleted, i.e. the method must be signed again.

Signature 2



NOTE

Methods can only be signed at level 2 if the user belongs to a user group with the corresponding permission (see Chapter 6.2.1.2.3, page 307).

1 Click on the **Sign ► Signature 2...** menu item.

The **Signature Level 2** dialog window opens. If the selected method can be signed, **Signature possible** is displayed in the **Info** field.

- 2 Enter or select User, Password, Reason and Comment.
- 3 Click on [Sign].

The selected method will be signed at level 2.



NOTE

Methods signed at level 2 are **locked**, i.e. they can neither be edited nor deleted. In order to be able to edit such methods again, the signatures at level 2 must first be deleted (see Chapter 6.2.1.2.3, page 307).

StabNet 1.1 ••••••• 435

8.6 Methods

8.6.9 Making a method version current

How to proceed?

1 Select the **Method** program part.

2 Click on the 2 symbol or the File ➤ Method manager... menu item

The **Method manager** dialog window opens.

- 3 Select the desired method group in the **Method group** selection list.
- **4** Select the desired method.
- **5** Click on [History].

The **Method history** dialog window opens showing a table with all **versions** of the selected method.

- **6** Select the desired method that is to be made the current method version again.
- 7 Click on [Make current].

The selected method version is set once again as the current method version. At the same time, the method is saved with a version number that is increased by **+1** compared with the last method version to have been saved.

8.6.10 Printing a method report

How to proceed?

- 1 Select the **Method** program part.
- 2 Click on the **≥** symbol or the **File ▶ Open...** menu item.

The **Open method** dialog window opens.

- **3** Select the desired method group in the **Method group** selection list.
- 4 Select the desired method in the table or enter a name in the **Method name** field.

5 Click on [Open].

The selected method is opened in the main window in the place of a method that is already opened. The method name is displayed in the title bar of the program; the number of currently opened methods is displayed in the left upper corner of the method symbol.

6 Click on the File ➤ Print (PDF)... menu item.

The Print method reports (PDF) dialog window opens.

Select the desired report and the orientation and click on [OK].
The desired report is opened as a PDF file.

8.6.11 Backing up methods

How to proceed?

General

Methods are stored in the configuration database and are globally accessible there for all clients. This means that in order to save methods, the configuration data must be saved manually or automatically for that reason. Another possible way is to export the methods and then to save these files outside of **StabNet**.

Backing up configuration data manually

- 1 Select the **Configuration** program part.
- 2 Click on the File ➤ Backup ➤ Manually menu item.

 The Backup configuration data manually dialog window opens.
- **3** Select the directory for the backup in the **Backup directory** field.
- 4 Select or enter the name for the backup file in the **Backup name** field. If an existing backup file is selected, it will be overwritten.



NOTE

If the backup directory is on a network drive, the backup date should be added to the backup name, because the backup information is not available when the data is restored.

 8.6 Methods

5 Click on [Start].

The manual backup is started and the configuration database is backed up to the selected directory.

Backing up configuration data automatically

- 1 Select the **Configuration** program part.
- Click on the File ➤ Backup ➤ Automatically menu item.
 The Backup configuration data automatically dialog window opens.
- **3** Activate the **Automatic backup** check box.
- 4 Enter an **Interval** for backup monitoring or a date for the **Next** backup.
- **5** Select a directory for the backup in the **Backup directory** field.
- 6 Click on [OK].

The **Backup configuration data automatically** dialog window closes.

The configuration database is automatically saved in the selected directory at the desired moment.

Exporting methods

- 1 Select the **Method** program part.
- 2 Click on the 2 symbol or the File ➤ Method manager... menu item.

The **Method manager** dialog window opens.

- 3 Select the desired method group in the **Method group** selection list.
- **4** Select the desired method.

5 Click on the Edit ► Export... menu item.
The Select directory for export dialog window opens.

6 Select the desired directory for the export files and click on **[OK]**.

The selected methods are each exported in a file named **'Method name'.rmet**.



NOTE

The exported methods are stored uncoded but with a checksum. If a file stored in this manner is tampered with, then it cannot be imported again.

8.7 Method groups

8.7.1 Creating a method group

How to proceed?

- 1 Select the **Method** program part.
- 2 Click on the symbol or the **File ► Method groups...** menu item.

The **Method groups** dialog window opens.

3 Click on [New].

The **Properties - Method group - New Group** dialog window opens.

- 4 On the **General** tab, enter a new name for the method group in the **Name** field and a comment in the **Comment** field.
- On the **Access rights** tab, assign access permissions for method groups and their methods per user group.



NOTE

The **Administrators** user group always has both access permissions, i.e. they cannot be disabled.

8.8 Reports

6 Click on [OK].

The **Properties - Method group - New Group** dialog window is closed.

8.7.2 Deleting a method group

How to proceed?

- 1 Select the **Method** program part.
- 2 Click on the symbol or the File ► Method groups... menu item

The **Method groups** dialog window opens.

- **3** Select the desired method group.
- 4 Click on [Delete].

The selected method group is deleted.

5 Confirm deleting with **[OK]**.

8.8 Reports

8.8.1 Creating a report template

How to proceed?

1 Select the **Database** program part.

2



NOTE

A database must be open in order to carry out the subsequent steps.

Click on the **Tools** ▶ **Report templates** ▶ **New** ▶ **Form report...** / **Tabular report...** menu item.

The **Report template - 'Name'** program window opens with an empty report template.

3 Click on the File ➤ Page setup... menu item in the Report template - 'Name' program window.

The **Page setup** dialog window opens.

4 Define the desired settings for the report format.

5 Click on [OK].

The **Page setup** dialog window closes.

6 Click on the **Tools ➤ Options...** menu item in the **Report template - 'Name'** program window.

The **Options for report templates** dialog window opens.

- **7** Define the desired settings for the report template.
- 8 Close the dialog window with **[OK]**.
- Select the desired module symbol on the module bar and place it on the report template by creating a field with the left mouse button.
 The properties window for the corresponding module opens automatically.
- **10** Enter the desired properties for the module.
- **11** Click on **[OK]**.

The properties window is closed.

- **12** Repeat steps **7** and **8** for each desired module.
- 13 Click on the symbol or the File ► Save as... menu item.

The **Save report template** dialog window opens.

- **14** Enter a name in the **Name** field.
- 15 Click on [Save].

The report template is saved under the name entered.

8.8 Reports

8.8.2 Editing a report template

How to proceed?

1 Select the **Database** program part.

2 Click on the symbol or the Tools ► Report templates ► Open... menu item.

The **Open report template** program window opens.

- **3** Select the desired report template.
- 4 Click on [Open].

The program window with the selected report template opens.

5 Click on the File ► Page setup... menu item.
The Page setup dialog window opens.

- **6** Define the desired settings for the report format.
- **7** Close the dialog window with **[OK]**.
- 8 Click on the **Tools ► Options...** menu item in the **Report tem- plate 'Name'** program window.

The **Options for report templates** dialog window opens.

- **9** Define the desired settings for the report template.
- **10** Close the window with **[OK]**.

Editing existing modules

Select the symbol on the module bar and double-click on the desired module in the report template.

The properties window of the selected module opens automatically.

- **2** Enter the desired properties for the module.
- **3** Close the properties window with **[OK]**.

4 Repeat steps 1 and 2 for each desired module.

Creating new modules

- Select the desired module symbol on the module bar and place it on the report template by creating a field with the left mouse button.

 The properties window for the corresponding module opens automatically.
- **2** Define the desired properties for the module.
- **3** Close the properties window with **[OK]**.
- 4 Repeat steps 1 and 2 for each desired new module.
- 5 Click on the symbol or the **File ► Save** menu item.
 The report template is saved.

8.8.3 Printing a determination report

How to proceed?

- **1** Select the **Database** program part.
- 2 Click on the symbol or the File ➤ Open... menu item.
 The Open database dialog window opens.
- 3 Select the desired database or enter the name in the **Database** name field.
- 4 Click on [Open].

The data sets of the selected database are displayed in the **Determination overview**. The database name is displayed in the title bar of the program; the number of currently opened databases is displayed in the left upper corner of the database symbol.

8.8 Reports



NOTE

A maximum of 4 databases can be opened, but only 2 can be displayed at the same time. Databases that are open at the time the program is exited will be automatically opened the next time the program is started.

- **5** Select the desired determinations.
- 6 Click on the File ➤ Print ➤ Report... menu item.

 The Report output dialog window opens.
- 7 Under **Selection**, select desired determinations for report output.
- 8 Select the **Original report template(s)** or **Report template** option under **Report type**.
- 9 Under **Output target**, select the **Printer** and/or **PDF file** check box.



NOTE

If several reports are produced simultaneously as a PDF file, then an index will be automatically appended to the file name.

10 Click on [OK] in the **Report output** dialog window.

The reports of the selected determinations will be output.

8.8.4 Printing a determination overview

How to proceed?

- 1 Select the **Database** program part.
- 2 Click on the symbol or the File ► Open... menu item.
 The Open database dialog window opens.
- 3 Select the desired database or enter the name in the **Database** name field.

4 Click on [Open].

The data sets of the selected database are displayed in the **Determination overview**. The database name is displayed in the title bar of the program; the number of currently opened databases is displayed in the left upper corner of the database symbol.



NOTE

A maximum of 4 databases can be opened, but only 2 can be displayed at the same time. Databases that are open at the time the program is exited will be automatically opened the next time the program is started.

- **5** Select the desired determinations.
- 6 Click on the File ► Print ► Determination overview... menu item.

 The Print determination overview (PDF) dialog window opens.
- 7 Under **Selection**, select desired determinations for report output.
- 8 Select the **Portrait** or **Landscape** option under **Orientation**.
- 9 Click on [OK].

The determination overview opens as a PDF file.

Glossary

Cell constant

The resistance R of a given conductor depends on 2 parameters: the specific resistance p (or conductivity 1 / $\rho = \chi$) and a geometric factor Z. In the case of electrolytes, this factor Z is called cell constant. The following applies:

 $R = r \cdot Z$

In general, the measuring cell is calibrated by measuring the resistance of a solution with a known χ . The cell constant can then be easily deduced.

The cell constants of the conductivity measuring cells used in the Rancimat can be either entered manually or determined automatically by means of a defined standard solution.

Conductivity

Electrical conductivity is a sum parameter for dissolved, dissociated substances. The extent of conductivity depends on the concentration and the degree of dissociation of the ions as well as on the temperature and migration velocity.

Determination

Determination refers to the automatic determination of the induction time and/or stability time for a sample. In order to carry out a determination, a method suitable for the samples must be selected.

Evaluation

Process in which the evaluation data is calculated from the determined raw data.

Extrapolation

Extrapolation can be used to convert the results measured at various temperatures to the required target temperature. In addition, the factor for converting the induction time to the standard time can be determined with this procedure.

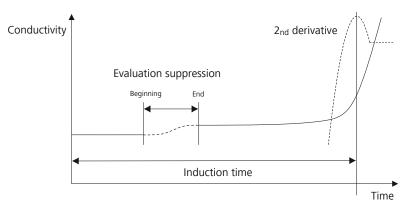
Note: The time determined for a particular sample by extrapolation to low target temperatures (e.g. 25 °C) is a purely theoretical value. The correlation between this time and e.g. the shelf life of the sample must be determined experimentally.

Glossary

Induction time

The induction time is the **time to the break point** of the *conductivity* vs. *time* curve recorded with the instrument. The induction time is a characteristic for the oxidation stability of the analyzed sample.

For the automatic determination of the induction time, the 2nd derivative of the measured curve is used, which exhibits a maximum at the break point and which can be displayed in the curve window of the database. To enable detection of a break point, certain criteria must be met with regard to the height and width of the peak in the 2nd derivative. The break point can also be determined manually as the intersection point of the two tangents at the extended straight branches of the curve.



With certain samples, it may occur that the conductivity rises slightly in steps long before the actual induction time (e.g. through side reactions or with volatile compounds). To prevent this rise being evaluated as an endpoint, the user can suppress the evaluation for the desired range.

Method

Instruction regarding the determination of a sample. Contains method, evaluation and result parameters.

Method group

Collection of *methods*, offering the possibility of defining access permissions.

Q₁₀ factor

Factor by which the reaction speed increases when the temperature is increased by 10 K.

Reprocessing

The reprocessing option opens the **Reprocess** window, in which the results of the determinations highlighted in the determination overview can be recalculated. The window comprises the following three areas:

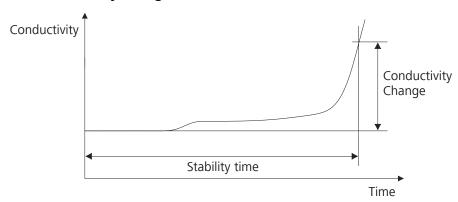
Parameters

Results

Documentation

Stability time

The stability time is the time which is necessary in order to attain a specified **conductivity change**.



The entry of an evaluation delay or evaluation suppression does not have any effect on this evaluation mode. The time from the start point of the measurement is calculated in all cases.

Standard time

Standard time is the calculated induction time at a desired target temperature and can be determined by means of extrapolation. The standard time is calculated using the following formulas:

Q₁₀ formula

$$t(Normzeit) = Faktor \frac{T(sample) - T(t \text{ arg } et)}{10} \times t(Ind., sample)$$

Arrhenius formula

$$t(Normzeit) = e^{\ln t(Ind.,sample) - \frac{1}{T(sample)} - \frac{1}{T(sample)}}$$

Temperature coefficient

Value determined from the regression straight line of the extrapolation indicating the ratio by which the induction time changes in relation to the temperature. This value can be saved in the configuration and adopted in the method.

Temperature correction

Temperature correction indicates the deviation of the current sample temperature from the temperature in the heating block and is determined

Glossary

with a calibrated, external temperature sensor. Sensors of this type are optionally available from Metrohm under the number 6.5616.000.

Index

Numbers/Symbols	Save filter 347	Client/server system 12, 93, 296,
21 CFR Part 11 5, 313, 314, 318,	Security settings 318	304, 313, 326, 337
319	Signature permissions 307	Color
892 Professional Rancimat	Special filter 344	Select 62
Device display 380	Table 340	
Device properties 374	Toolbar 339	Audit Trail 341
Gas flow 73	Update 343	Determination overview 164
893 Professional Biodiesel Ranci-	User interface 337	
mat	Verify 351	Common logarithm 42
Device display 388	,	Communication 4
Device properties 381	В	Conductivity
Gas flow 73	Backup 111	
895 Professional PVC Thermomat	Backup directories 323	Displays77
Device display 393	Configuration data 330, 331	Conductivity sensor
Device properties 389	Database 111	Assignment 267
Gas flow 73	Backup directory	Conductivity standard
	Create 324	•
Α	Edit 324	
Absolute value 43	General 323	Backup automatically 330
Access permissions	Batch	Backup manually 331
User groups 307	Attach determinations 179	
Access rights	Batch selection 166	Configuration information 233
Database111	Create 178	Configuration symbol . 11, 296
Addition 28	Delete 179	Definition 296
AND 32	Remove determinations 179	Devices 352
Application note		Export 328
Display81	C	Functions 299
Enter 295	Calculation algorithms 21	General 296
ASCII table 59	Calibration data	Import 329
Audit Trail	Calibration method 361	Information on the determina-
Archive 348, 398	Calibration temperature 361	tion 233
Column display 341, 395	Cell constant 361	Menu bar 297
Definition 337	Monitor 361	Options 335
Delete 349, 399	Resistance 364	Restore 332
Export 348, 397	Temperature 364	Subwindow 299
Filter 395	Case 57	Toolbar 298
Filter criterion 345	Cell constant	User interface 11, 296
Filter selection 343	Determine automatically 86	Configuration data 328
Functions 343	Enter manually 361	Back up 402, 427
General 337	Use 77, 267	
Last filter 343	Wizard 86	Import 427
Menu bar 338	Change layout 102, 302	Restore 404, 429
Monitoring 351	Client 325	Configuration database 3
Navigation bar 342	Client/server configuration 3	Conformity 5
Open 340, 395	Client/server functionality 1	Control chart
Organization 337	Client/server installation 322, 325	Detail overview 193
Print 350	Client/server setting 298	Graphics parameters 153
Quick filter 344	Client/server support 6	
Remove filter 348		Manage templates 151

Print 197	Detail overview	Column display 164
Properties 152	Control chart 193	Data display 163
Statistics 155	General 189	Data set selection 168
Control chart template	Print control chart 197	Filter selection 165
Export 328	Print result overview 196	Function 168
Import 329	Select 189	General 163
Create	Zoom 196	Navigation bar 166
method 431	Determination	Print 169, 420, 444
CSV export 157	Batch 178, 410	Table navigation 167
Curve	Carry out76	Update 163, 168
Reprocess manually 214	Comment 169, 234	Device
Curve evaluation	Configuration information 233	Column display 354
Edit 416	Delete 186, 415	Configuration 352
	Detail overview 189	Delete 354
D	Determination overview 163	Device name 352, 374, 382,
Database	Display history 187	389
Access rights 111	Display signatures 183	Device serial number 374,
Back up 400, 423	Double determination 76	382, 389
Back up manually 113	Examples 186	Device table 352
Backup 111, 113	Export 185, 412	Device type 352, 374, 382,
Close 107, 422	Extrapolation 216	389
Create 109, 422	Filter 173, 408	Display 380, 388, 393
Definition 93	Functions 168	Export 328
Delete 109, 426	Import 186, 414	General 352
Display next to one another	Information 227	GLP 378, 385, 391
107	Make current 415	Import 329
Display one above the other	Make old version current 187	Initialize 352
107	Messages 234	Integration 2
Display single database 107	Modification comment 215,	Print list of devices 355
Functions 100	318	Program version 374, 382,
General 93	Print report 188, 419, 443	389
General information 110	Quadruple determination 76	Properties 355
Information 227	Reason for modification 215	Remarks 374, 382, 389
Introduction 3	Reprocess 203, 416	Start-up 374, 382, 389
Manage 107	Search 170, 407	Status 352
Menu bar 94	Selection 168	Subwindow 352
Monitoring 112	Send to 185	Temperature correction table
Open 104, 421	Sensor information 233	377, 384, 390
Organization 93	Show method 187	USB devices 352
Print report 188	Sign 410	Dialog language 335
Properties 110	Signature permissions 307	Division 30
Rename 109	Signatures 227	Documentation
Restore 114, 402, 425	Single determination 76	Report 282
Select 106	Start 76	
Subwindow 100	Statistically linked 416	E
Toolbar 98	Status 227	E-mail
User interface 10, 93	Stop 76	Edit template 64, 333
Date 60	Update 168	Export template 328
Default reason 320	Variables 25	Login 321
Derivative	Version 187, 227, 415	Manage templates 63, 333
2nd derivative 272	Determination data	Send 63
Display curve 214, 239, 240	Determination database 3	E-Mail
Displaying a curve 289, 291	Determination overview	Import template 329
	Batch selection 166	Electronic signature 319

Equal to 34	Function buttons 20	<u>H</u>
Error (Function) 58	Functions 26	Heater
Evaluation	Input field20	Switch off 72
Evaluation type 227	Operators 26	Switch on 72
Manual 214	Overview 20	Heating block temperature 72
Exponential function 41	Result variables 25	Help 6
Export	System variables 26	History
Audit Trail 348	Variables23	Determinations 187
Configuration data 328, 426	Fraction 43	Hyperlink 61
Determinations 185, 412	Function	
Export template 156	Absolute value 43	<u> </u>
Method 433	Case 57	Import
Export template	Common logarithm 42	Configuration data 329, 427
Edit 157	Configuration 299	Determinations 186, 414
Export 328	Database 100	Method 433
Field selection 159	Determination overview 168	Induction time 272
Import 329	Error 58	Definition 272
Manage 156	Exponential function 41	Evaluate 272
Options for CSV format 160	Fraction 43	Set manually 214
Options for measuring point list	Integer 44	Set with tangent 214
161	Natural logarithm 41	Information
Properties 157	NumberToText 49	Comment 234
Request at file export 161	NumberToTime 50	Configuration 233
Selection 185	Overview 26	Determination 227
Extrapolation	Quantiles of the Student's t-dis-	Messages 234
Calculation 216	tribution 45	Method 230
Calculation in accordance with	Rounding integer 44	Overview 227
Arrhenius	Sign 45	Sample 232
Calculation in accordance with	Square root	Integer 44
Q ₁₀ 216	SubText 56	Round 44
Selection 221	TextPosition 55	Internal pump 375, 382
View 221	TextToNumber 50	
VICVV	TextToTime 51	L
F	Time()	Last filter
FDA	Time(Date) 47	Audit Trail 343
Login/Password protection	Time(Date+Time)	Determinations 173
	TimeToNumber 52	Less than 38
Security settings 313, 318	TimeToText 53	Less than or equal to 39
Signatures	Tinv 45	License
Filter	Trim 56	Add 326
Delete 175		Display 326
Determinations 173	G	License code 326
Filter criterion	Gas flow	Live curve 77
Filter selection	Properties 375, 382	Logarithm 41, 42
Last filter 173	Switch off 73	Login
Quick filter 173	Switch on 73	Automatic logout 14
Save 175	GLP 378, 385, 391	General 12
Special filter 174	Greater than	Login 13
Fixed report	Greater than or equal to	Manual logout 13
Form report	Group field	Security settings 314
Formula editor	Group field 146	Send e-mail 321
ASCII table 59	Group heid 140	Logout
Calculation algorithms 21		Automatic logout 14
Determination variables 25		Manual logout 13
Determination variables 25		

M	Signature permissions 307	Monitoring the molecular sieve
Measuring parameters	Signatures 230	375, 382
Gas flow 267	Status 230	Multiplication 29
Sample temperature 267	Structure 244	
Start options 267	Toolbar 246	N
Stop criteria 267	User interface 11, 244	Natural logarithm 41
Temperature correction 267	Version 230, 250, 264, 436	Navigation
Measuring position display 70	Method comment 295	Audit Trail 342
Menu bar 245	Method editor 3	Determination overview 167
Audit Trail 338	Method group	Report template 131
Configuration 297	Access rights 267	Not equal to40
Database 94	Create 439	NumberToText 49
Methods 245	Default method group 309	NumberToTime 50
Report template 120	Delete 440	
Workplace 67	General parameters 266	0
Method	Manage 265	Object-oriented database 3
Back up 405	Properties 266	Online help 6
Check 250	Methods	Operation 2
Close 254, 430	Back up 437	Operator
Copy 257	Modification comment	Addition 28
Create new 247	Determination 215, 318	AND 32
Definition 244	Method 253, 318	Division 30
Delete 257, 432	Sample data 318	Equal to 34
Display signatures 263	Modification reason	Greater than 36
Edit250	Determination 318	Greater than or equal to 37
Export 258, 433	Method 253, 318	Less than 38
Functions 246	Sample data 318	Less than or equal to 39
General 244	Module	Multiplication 29
Import 259, 433	Curve field 150	Not equal to 40
Information on determination	Data field 136	OR33
method 230	Date field 138	Overview 26
Introduction 244	Edit 129	Potentiation 31
Make current 264, 436	Fixed report	Subtraction 29
Manage	Group field 146	Options
Menu bar 245	Image field147	Configuration 335
Method groups 265	Insert 129	Dialog language 335
Method report 253	Line 148	Save
Method symbol 11, 244, 249	Module bar 123	OR 33
Method template 247	Number of pages 143	
Modification comment 253,	Page number 141	P
318	Rectangle149	Password
Modification reason 253	Text field	Change 14
Move	Time field 139	Entry 13
Open 247, 430	Toolbar 123	General 12
Rename 256, 259		Security settings 314
	Monitoring	Start password 14, 311
Reports	Audit Trail	Password protection 12, 314
Sample methods	Calibration data 361, 364	PDF output
Salection 240	Database	Potentiation
Selection	Define	Print
Send to	Result	Audit Trail350
Show determination method	Sensor	Determination overview 169,
	Temperature coefficient 368	420, 444
Show history	Monitoring the filter 375, 382	List of devices 355
Sign 434		LIST OF GEVICES

List of temperature coefficients	Line	148	S	
368	Manage	116	Sample data	
Method report 253	Menu bar	120	Information	232
Report 188	Module bar	123	Text templates	92
Priority rules 27	Navigate	128	Variables	24
Program administration	Number of pages		Sample data variable	24
Backup directories 323	Open		Sample temperature	267
Clients 325	Options		Save	
General 322	Overview		method	431
Licenses 326	Page margins		Search	
Program part	Page number		Determinations	170
Configuration 11, 296	Page preview		Security settings	
Database	Page setup		Audit Trail	318
Method 11, 244	Paper size		Default reasons	
Workplace 10, 66	Rectangle		Export	
Program parts 9	Rename		Import	
Overview 9	Save		Login	
			Modifications	
Program versions 6	Tabular report 1 Text field		Overview	
0			Password protection	
Quick access 297, 299	Time field			
	Toolbar 1:		Signatures	
Quick filter	Unit		Test login	
Audit Trail	User interface Editor		Sensor	
Determination overview 173	Zoom		Calibration data	
D	Reprocess		Edit properties	
R	Curve		Export	
Reason for modification	Display results		General	
Determination 215	Edit evaluation paramete		Import	
Report		212	Limit values	
Document	General	203	Monitoring	
Print 188, 419, 443	Procedure	416	Parameters	
Report template	Reprocessing table	207	Sensor information	
Comment 132	Reprocessing window	205	Sensor table	356
Copy 117	Rules	204	Standard sensors	355
Create 440	Sample data	209	Subwindow	355
Create new 118	Reprocessing table	207	Sign	45
Curve field 150	Reprocessing window	205	Delete signatures 2 19	9, 184,
Data field 136	Close	203	263	
Date field 138	Open	203	Determination	410
Default font 132	Restore		Display signatures	263
Define sections 127	Configuration data	332	Method	434
Delete 117	Database		Procedure	16
Edit 119, 442	Result		Rules 15,	180, 259
Edit modules 129	Define	276	Security settings	319
Export 117	Display		Signature 1 16,	
Fixed report 145	Monitor		Signature 2 18,	
Form report 118, 127	Select		Signature permissions .	
Functions 125	Selection		Signature	
General 119	Statistics		Display signatures	183
Grid 132	User-defined		Single determination	
Image field147	Variables		Start	407
Import 117	Result variable		Special filter	
Insert modules 129	result variable	23	Audit Trail	344
Insert pages 128			Determinations overvie	
72.7 72.9 22 120			Determinations overvie	

Square root	42	Table 377, 3	84, 390	User groups	305
Stability time	274	Value table (approximat	ions)	User group	
Definition	274		271	Access permissions	307
Evaluate	274	Wizard	81	Add	309
Standard solution		Temperature sensor		Сору	310
Conductivity values	88	Calibration data	364	Delete	310
Standard time		Template		Details	305
Start options	267	Control chart	151	General	304
Start password		E-mail	333	Options	309
Enter	14	Export template	156	Rename	310
Set	311, 313	Report template	116	Signature permissions	307
Statistics		Text editor	60	UTC 4	6, 47, 48
Define	278	Text templates			
Evaluate	277	Edit	92	V	
Start single determi	nation with	Manage	92	Variable	
statistics	407	TextPosition	55	Determination variable	s 25
Status bar	10, 66	TextToNumber	50	Enter	23
Stop criteria	80, 267	TextToTime	51	Overview	23
Change	80	Time()	46	Result variables	25
SubText	56	Time(Date)	47	Sample data	24
Subtraction	29	Time(Date+Time)	48	System variables	26
Subwindow		Timer		Versions	6
Configuration	299	Automatic heater start	89	View	
Database	100	TimeToNumber	52	Change layout	
Presentation	299	TimeToText	53	Default views	309
Quick access	299	Toolbar		Delete	104, 304
System variable	26	Audit Trail	339	Export	328
		Configuration	298	General	101, 301
<u>T</u>		Database	98	Import	
Tabular report	118, 127	Methods	246	Load	103, 302
Tangents		Report template	122	Rename	104, 304
Delete		Switch on/off	297	Save	
Set manually	214	Workplace	68	Save on closing	335
Target temperature		Trim	56		
Temperature coefficien				W	
Add new temperati	ure coeffi-	U		Welcome	1
cient		User		Wizard	
Arrhenius		Access permissions	307	Determine cell constar	
Column display		Add		Determine temperatur	
Configuration		Details		tion	
Delete		Full Name	311	Workplace	
Edit properties	368	General	304	Close	
Export	328	Options		Definition	
General		Short name	•	Elements	
Import		Signature permissions	307	Functions	
Monitoring	368	Status	311	General	
Parameter		User administration		Menu bar	
Print list of tempera	iture coeffi-	Access permissions	307	Open	
cients	368	Export	328	Select	
Q10		Functions		Status bar	
Subwindow		General		Symbol	
Table		Import		Toolbar	
Temperature correction		Options		User interface	10, 66
Determine	81	Signature permissions	307		