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PC/LIMS Report Guide

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1 Introduction

The 900 Touch Control and the Titrino plus instrument family offer the possibility of sending all determination data to a **PC/LIMS Report** file. Please see the respective instrument manuals for detailed information. There you will learn how to set up a PC/LIMS connection and how to send or save a PC/LIMS Report manually and auto-matically.

The PC/LIMS Report is saved to a single **ASCII file**. It provides all information about the determination and sample data and about the devices and the method used.

The filename consists of a fixed term "PC_LIMS_Report" followed by the title and date & time of the determination. The extension ".txt " shows the ASCII file characteristics.

Example: `PC_LIMS_Report-Titer NaOH-20030505-163050.txt`

If no determination file name is defined (by default, sample identification 1 is used as file name), this entry is left out in the PC/LIMS Report file name.

The PC/LIMS Report is best opened and viewed with an editor which allows to see special characters like tabulators and carriage-returns, because all data entries, which are written in one line, are separated by **tabulators**. The number of these tabulators is fixed within one line. If no data exist for a certain entry, it is left empty, but the tabulator is given anyway. **Carriage-returns** separate repeated data sets in a list.

The main structure of the PC/LIMS Report consists of the following information:
- **Title**
- **Device data**
- **Sample data**
- **Measuring point lists**
- **Determination data**
- **Method properties**
- **Method data**

This structure is built on combined substructures, each starting with "`$S`" and finished by "`$E`".

Report structure illustration
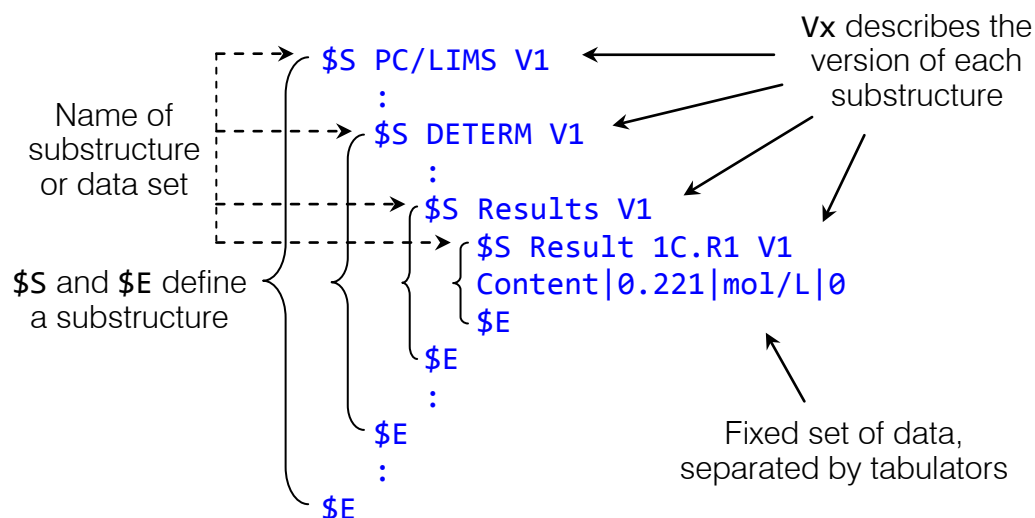
1.1 Instrument integration

PC/LIMS reports can be read into tiBase by:
- Titrino plus
  848, 870, 877
- Touch Control
  840 (5.840.0150), 900
- Ti-Touch
  915, 916
- PC Control
- 862 Compact Titrosampler
- 899 Coulometer

2 Example report

In this chapter, the structure and content of a PC/LIMS Report is described exemplarily. The PC/LIMS report shown on the following pages was generated from the example result file *Titer of NaOH-20030505-163050* stored in the group *Examples* on *Card 1*.

In the right column you find the PC/LIMS report. The original file was modified with regard to a better readability:

- Indented lines are used to illustrate the structure of such report.

- Within one report line, more than one entries are separated by tabulators. These are illustrated here by a ' | '.

- Some line entries and their comments are listed vertically for lack of space.

- Long data blocks are shortened (e. g. measuring point list).

The left column contains the corresponding description of each entry. It was shortened in the method section of the report.

As this report is just an example, it should not be taken as a complete reference. For this purpose, please see the following *Section 3*.

Title	`$S PC/LIMS V1`
Device data	`$S Devices V1`
Device name	`  $S device PC Control V1`
Program version|Serial number	`    P 1.1|S Demo version`
	`  $E`
Device name	`  $S device 835 Titrando V1`
Program version|Serial number	`    P 0.835.0046|S 0002168`
Measuring interface	`    $S ADC1`
ADC part number|Serial number	`      ADC 3.770.0110|S 0003327`
	`    $E`
MSB port	`    $S MSB1`
Connected device	`      $S 800`
Serial number|Serial number of /exchangedosing unit	`        S 0002125|S 11180111`
	`      $E`
MSB port	`      $S 801`
Connected device	`        S 0002110|`
Serial number|	`      $E`
	`    $E`
	`  $E`
	`$E`
Sample data	`$S Sample data V1`
ID1|ID2|Sample size|Sample unit	`  Titer of NaOH||0.33224|g`
	`$E`
Measuring point list	`$S MPL V2`
Mode block|Command number| Command name|Vx	`  $S Mode 1|02|DET pH|V1.0`
Index|Volume|Measured value| ERC|Time|Temperature	`    1|0.00000|4.242|0.0|0.0|25.0`
:	`    2|0.01000|4.242|5.3|1.9|25.0`
:	`    3|0.02000|4.243|6.6|3.8|25.0`
	`    :`
	`    :`
	`    :`
	`    56|19.70200|11.636|0.0|319.3|25.0`
	`    57|20.00000|11.671|0.0|321.5|25.0`
	`  $E`
	`$E`
Determination	`$S DETERM V1`
Properties	`  $S Props V2`
Method|Method status|	`    Titer NaOH|saved|`
Determination name|	`    Titer of NaOH-20030505-163050|`
Determination ID	`    30799722111244201329634`
Determination date & time|	`    2003-05-05 16:30:50|`
Determination status|	`    original loaded saved ver. 1|`
Determination end|	`    Regular without errors|`
User|Sample number|	`    Metrohm Herisau|21|`
Recalculated by|Recalculated on|	`    ||||||||||||||||||||||||||||`
Reason|Comment|Reviewed by|	
Reviewed on|Reason|Comment|	
|||||||Released by|	
Released on|Reason|Comment ||||||||	
	`    $E`
Results	`  $S Results V1`
Result 1C.R1	`    $S Result 1C.R1 V1`
Name|Value|Unit|CalcErrorNo	`      Titer|0.9961||0`
	`    $E`
	`  $E`

Description	Data
Mode block|Command number|Command name|Vx	`$S Mode 1|02|DET pH|V2.0`
EP	`$S EP V1`
EPn|EMn|EFn|EDn|ETn|ESln	`16.3320|8.860|77.165|213.2|25.0|1`
	`$E`
Cal	`$S Cal V1`
	`$E`
StdAdd	`$S StdAdd V1`
	`$E`
	`$E`
Other variables	`$S Other Variables V1`
System	`$S System V1`
DD|%RN|%SC|%AS|%AC|	`354.0|21|71|0||`
%AD|%SS|%SL|%SE	`|0||0`
	`$E`
Mode block|Command number|Command name|Vx	`$S Mode 1|02|DET pH|V2.0`
TITER|CONC|MCV|MCD|	`0.9963|0.1|20.0000|324.4|`
MSV|MIM|MIT|MSM|MST|	`0.0000|4.251|25.0|4.242|25.0|`
MSD|MCM|MCT|MSA|	`2.9|11.671|25.0|0.0000|`
MSP|MSS|MEN|MSL|MVA|	`0.0000|0.0000|7.000|100.0||`
MMP|||MTS|MTM|MDD|MCQ	`57|||Stop volume reached|manual||`
|Titrant|MCL|Mean oven temperature|Minimum oven temperature|Maximum oven temperature|Mean gas flow	`|NaOH|||||`
	`$E`
Statistics	`$S Statistics V2`
SNT|SSD|	`1|5|`
Current value of stat. counter|	`5|`
Statistics ID	`1052149417125`
Statistic table SMN1	`$S SMN1 V2`
SNR|SMN|SSA|SSR	`5|0.9963|0.00064|0.06`
Determination ID of result n|	`||0.9964|on`
Result n|Indicator for	`||0.9953|on`
consideration of result n for	`||0.9970|on`
statistics	`||0.9966|on`
	`||0.9961|on`
	`$E`
	`$E`
Common variables local V1	`$S ComVar local V1`
	`$E`
Titrant	`$S Titrant V1`
Titrant1	`$S Titrant1 V1`
Name|Conc|Conc unit|Titer|	`NaOH|0.1|mol/L|0.9963`
Titer unit|Method|	`||Titer NaOH|`
Determination date & time|	`2003-05-05 16:36:22|`
Serial no. (buret unit)|	`287|`
Cylinder vol.|Serial no. (cyl.)	`0|`
	`$E`
	`$E`
Sensor	`$S Sensor V1`
Sensor1	`$S Sensor1 V2`
Name|Type|Serial number|	`6.0232.100|pH|||`
Order number|Slope|pH(0)|	`100.0|7.000|`
Calibration temp.|Type of	`25.0||2003-04-14 11:39:34`
temp.meas.|Calibration date	`||`

& time|Calibration method|	$E
User	$E
	$E
Calculation variables	$S Calc Vars V1
Calc1	$S Calc1 V1
Result1	$S R1 V1
C00|Value|	C00|0.33224|
C|Value|	CONC|0.1|
EP1|Value|[3]	EP1|16.3320|
	$E
	$E
	$E
Messages	$S Messages V1
	$E
(End of Determination)	**$E**
Method properties	**$S Methodproperties V1**
Method|Method status|Created by|	Titer NaOH|saved|Metrohm Herisau|
Created on|Last saved by|	2003-05-05 14:55:54||
Last saved on|Version|	2003-05-05 14:55:54|ver. 1|
Modified by|Modified on|Reason|	|||||||||||||||||||||||||||
Comment|Reviewed by|Reviewed on|	
Reason|Comment||||||||	
Released by|Released on|Reason|	
Comment||||||||	
	$E
Method	**$S Method V1**
Method options	$S Methodoptions V1.1
:	on|5|off|Identification 1|
:	Identification 2|on|on|off|1.0|g|off|
:	0|9999999999|off|30 s|on|Titer
:	determination of c(NaOH) = 0.1 mol/L:
:	
:	Dissolve between 0.082 and 0.368 g potassium
:	hydrogen phthalate (dried 2 h at 105 °C and
(See *section 3.7.1* on *page 18* for	cooled down in an exsiccator) in 60 mL
detailed description)	carbonate free dist. water and titrate with
:	c(NaOH) = 0.1 mol/L. Repeat the
:	determination 5 times. The mean value is
:	saved as titer.
:	Reference: Application Bulletin No. 206,
:	252|on|on|Card 1|Main Group|
:	Identification 1|on|off|off|on|on|no|
:	*************|on|off
	$E
Command number|Command|	$S 01|REQUEST|
Command comment	Data request
(See *section 3.7.57* on *page 56* for	Identification 1|on|off|off|on
detailed description)	$E
Command number|Command|	$S 02|DET pH|
Command comment	Dynamic pH titration
:	Titrando 1|0.00000 mL|maximum|0 s|
:	off|off|5.00 mL/min|off|0 s|1 s|
:	optimal|4|10.00 μL|off|maximum|
:	50.0 mV/min|0 s|26 s|25.0 °C|
:	20.000 mL|off|9|off|off|maximum|off|
:	5|all|-20.000 pH|off|off|off|off|off|
:	off|off|off|20.000 pH|20.000 pH|

:	`20.000 pH|20.000 pH|20.000 pH|`
:	`20.000 pH|20.000 pH|20.000 pH|`
(See *section 3.7.2* on *page 18* for	`20.000 pH|5|5|5|5|5|5|5|5|5|first|`
detailed description)	`first|first|first|first|first|first|`
:	`first|first|0.00000 mL|off|off|off|`
:	`off|off|off|off|off|9999.99 mL|`
:	`9999.99 mL|9999.99 mL|9999.99 mL|`
:	`9999.99 mL|9999.99 mL|9999.99 mL|`
:	`9999.99 mL|9999.99 mL|5|5|5|5|5|5|5|5|`
:	`5|first|first|first|first|first|first|`
:	`first|first|first|1|6.0232.100|`
:	`automatic|1|NaOH|1|8|on|on`
	`$E`
Command number|Command|	`$S 03|CALC|Calculation`
Command comment	`    $S R1`
:	`        1|Titer|C00*1000/CONC/204.23/EP1|`
:	`        4||0|Mean value|off|0|on|off|`
:	`        Round|off|0.0|9999999999|`
:	`        Display message|The following`
:	`        variables are used:`
:	
:	`        C00 = Sample size in g`
:	`        1000 = Factor from L to mL`
(See *section 0* on *page 52*	`        CONC = Concentration of the`
for detailed description)	`               selected titrant in mol/L`
:	`        EP1=  Endpoint volume|`
:	`    $E`
:	`$E`
Command number|Command|	`$S 04|REPORT|Report`
Command comment	`    $S Reportoptions V1`
:	`        on each page|off|on`
:	`    $E`
:	`    $S Result report`
:	`        on|on|off|off|on|off|on|on|on|off`
(See *section 3.7.54* on *page 53*	`    $E`
for detailed description)	`    $S Curve`
:	`        2|off|Volume|Meas. value|blue|`
:	`        none|magenta|on|off|88 %|34 %`
:	`    $E`
:	`    $S Statistics overview`
:	`        at the end of a series`
:	`    $E`
	`$E`
(End of Method)	**`$E`**
(End of PC/LIMS Report)	**`$E`**

3 Reference

The reference description of all PC/LIMS report entries is partitioned into sections to illustrate the report structure. The name of each report entry cluster is given as a section or table header and may be described by a prefixed term.

In the PC/LIMS report all entries of an entry cluster are given within one line, separated by tabulators. In the following reference, these entries are listed in tables. Each line of these tables contains the entry **number**, the parameter **name** together with special values written in brackets [ ], and the **type** of the entry value.

The type of the entry value can be:

X : checkbox ([on], [off])
IN : integer number
INC : combo box selection from integer number and special value
FN : floating number
FNC : combo box selection from floating number and special value
T : text
TC : combo box selection from text
TA : text area
C : combo box selection
DATE : date & time
BOOL : Boolean type (0, 1)

Example	Description
Vx	Version of the corresponding entry cluster (x = 1, 1.1,...)
##	Section 3.7 Method: line number of method command (## = 01, 02, 03,...99)
MSB# EPn	# and n are replaced by integer numbers; multiple entry clusters of parameters indicated that way are possible.
(MCM)	Corresponding program variables are written in parentheses. See Instructions for Use for PC Control / Touch Control, chapter '4.4 Calculations', for a list of all calculation variables.
[off]	For combo box selections, all possible entries are given in squared brackets. If there are special entries for numerical parameters, they are also written in squared brackets.
R1	Many method parameters which contain numerical values may also give result variables (R1...R9) as report entries. See Instructions for Use for PC Control / Touch Control: Chapter '4.4.7 Result Variables as Parameter'.
30 s	Entries from numerical values like integer or floating numbers may also contain the corresponding unit. Otherwise, the unit is given in an additional entry, separated by a tabulator (valid for user defined units, e.g. sample size, result, titrant concentration, titrant titer).

At the end of the reference description you'll find several comments explaining some special versions of report entries.

3.1 Title: PC/LIMS Vx

3.2 Device data: `Devices Vx`

3.2.1 Device Touch Control Vx

No.	Parameter description	Type
1	**P** Program version	T
2	**S** Serial number	T

3.2.2 Device Titrando / Dosing Interface / pH Module / Conductivity Module / Titrino plus / Compact Titrosampler / Compact Oven SC / Ti-Touch Titrator / Coulometer Vx

No.	Parameter description	Type
1	**P** Program version	T
2	**S** Serial number	T

ADC# (not for Dosing Interface)

No.	Parameter description	Type
1	**ADC** Part number	T
2	**S** Serial number	T
3	Order number of electrode; 857 Titrando only	T
4	Serial number of electrode; 857 Titrando only	T

MSB#

`[685][700][800][801][803][804][805]`

No.	Parameter description	Type
1	**S** Serial number	T
2	**S** Serial number of dosing/exchange unit; 800 and 805 only	T

3.2.3 Device USB Sample Processor / Robotic Titrosampler Vx

No.	Parameter description	Type
1	**P** Program version	T
2	**S** Serial number	T

Rack

No.	Parameter description	Type
1	Sample rack	T
2	Rack code	T

Swinghead#

No.	Parameter description	Type
1	**SH** part number	T
2	**S** Serial number	T

ADC# (Robotic Titrosampler only)

No.	Parameter description	Type
1	**ADC** Part number	T
2	**S** Serial number	T

MSB#

`[685][700][800][801][803][804][805]`

No.	Parameter description	Type
1	**S** Serial number	T
2	**S** Serial number of dosing/exchange unit; 800 and 805 only	T

3.3 **Sample data:** `Sample data Vx`

No.	Parameter description	Type
1	ID1 (CI1)	T
2	ID2 (CI2)	T
3	Sample size (C00)	FN
4	Sample unit	T

3.4 **Measuring point lists:** `MPL Vx`

`Mode # Command number Command name Vx`

(Titration **DET**:)

No.	Parameter description	Type
5	Index	IN
6	Volume	FN
7	Measured value	FN
8	ERC	FN
9	Time	FN
10	Temperature	FN

(Titration **MET**:)

No.	Parameter description	Type
1	Index	IN
2	Volume	FN
3	Measured value	FN
4	Delta MV	FN
5	Time	FN
6	Temperature	FN

(Titration **SET**:)

No.	Parameter description	Type
1	Index	IN
2	Time	FN
3	Measured value	FN
4	Volume	FN
5	Volume drift	FN
6	Temperature	FN

(Titration **KFT**:)

No.	Parameter description	Type
1	Index	IN
2	Time	FN
3	Measured value	FN

4	Volume	FN
5	Volume drift	FN
6	Temperature	FN

(Titration **KFC**:)

No.	Parameter description	Type
1	Index	IN
2	Time	FN
3	Measured value	FN
4	Water quantity	FN
5	Drift	FN
6	Temperature	FN

(Titration **BRC**:)

No.	Parameter description	Type
1	Index	IN
2	Time	FN
3	Measured value	FN
4	Bromine quantity	FN
5	Drift	FN
6	Temperature	FN

(Titration **STAT**:)

No.	Parameter description	Type
1	Index	IN
2	Time	FN
3	Measured value	FN
4	Volume	FN
5	Volume drift	FN
6	Temperature	FN
7	Monitoring	T

(Titration **MAT**:)

No.	Parameter description	Type
1	Index	IN
2	Time	FN
3	Measured value	FN
4	Volume	FN
5	ERC	FN
6	Temperature	FN

(Monitored dosing **DOS**:)

No.	Parameter description	Type
1	Index	IN
2	Time	FN
3	Measured value	FN
4	Volume	FN
5	Volume drift	FN
6	Temperature	FN
7	Monitoring	T

(Direct measurement **MEAS**:)

No.	Parameter description	Type
1	Index	IN
2	Time	FN
3	Measured value	FN
4	Measured value drift	FN
5	Temperature	FN

3.5 **Determination:** `Determ Vx`

3.5.1 **Properties:** `Props Vx`

No.	Parameter description	Type
1	Method	T
2	Method status	T
3	Determination name	T
4	Determination ID	IN
5	Determination date & time	date
6	Determination status	T
7	Determination end	T
8	User	T
9	Sample number	IN
10	Recalculated by	T
11	Recalculated on (date & time, UTC)	date
12	Reason	T
13	Comment	T
14	Reviewed by	T
15	Reviewed on (date & time, UTC)	date
16	Reason	T
17	Comment	T
18	Reviewed by	T
19	Reviewed on (date & time, UTC)	date
20	Reason	T
21	Comment	T
22	Reviewed by	T
23	Reviewed on (date & time, UTC)	date
24	Reason	T
25	Comment	T
26	Released by	T
27	Released on (date & time, UTC)	date
28	Reason	T
29	Comment	T
30	Released by	T
31	Released on (date & time, UTC)	date
32	Reason	T
33	Comment	T
34	Released by	T
35	Released on (date & time, UTC)	date
36	Reason	T
37	Comment	T

3.5.2 Results Vx

`Result #C.R# Vx`

No.	Parameter description	Type
1	Name	T
2	Value	FN
3	Unit	T
4	CalcErrorNumber	IN

3.5.3 Mode # Command number Command name Vx

`EP Vx`

No.	Parameter description	Type
1	Volume/Quantity of endpoint (EPn) [1]	FN
2	Measured value (EMn)	FN
3	Endpoint recognition criterion ERC (EFn) (SET: EFn=missing)	FN
4	Time (EDn)	FN
5	Temperature (ETn)	FN
6	Recognition of endpoint (ESIn) [0] [1]	IN

`CAL Vx`

No.	Parameter description	Type
1	Buffer / Standard number	IN
2	pH of buffer / concentration of standard / conductivity of standard at reference temp.	FN
3	Unit; empty in case of pH calibration	T
4	Measured value	FN
5	Temperature	FN
6	Time	IN

`StdAdd Vx`

No.	Parameter description	Type
1	Increment number ('0' for sample)	IN
2	Concentration of standard ('0' for sample)	FN
3	Unit ('0' for sample)	T
4	Volume of increment ('0' for sample)	FN
5	Measured value	FN
6	Temperature	FN
7	Time	IN

3.5.4 Eval # Command number Command name Vx [2]

No.	Parameter description			Type
1	Volume	(FP# / HP# / XAP / XIP / BP#)	[outside]	FN
2	Measured value	(FM# / HM# / XAM / XIM / BM#)	[outside]	FN
3	Time	(FD# / HD# / XAD / XID / BD#)	[outside]	FN
4	Temperature	(FT# / HT# / XAT / XIT / BT#)	[outside]	FN

3.5.5 Eval # Command number Command name Vx (Eval Rate)

No.	Parameter description	Type
1	Mean rate for whole range (RM)	FN
2	Standard deviation for RM (RMS)	FN
3	Correlation coefficient for RM (RMC)	FN
4	Mean rate for time slot (RD#)	FN

5	Standard deviation for RD# (RDS#)	FN
6	Correlation coefficient for RD# (RDC#)	FN

3.5.6 Other Variables Vx

System Vx

No.	Parameter description	Type
1	Duration of determination (DD)	FN
2	Sample number (%RN)	IN
3	Start counter (%SC)	IN
4	Autostart status (%AS)	BOOL
5	Autostart counter (%AC) (no entry without autostart)	IN
6	Autostart setpoint counter (%AD) (no entry without autostart)	IN
7	Sample data silo status (%SS)	BOOL
8	Current silo line (%SL) (no entry without silo)	IN
9	Silo end reached (%SE)	BOOL

Mode # Command number Command name Vx

No.	Parameter description	Type
1	Titer of selected titrant (TITER)	FN
2	Concentration of selected titrant (CONC)	FN
3	End volume (MCV)	FN
4	Total duration of mode (MCD)	FN
5	Total start volume (MSV) (Standard addition: sample size + V aux. solution)	FN
6	Initial measured value (MIM)	FN
7	Initial temperature (MIT)	FN
8	Start measured value (MSM)	FN
9	Start temperature (MST)	FN
10	Duration of start conditions (MSD)	FN
11	End measured value (MCM)	FN
12	End temperature (MCT)	FN
13	Volume for start volume (MSA)	FN
14	Volume for start measured value (MSP)	FN
15	Volume for start slope (MSS)	FN
16	Electrode zero point (MEN)	FN
17	Slope of electrode (MSL)	FN
18	Electrode variance (MVA) (only for ISE; otherwise empty)	FN
19	Number of measuring points (MMP)	IN
20	Drift for drift correction (MDC) (only for SET, KFT; otherwise empty)	FN
21	Time for drift correction (DDC) (only for SET, KFT; otherwise empty)	FN
22	Stop type (MTS)	T
23	Type of temperature measurement (MTM) [Pt1000] [NTC] [manual]	C
24	Duration of effective dosing (MDD) (only for DOS; otherwise empty)	FN
25	End quantity (MCQ) (only for KFC, BRC; otherwise empty)	FN
26	Titrant	TC
27	Cell constant (MCL)	FN
28	Mean oven temperature	FN
29	Minimum oven temperature	FN
30	Maximum oven temperature	FN
31	Mean gas flow	FN

Statistic Vx

No.	Parameter description	Type

1	Statistics status (SNT)	BOOL
2	Statistics setpoint counter (SSD)	IN
3	Current value of statistics counter	IN
4	Statistics ID	IN

SMN# Vx (Statistic table)

No.	Parameter description	Type
1	Number n for mean value SMN# (SNR#)	IN
2	Mean value# (SMN#)	FN
3	Abs. standard deviation of SMN# (SSA#)	FN
4	Rel. standard dev. of SMN# in % (SSR#)	FN
5	Determination ID of result n	IN
6	Result n (value and unit)	FN
7	Indicator for consideration of result n for statistics [on], [off]	T

ComVar local Vx

No.	Parameter description	Type
1	Index	IN
2	Value	FN

Titrant Vx

Titrant# Vx

No.	Parameter description	Type
1	Titrant	T
2	Concentration	FN
3	Concentration unit	T
4	Titer	FN
5	Titer unit	T
6	Method	T
7	Date & time of titer determination	date
8	Serial number (buret unit)	IN
9	Cylinder volume	IN
10	Serial number (cylinder)	IN

Sensor Vx

Sensor# Vx

(for pH sensors)

No.	Parameter description	Type
1	Sensor	T
2	Sensor type	T
3	Serial number	IN
4	Order number	T
5	Slope	FN
6	pH(0)	FN
7	Calibration temperature	FN
8	Type of temperature measurement [(Pt1000)] [(NTC)] [(manual)]	C
9	Calibration date & time	date
10	Calibration method	T
11	User	T

(for ISE sensors)

No.	Parameter description	Type
1	Sensor	T

2	Sensor type	T
3	Serial number	IN
4	Order number	T
5	Slope	FN
6	E(0)	FN
7	c (blank)	FN
8	Variance	FN
9	Calibration temperature	FN
10	Type of temperature measurement [(Pt1000)] [(NTC)] [(manual)]	C
11	Calibration date & time	date
12	Calibration method	T
13	User	T
14	Ion	T

(for metal electrodes)

No.	Parameter description	Type
1	Sensor	T
2	Sensor type	T
3	Serial number	IN
4	Order number	T

(for temperature sensors)

No.	Parameter description	Type
1	Sensor	T
2	Sensor type	T
3	Serial number	IN
4	Order number	T

(for conductivity measuring cells)

No.	Parameter description	Type
1	Sensor	T
2	Sensor type	T
3	Serial number	IN
4	Order number	T
5	Cell constant	FN
6	Calibration temperature	FN
7	Type of temperature measurement [(Pt1000)] [(NTC)] [(manual)]	C
8	Calibration date & time	date
9	Calibration method	T
10	User	T

(for other sensors)

No.	Parameter description	Type
1	Sensor	T
2	Sensor type	T
3	Serial number	IN
4	Order number	T

3.5.7   Calc Vars Vx

`Calc# Vx`

`R# Vx`

No.	Parameter description	Type

1	Short name	T
2	Value	FN
3	Short name	T
4	Value	FN
5	: [3]	FN

3.5.8   Messages Vx

Message Vx

No.	Parameter description	Type
1	Command number (one-digit if <10)	IN
2	Command	T
3	Message number	T
4	Message title	T
5	Time elapsed since start ("recalc" if determination has been recalculated)	IN, T

3.6   Methodproperties Vx

No.	Parameter description	Type
1	Method	T
2	Method status	T
3	Created by	T
4	Created on (date & time, UTC)	date
5	Last saved by	T
6	Last saved on (date & time, UTC)	date
7	Version	T
8	Modified by	T
9	Modified on (date & time, UTC)	date
10	Reason	T
11	Comment	T
12	Reviewed by	T
13	Reviewed on (date & time, UTC)	date
14	Reason	T
15	Comment	T
16	Reviewed by	T
17	Reviewed on (date & time, UTC)	date
18	Reason	T
19	Comment	T
20	Reviewed by	T
21	Reviewed on (date & time, UTC)	date
22	Reason	T
23	Comment	T
24	Released by	T
25	Released on (date & time, UTC)	date
26	Reason	T
27	Comment	T
28	Released by	T
29	Released on (date & time, UTC)	date
30	Reason	T
31	Comment	T
32	Released by	T
33	Released on (date & time, UTC)	date

34	Reason	T
35	Comment	T

3.7   Method Vx

3.7.1   Methodoptions Vx

No.	Parameter description	Type
1	Statistics	X
2	Number of samples	IN
3	Show 'Direct parameters'	X
4	Label for ID 1	T
5	Label for ID 2	T
6	Display ID 1	X
7	Display ID 2	X
8	Fixed sample size	X
9	Sample size	FN
10	Unit of sample size	TC
11	Monitoring sample size limits	X
12	Lower limit sample size	FN
13	Upper limit sample size	FN
14	Display message sample size	X
15	Timeout message sample size	FNC
16	Method check at start	X
17	Note	TA
18	Display Note - Automatically after loading the method	X
19	Save determination automatically	X
20	Memory	C
21	Group	TC
22	File name	TC
23	Write protection	X
24	Send PC/LIMS report	X
25	Rack reset	X
26	Pumps off	X
27	Stirrer off	X
28	Check rack [no]	TC
29	Set remote lines	INC
30	Increase sample variable automatically	X
31	Request rack position at start	X

3.7.2   ## DET pH   Dynamic equivalence point titration

No.	Parameter description	Type
1	Control device	TC
2	Start volume	FN
3	Dosing rate (Start conditions) [maximum]	FNC
4	Pause	IN
5	Start meas. value [off]	FNC
6	Start slope [off]	FNC
7	Dosing rate (More start conditions) [maximum]	FNC
8	Signal drift (Initial measured value) [off]	FNC
9	Min. waiting time (Initial measured value)	IN

10	Max. waiting time (Initial measured value)	IN
11	Titration rate [slow] [optimal] [fast] [User]	C
12	Meas. point density	IN
13	Min. increment	FN
14	Max. increment [off]	FNC
15	Dosing rate (User defined parameters) [maximum]	FNC
16	Signal drift (User defined parameters) [off]	FNC
17	Min. waiting time (User defined parameters)	IN
18	Max. waiting time (User defined parameters)	IN
19	Temperature	FN
20	Stop volume [off]	FNC
21	Stop meas. value [off]	FNC
22	Stop EP [off]	INC
23	Volume after EP [off]	FNC
24	Stop time [off]	INC
25	Filling rate [maximum]	FNC
26	Set windows [off] [measured value] [volume]	C
27	EP criterion	IN
28	EP recognition [all] [greatest] [last] [ascending] [descending] [off]	C
29	Lower limit meas window 1	FN
30	Lower limit meas window 2	FN
31	Lower limit meas window 3	FN
32	Lower limit meas window 4	FN
33	Lower limit meas window 5	FN
34	Lower limit meas window 6	FN
35	Lower limit meas window 7	FN
36	Lower limit meas window 8	FN
37	Lower limit meas window 9	FN
38	Upper limit meas window 1	FN
39	Upper limit meas window 2	FN
40	Upper limit meas window 3	FN
41	Upper limit meas window 4	FN
42	Upper limit meas window 5	FN
43	Upper limit meas window 6	FN
44	Upper limit meas window 7	FN
45	Upper limit meas window 8	FN
46	Upper limit meas window 9	FN
47	EP criterion meas window 1	IN
48	EP criterion meas window 2	IN
49	EP criterion meas window 3	IN
50	EP criterion meas window 4	IN
51	EP criterion meas window 5	IN
52	EP criterion meas window 6	IN
53	EP criterion meas window 7	IN
54	EP criterion meas window 8	IN
55	EP criterion meas window 9	IN
56	EP recognition meas window 1 [first] [greatest] [last] [ascending] [descending]	C
57	EP recognition meas window 2 [first] [greatest] [last] [ascending] [descending]	C
58	EP recognition meas window 3 [first] [greatest] [last] [ascending] [descending]	C
59	EP recognition meas window 4 [first] [greatest] [last] [ascending] [descending]	C
60	EP recognition meas window 5 [first] [greatest] [last] [ascending] [descending]	C
61	EP recognition meas window 6 [first] [greatest] [last] [ascending] [descending]	C

62	EP recognition meas window 7 [first] [greatest] [last] [ascending] [descending]	C
63	EP recognition meas window 8 [first] [greatest] [last] [ascending] [descending]	C
64	EP recognition meas window 9 [first] [greatest] [last] [ascending] [descending]	C
65	Lower limit volume window 1	FN
66	Lower limit volume window 2	FN
67	Lower limit volume window 3	FN
68	Lower limit volume window 4	FN
69	Lower limit volume window 5	FN
70	Lower limit volume window 6	FN
71	Lower limit volume window 7	FN
72	Lower limit volume window 8	FN
73	Lower limit volume window 9	FN
74	Upper limit volume window 1	FN
75	Upper limit volume window 2	FN
76	Upper limit volume window 3	FN
77	Upper limit volume window 4	FN
78	Upper limit volume window 5	FN
79	Upper limit volume window 6	FN
80	Upper limit volume window 7	FN
81	Upper limit volume window 8	FN
82	Upper limit volume window 9	FN
83	EP criterion volume window 1	IN
84	EP criterion volume window 2	IN
85	EP criterion volume window 3	IN
86	EP criterion volume window 4	IN
87	EP criterion volume window 5	IN
88	EP criterion volume window 6	IN
89	EP criterion volume window 7	IN
90	EP criterion volume window 8	IN
91	EP criterion volume window 9	IN
92	EP recognition volume window 1 [first] [greatest] [last] [ascending] [descending]	C
93	EP recognition volume window 2 [first] [greatest] [last] [ascending] [descending]	C
94	EP recognition volume window 3 [first] [greatest] [last] [ascending] [descending]	C
95	EP recognition volume window 4 [first] [greatest] [last] [ascending] [descending]	C
96	EP recognition volume window 5 [first] [greatest] [last] [ascending] [descending]	C
97	EP recognition volume window 6 [first] [greatest] [last] [ascending] [descending]	C
98	EP recognition volume window 7 [first] [greatest] [last] [ascending] [descending]	C
99	EP recognition volume window 8 [first] [greatest] [last] [ascending] [descending]	C
100	EP recognition volume window 9 [first] [greatest] [last] [ascending] [descending]	C
101	Measuring input [1] [2]	C
102	Sensor	TC
103	Temp. meas. [continuous] [automatic] [off]	C
104	Dosing device [1] [2] [3] [4]	C
105	Titrant	TC
106	Stirrer [1] [2] [3] [4] [off]	C
107	Stirring rate	IN
108	Switch off auto.	X
109	Electrode check	X

3.7.3   ## DET U   Dynamic equivalence point titration

See *section 3.7.2*

3.7.4 ## DET Ipol   Dynamic equivalence point titration

No.	Parameter description	Type
1	Control device	TC
2	Start volume	FN
3	Dosing rate (Start conditions) [maximum]	FNC
4	Pause	IN
5	Start meas. value [off]	FNC
6	Start slope [off]	FNC
7	Dosing rate (More start conditions) [maximum]	FNC
8	Signal drift (Initial measured value) [off]	FNC
9	Min. waiting time (Initial measured value)	IN
10	Max. waiting time (Initial measured value)	IN
11	Titration rate [slow] [optimal] [fast] [User]	C
12	Meas. point density	IN
13	Min. increment	FN
14	Max. increment [off]	FNC
15	Dosing rate (User defined parameters) [maximum]	FNC
16	Signal drift (User defined parameters) [off]	FNC
17	Min. waiting time (User defined parameters)	IN
18	Max. waiting time (User defined parameters)	IN
19	Temperature	FN
20	Stop volume [off]	FNC
21	Stop meas. value [off]	FNC
22	Stop EP [off]	INC
23	Volume after EP [off]	FNC
24	Stop time [off]	INC
25	Filling rate [maximum]	FNC
26	Set windows [off] [measured value] [volume]	C
27	EP criterion	IN
28	EP recognition [all] [greatest] [last] [ascending] [descending] [off]	C
29	Lower limit meas window 1	FN
30	Lower limit meas window 2	FN
31	Lower limit meas window 3	FN
32	Lower limit meas window 4	FN
33	Lower limit meas window 5	FN
34	Lower limit meas window 6	FN
35	Lower limit meas window 7	FN
36	Lower limit meas window 8	FN
37	Lower limit meas window 9	FN
38	Upper limit meas window 1	FN
39	Upper limit meas window 2	FN
40	Upper limit meas window 3	FN
41	Upper limit meas window 4	FN
42	Upper limit meas window 5	FN
43	Upper limit meas window 6	FN
44	Upper limit meas window 7	FN
45	Upper limit meas window 8	FN
46	Upper limit meas window 9	FN
47	EP criterion meas window 1	IN
48	EP criterion meas window 2	IN

49	EP criterion meas window 3	IN
50	EP criterion meas window 4	IN
51	EP criterion meas window 5	IN
52	EP criterion meas window 6	IN
53	EP criterion meas window 7	IN
54	EP criterion meas window 8	IN
55	EP criterion meas window 9	IN
56	EP recognition meas window 1 [first] [greatest] [last] [ascending] [descending]	C
57	EP recognition meas window 2 [first] [greatest] [last] [ascending] [descending]	C
58	EP recognition meas window 3 [first] [greatest] [last] [ascending] [descending]	C
59	EP recognition meas window 4 [first] [greatest] [last] [ascending] [descending]	C
60	EP recognition meas window 5 [first] [greatest] [last] [ascending] [descending]	C
61	EP recognition meas window 6 [first] [greatest] [last] [ascending] [descending]	C
62	EP recognition meas window 7 [first] [greatest] [last] [ascending] [descending]	C
63	EP recognition meas window 8 [first] [greatest] [last] [ascending] [descending]	C
64	EP recognition meas window 9 [first] [greatest] [last] [ascending] [descending]	C
65	Lower limit volume window 1	FN
66	Lower limit volume window 2	FN
67	Lower limit volume window 3	FN
68	Lower limit volume window 4	FN
69	Lower limit volume window 5	FN
70	Lower limit volume window 6	FN
71	Lower limit volume window 7	FN
72	Lower limit volume window 8	FN
73	Lower limit volume window 9	FN
74	Upper limit volume window 1	FN
75	Upper limit volume window 2	FN
76	Upper limit volume window 3	FN
77	Upper limit volume window 4	FN
78	Upper limit volume window 5	FN
79	Upper limit volume window 6	FN
80	Upper limit volume window 7	FN
81	Upper limit volume window 8	FN
82	Upper limit volume window 9	FN
83	EP criterion volume window 1	IN
84	EP criterion volume window 2	IN
85	EP criterion volume window 3	IN
86	EP criterion volume window 4	IN
87	EP criterion volume window 5	IN
88	EP criterion volume window 6	IN
89	EP criterion volume window 7	IN
90	EP criterion volume window 8	IN
91	EP criterion volume window 9	IN
92	EP recognition volume window 1 [first] [greatest] [last] [ascending] [descending]	C
93	EP recognition volume window 2 [first] [greatest] [last] [ascending] [descending]	C
94	EP recognition volume window 3 [first] [greatest] [last] [ascending] [descending]	C
95	EP recognition volume window 4 [first] [greatest] [last] [ascending] [descending]	C
96	EP recognition volume window 5 [first] [greatest] [last] [ascending] [descending]	C
97	EP recognition volume window 6 [first] [greatest] [last] [ascending] [descending]	C
98	EP recognition volume window 7 [first] [greatest] [last] [ascending] [descending]	C
99	EP recognition volume window 8 [first] [greatest] [last] [ascending] [descending]	C
100	EP recognition volume window 9 [first] [greatest] [last] [ascending] [descending]	C

101	Measuring input [1] [2]	C
102	Sensor	TC
103	I(pol)	FN
104	Electrode test	X
105	Temp. meas. [continuous] [automatic] [off]	C
106	Dosing device [1] [2] [3] [4]	C
107	Titrant	TC
108	Stirrer [1] [2] [3] [4] [off]	C
109	Stirring rate	IN
110	Switch off auto.	X
111	Electrode check	X

3.7.5   ## DET Upol   Dynamic equivalence point titration

No.	Parameter description	Type
1	Control device	TC
2	Start volume	FN
3	Dosing rate (Start conditions) [maximum]	FNC
4	Pause	IN
5	Start meas. value [off]	FNC
6	Start slope [off]	FNC
7	Dosing rate (More start conditions) [maximum]	FNC
8	Signal drift (Initial measured value) [off]	FNC
9	Min. waiting time (Initial measured value)	IN
10	Max. waiting time (Initial measured value)	IN
11	Titration rate [slow] [optimal] [fast] [User]	C
12	Meas. point density	IN
13	Min. increment	FN
14	Max. increment [off]	FNC
15	Dosing rate (User defined parameters) [maximum]	FNC
16	Signal drift (User defined parameters) [off]	FNC
17	Min. waiting time (User defined parameters)	IN
18	Max. waiting time (User defined parameters)	IN
19	Temperature	FN
20	Stop volume [off]	FNC
21	Stop meas. value [off]	FNC
22	Stop EP [off]	INC
23	Volume after EP [off]	FNC
24	Stop time [off]	INC
25	Filling rate [maximum]	FNC
26	Set windows [off] [measured value] [volume]	C
27	EP criterion	IN
28	EP recognition [all] [greatest] [last] [ascending] [descending] [off]	C
29	Lower limit meas window 1	FN
30	Lower limit meas window 2	FN
31	Lower limit meas window 3	FN
32	Lower limit meas window 4	FN
33	Lower limit meas window 5	FN
34	Lower limit meas window 6	FN
35	Lower limit meas window 7	FN
36	Lower limit meas window 8	FN
37	Lower limit meas window 9	FN

38	Upper limit meas window 1	FN
39	Upper limit meas window 2	FN
40	Upper limit meas window 3	FN
41	Upper limit meas window 4	FN
42	Upper limit meas window 5	FN
43	Upper limit meas window 6	FN
44	Upper limit meas window 7	FN
45	Upper limit meas window 8	FN
46	Upper limit meas window 9	FN
47	EP criterion meas window 1	IN
48	EP criterion meas window 2	IN
49	EP criterion meas window 3	IN
50	EP criterion meas window 4	IN
51	EP criterion meas window 5	IN
52	EP criterion meas window 6	IN
53	EP criterion meas window 7	IN
54	EP criterion meas window 8	IN
55	EP criterion meas window 9	IN
56	EP recognition meas window 1 [first] [greatest] [last] [ascending] [descending]	C
57	EP recognition meas window 2 [first] [greatest] [last] [ascending] [descending]	C
58	EP recognition meas window 3 [first] [greatest] [last] [ascending] [descending]	C
59	EP recognition meas window 4 [first] [greatest] [last] [ascending] [descending]	C
60	EP recognition meas window 5 [first] [greatest] [last] [ascending] [descending]	C
61	EP recognition meas window 6 [first] [greatest] [last] [ascending] [descending]	C
62	EP recognition meas window 7 [first] [greatest] [last] [ascending] [descending]	C
63	EP recognition meas window 8 [first] [greatest] [last] [ascending] [descending]	C
64	EP recognition meas window 9 [first] [greatest] [last] [ascending] [descending]	C
65	Lower limit volume window 1	FN
66	Lower limit volume window 2	FN
67	Lower limit volume window 3	FN
68	Lower limit volume window 4	FN
69	Lower limit volume window 5	FN
70	Lower limit volume window 6	FN
71	Lower limit volume window 7	FN
72	Lower limit volume window 8	FN
73	Lower limit volume window 9	FN
74	Upper limit volume window 1	FN
75	Upper limit volume window 2	FN
76	Upper limit volume window 3	FN
77	Upper limit volume window 4	FN
78	Upper limit volume window 5	FN
79	Upper limit volume window 6	FN
80	Upper limit volume window 7	FN
81	Upper limit volume window 8	FN
82	Upper limit volume window 9	FN
83	EP criterion volume window 1	IN
84	EP criterion volume window 2	IN
85	EP criterion volume window 3	IN
86	EP criterion volume window 4	IN
87	EP criterion volume window 5	IN
88	EP criterion volume window 6	IN
89	EP criterion volume window 7	IN

90	EP criterion volume window 8	IN
91	EP criterion volume window 9	IN
92	EP recognition volume window 1 [first] [greatest] [last] [ascending] [descending]	C
93	EP recognition volume window 2 [first] [greatest] [last] [ascending] [descending]	C
94	EP recognition volume window 3 [first] [greatest] [last] [ascending] [descending]	C
95	EP recognition volume window 4 [first] [greatest] [last] [ascending] [descending]	C
96	EP recognition volume window 5 [first] [greatest] [last] [ascending] [descending]	C
97	EP recognition volume window 6 [first] [greatest] [last] [ascending] [descending]	C
98	EP recognition volume window 7 [first] [greatest] [last] [ascending] [descending]	C
99	EP recognition volume window 8 [first] [greatest] [last] [ascending] [descending]	C
100	EP recognition volume window 9 [first] [greatest] [last] [ascending] [descending]	C
101	Measuring input [1] [2]	C
102	Sensor	TC
103	U(pol)	IN
104	Electrode test	X
105	Temp. meas. [continuous] [automatic] [off]	C
106	Dosing device [1] [2] [3] [4]	C
107	Titrant	TC
108	Stirrer [1] [2] [3] [4] [off]	C
109	Stirring rate	IN
110	Switch off auto.	X
111	Electrode check	X

3.7.6   ## MET pH   Monotonic equivalence point titration

No.	Parameter description	Type
1	Control device	TC
2	Start volume	FN
3	Dosing rate (Start conditions) [maximum]	FNC
4	Pause	IN
5	Start meas. value [off]	FNC
6	Start slope [off]	FNC
7	Dosing rate (More start conditions) [maximum]	FNC
8	Signal drift (Initial measured value) [off]	FNC
9	Min. waiting time (Initial measured value)	IN
10	Max. waiting time (Initial measured value)	IN
11	Titration rate [slow] [optimal] [fast] [User]	C
12	Volume increment	FN
13	Dosing rate (User defined parameters) [maximum]	FNC
14	Signal drift (User defined parameters) [off]	FNC
15	Min. waiting time (User defined parameters)	IN
16	Max. waiting time (User defined parameters)	IN
17	Temperature	FN
18	Stop volume [off]	FNC
19	Stop meas. value [off]	FNC
20	Stop EP [off]	INC
21	Volume after EP [off]	FNC
22	Stop time [off]	INC
23	Filling rate [maximum]	FNC
24	Set windows [off] [measured value] [volume]	C
25	EP criterion	FN
26	EP recognition [all] [greatest] [last] [ascending] [descending] [off]	C

27	Lower limit meas window 1	FN
28	Lower limit meas window 2	FN
29	Lower limit meas window 3	FN
30	Lower limit meas window 4	FN
31	Lower limit meas window 5	FN
32	Lower limit meas window 6	FN
33	Lower limit meas window 7	FN
34	Lower limit meas window 8	FN
35	Lower limit meas window 9	FN
36	Upper limit meas window 1	FN
37	Upper limit meas window 2	FN
38	Upper limit meas window 3	FN
39	Upper limit meas window 4	FN
40	Upper limit meas window 5	FN
41	Upper limit meas window 6	FN
42	Upper limit meas window 7	FN
43	Upper limit meas window 8	FN
44	Upper limit meas window 9	FN
45	EP criterion meas window 1	FN
46	EP criterion meas window 2	FN
47	EP criterion meas window 3	FN
48	EP criterion meas window 4	FN
49	EP criterion meas window 5	FN
50	EP criterion meas window 6	FN
51	EP criterion meas window 7	FN
52	EP criterion meas window 8	FN
53	EP criterion meas window 9	FN
54	EP recognition meas window 1 [first] [greatest] [last] [ascending] [descending]	C
55	EP recognition meas window 2 [first] [greatest] [last] [ascending] [descending]	C
56	EP recognition meas window 3 [first] [greatest] [last] [ascending] [descending]	C
57	EP recognition meas window 4 [first] [greatest] [last] [ascending] [descending]	C
58	EP recognition meas window 5 [first] [greatest] [last] [ascending] [descending]	C
59	EP recognition meas window 6 [first] [greatest] [last] [ascending] [descending]	C
60	EP recognition meas window 7 [first] [greatest] [last] [ascending] [descending]	C
61	EP recognition meas window 8 [first] [greatest] [last] [ascending] [descending]	C
62	EP recognition meas window 9 [first] [greatest] [last] [ascending] [descending]	C
63	Lower limit volume window 1	FN
64	Lower limit volume window 2	FN
65	Lower limit volume window 3	FN
66	Lower limit volume window 4	FN
67	Lower limit volume window 5	FN
68	Lower limit volume window 6	FN
69	Lower limit volume window 7	FN
70	Lower limit volume window 8	FN
71	Lower limit volume window 9	FN
72	Upper limit volume window 1	FN
73	Upper limit volume window 2	FN
74	Upper limit volume window 3	FN
75	Upper limit volume window 4	FN
76	Upper limit volume window 5	FN
77	Upper limit volume window 6	FN
78	Upper limit volume window 7	FN

79	Upper limit volume window 8	FN
80	Upper limit volume window 9	FN
81	EP criterion volume window 1	FN
82	EP criterion volume window 2	FN
83	EP criterion volume window 3	FN
84	EP criterion volume window 4	FN
85	EP criterion volume window 5	FN
86	EP criterion volume window 6	FN
87	EP criterion volume window 7	FN
88	EP criterion volume window 8	FN
89	EP criterion volume window 9	FN
90	EP recognition volume window 1 [first] [greatest] [last] [ascending] [descending]	C
91	EP recognition volume window 2 [first] [greatest] [last] [ascending] [descending]	C
92	EP recognition volume window 3 [first] [greatest] [last] [ascending] [descending]	C
93	EP recognition volume window 4 [first] [greatest] [last] [ascending] [descending]	C
94	EP recognition volume window 5 [first] [greatest] [last] [ascending] [descending]	C
95	EP recognition volume window 6 [first] [greatest] [last] [ascending] [descending]	C
96	EP recognition volume window 7 [first] [greatest] [last] [ascending] [descending]	C
97	EP recognition volume window 8 [first] [greatest] [last] [ascending] [descending]	C
98	EP recognition volume window 9 [first] [greatest] [last] [ascending] [descending]	C
99	Measuring input [1] [2]	C
100	Sensor	TC
101	Temp. meas. [continuous] [automatic] [off]	C
102	Dosing device [1] [2] [3] [4]	C
103	Titrant	TC
104	Stirrer [1] [2] [3] [4] [off]	C
105	Stirring rate	IN
106	Switch off auto.	X
107	Electrode check	X

3.7.7   ## MET U   Monotonic equivalence point titration

See *section 3.7.6*

3.7.8   ## MET Ipol   Monotonic equivalence point titration

No.	Parameter description	Type
1	Control device	TC
2	Start volume	FN
3	Dosing rate (Start conditions) [maximum]	FNC
4	Pause	IN
5	Start meas. value [off]	FNC
6	Start slope [off]	FNC
7	Dosing rate (More start conditions) [maximum]	FNC
8	Signal drift (Initial measured value) [off]	FNC
9	Min. waiting time (Initial measured value)	IN
10	Max. waiting time (Initial measured value)	IN
11	Titration rate [slow] [optimal] [fast] [User]	C
12	Volume increment	FN
13	Dosing rate (User defined parameters) [maximum]	FNC
14	Signal drift (User defined parameters) [off]	FNC
15	Min. waiting time (User defined parameters)	IN

16	Max. waiting time (User defined parameters)	IN
17	Temperature	FN
18	Stop volume [off]	FNC
19	Stop meas. value [off]	FNC
20	Stop EP [off]	INC
21	Volume after EP [off]	FNC
22	Stop time [off]	INC
23	Filling rate [maximum]	FNC
24	Set windows [off] [measured value] [volume]	C
25	EP criterion	IN
26	EP recognition [all] [greatest] [last] [ascending] [descending] [off]	C
27	Lower limit meas window 1	FN
28	Lower limit meas window 2	FN
29	Lower limit meas window 3	FN
30	Lower limit meas window 4	FN
31	Lower limit meas window 5	FN
32	Lower limit meas window 6	FN
33	Lower limit meas window 7	FN
34	Lower limit meas window 8	FN
35	Lower limit meas window 9	FN
36	Upper limit meas window 1	FN
37	Upper limit meas window 2	FN
38	Upper limit meas window 3	FN
39	Upper limit meas window 4	FN
40	Upper limit meas window 5	FN
41	Upper limit meas window 6	FN
42	Upper limit meas window 7	FN
43	Upper limit meas window 8	FN
44	Upper limit meas window 9	FN
45	EP criterion meas window 1	IN
46	EP criterion meas window 2	IN
47	EP criterion meas window 3	IN
48	EP criterion meas window 4	IN
49	EP criterion meas window 5	IN
50	EP criterion meas window 6	IN
51	EP criterion meas window 7	IN
52	EP criterion meas window 8	IN
53	EP criterion meas window 9	IN
54	EP recognition meas window 1 [first] [greatest] [last] [ascending] [descending]	C
55	EP recognition meas window 2 [first] [greatest] [last] [ascending] [descending]	C
56	EP recognition meas window 3 [first] [greatest] [last] [ascending] [descending]	C
57	EP recognition meas window 4 [first] [greatest] [last] [ascending] [descending]	C
58	EP recognition meas window 5 [first] [greatest] [last] [ascending] [descending]	C
59	EP recognition meas window 6 [first] [greatest] [last] [ascending] [descending]	C
60	EP recognition meas window 7 [first] [greatest] [last] [ascending] [descending]	C
61	EP recognition meas window 8 [first] [greatest] [last] [ascending] [descending]	C
62	EP recognition meas window 9 [first] [greatest] [last] [ascending] [descending]	C
63	Lower limit volume window 1	FN
64	Lower limit volume window 2	FN
65	Lower limit volume window 3	FN
66	Lower limit volume window 4	FN
67	Lower limit volume window 5	FN

68	Lower limit volume window 6	FN
69	Lower limit volume window 7	FN
70	Lower limit volume window 8	FN
71	Lower limit volume window 9	FN
72	Upper limit volume window 1	FN
73	Upper limit volume window 2	FN
74	Upper limit volume window 3	FN
75	Upper limit volume window 4	FN
76	Upper limit volume window 5	FN
77	Upper limit volume window 6	FN
78	Upper limit volume window 7	FN
79	Upper limit volume window 8	FN
80	Upper limit volume window 9	FN
81	EP criterion volume window 1	IN
82	EP criterion volume window 2	IN
83	EP criterion volume window 3	IN
84	EP criterion volume window 4	IN
85	EP criterion volume window 5	IN
86	EP criterion volume window 6	IN
87	EP criterion volume window 7	IN
88	EP criterion volume window 8	IN
89	EP criterion volume window 9	IN
90	EP recognition volume window 1 [first] [greatest] [last] [ascending] [descending]	C
91	EP recognition volume window 2 [first] [greatest] [last] [ascending] [descending]	C
92	EP recognition volume window 3 [first] [greatest] [last] [ascending] [descending]	C
93	EP recognition volume window 4 [first] [greatest] [last] [ascending] [descending]	C
94	EP recognition volume window 5 [first] [greatest] [last] [ascending] [descending]	C
95	EP recognition volume window 6 [first] [greatest] [last] [ascending] [descending]	C
96	EP recognition volume window 7 [first] [greatest] [last] [ascending] [descending]	C
97	EP recognition volume window 8 [first] [greatest] [last] [ascending] [descending]	C
98	EP recognition volume window 9 [first] [greatest] [last] [ascending] [descending]	C
99	Measuring input [1] [2]	C
100	Sensor	TC
101	I(pol)	FN
102	Electrode test	X
103	Temp. meas. [continuous] [automatic] [off]	C
104	Dosing device [1] [2] [3] [4]	C
105	Titrant	TC
106	Stirrer [1] [2] [3] [4] [off]	C
107	Stirring rate	IN
108	Switch off auto.	X
109	Electrode check	X

3.7.9   ## MET Upol   Monotonic equivalence point titration

No.	Parameter description	Type
1	Control device	TC
2	Start volume	FN
3	Dosing rate (Start conditions) [maximum]	FNC
4	Pause	IN
5	Start meas. value [off]	FNC
6	Start slope [off]	FNC

7	Dosing rate (More start conditions) [maximum]	FNC
8	Signal drift (Initial measured value) [off]	FNC
9	Min. waiting time (Initial measured value)	IN
10	Max. waiting time (Initial measured value)	IN
11	Titration rate [slow] [optimal] [fast] [User]	C
12	Volume increment	FN
13	Dosing rate (User defined parameters) [maximum]	FNC
14	Signal drift (User defined parameters) [off]	FNC
15	Min. waiting time (User defined parameters)	IN
16	Max. waiting time (User defined parameters)	IN
17	Temperature	FN
18	Stop volume [off]	FNC
19	Stop meas. value [off]	FNC
20	Stop EP [off]	INC
21	Volume after EP [off]	FNC
22	Stop time [off]	INC
23	Filling rate [maximum]	FNC
24	Set windows [off] [measured value] [volume]	C
25	EP criterion	FN
26	EP recognition [all] [greatest] [last] [ascending] [descending] [off]	C
27	Lower limit meas window 1	FN
28	Lower limit meas window 2	FN
29	Lower limit meas window 3	FN
30	Lower limit meas window 4	FN
31	Lower limit meas window 5	FN
32	Lower limit meas window 6	FN
33	Lower limit meas window 7	FN
34	Lower limit meas window 8	FN
35	Lower limit meas window 9	FN
36	Upper limit meas window 1	FN
37	Upper limit meas window 2	FN
38	Upper limit meas window 3	FN
39	Upper limit meas window 4	FN
40	Upper limit meas window 5	FN
41	Upper limit meas window 6	FN
42	Upper limit meas window 7	FN
43	Upper limit meas window 8	FN
44	Upper limit meas window 9	FN
45	EP criterion meas window 1	FN
46	EP criterion meas window 2	FN
47	EP criterion meas window 3	FN
48	EP criterion meas window 4	FN
49	EP criterion meas window 5	FN
50	EP criterion meas window 6	FN
51	EP criterion meas window 7	FN
52	EP criterion meas window 8	FN
53	EP criterion meas window 9	FN
54	EP recognition meas window 1 [first] [greatest] [last] [ascending] [descending]	C
55	EP recognition meas window 2 [first] [greatest] [last] [ascending] [descending]	C
56	EP recognition meas window 3 [first] [greatest] [last] [ascending] [descending]	C
57	EP recognition meas window 4 [first] [greatest] [last] [ascending] [descending]	C
58	EP recognition meas window 5 [first] [greatest] [last] [ascending] [descending]	C

59	EP recognition meas window 6 [first] [greatest] [last] [ascending] [descending]	C
60	EP recognition meas window 7 [first] [greatest] [last] [ascending] [descending]	C
61	EP recognition meas window 8 [first] [greatest] [last] [ascending] [descending]	C
62	EP recognition meas window 9 [first] [greatest] [last] [ascending] [descending]	C
63	Lower limit volume window 1	FN
64	Lower limit volume window 2	FN
65	Lower limit volume window 3	FN
66	Lower limit volume window 4	FN
67	Lower limit volume window 5	FN
68	Lower limit volume window 6	FN
69	Lower limit volume window 7	FN
70	Lower limit volume window 8	FN
71	Lower limit volume window 9	FN
72	Upper limit volume window 1	FN
73	Upper limit volume window 2	FN
74	Upper limit volume window 3	FN
75	Upper limit volume window 4	FN
76	Upper limit volume window 5	FN
77	Upper limit volume window 6	FN
78	Upper limit volume window 7	FN
79	Upper limit volume window 8	FN
80	Upper limit volume window 9	FN
81	EP criterion volume window 1	FN
82	EP criterion volume window 2	FN
83	EP criterion volume window 3	FN
84	EP criterion volume window 4	FN
85	EP criterion volume window 5	FN
86	EP criterion volume window 6	FN
87	EP criterion volume window 7	FN
88	EP criterion volume window 8	FN
89	EP criterion volume window 9	FN
90	EP recognition volume window 1 [first] [greatest] [last] [ascending] [descending]	C
91	EP recognition volume window 2 [first] [greatest] [last] [ascending] [descending]	C
92	EP recognition volume window 3 [first] [greatest] [last] [ascending] [descending]	C
93	EP recognition volume window 4 [first] [greatest] [last] [ascending] [descending]	C
94	EP recognition volume window 5 [first] [greatest] [last] [ascending] [descending]	C
95	EP recognition volume window 6 [first] [greatest] [last] [ascending] [descending]	C
96	EP recognition volume window 7 [first] [greatest] [last] [ascending] [descending]	C
97	EP recognition volume window 8 [first] [greatest] [last] [ascending] [descending]	C
98	EP recognition volume window 9 [first] [greatest] [last] [ascending] [descending]	C
99	Measuring input [1] [2]	C
100	Sensor	TC
101	U(pol)	IN
102	Electrode test	X
103	Temp. meas. [continuous] [automatic] [off]	C
104	Dosing device [1] [2] [3] [4]	C
105	Titrant	TC
106	Stirrer [1] [2] [3] [4] [off]	C
107	Stirring rate	IN
108	Switch off auto.	X
109	Electrode check	X

3.7.10 ## SET pH   Endpoint titration

No.	Parameter description	Type
1	Control device	TC
2	Signal drift [off]	FNC
3	Min. waiting time	IN
4	Max. waiting time	IN
5	Start volume	FN
6	Dosing rate [maximum]	FNC
7	Pause 1	IN
8	Pause 2	IN
9	EP1 at pH [off]	FNC
10	Titration rate (EP1) [slow] [optimal] [fast] [User]	C
11	Dynamics (EP1) [off]	FNC
12	Max. rate (EP1) [maximum]	FNC
13	Min. rate (EP1)	FN
14	Stop criterion (EP1) [drift] [time] [off]	C
15	Stop drift (EP1)	IN
16	Delay time (EP1)	IN
17	EP2 at pH [off]	FNC
18	Titration rate (EP2) [slow] [optimal] [fast] [User]	C
19	Dynamics (EP2) [off]	FNC
20	Max. rate (EP2) [maximum]	FNC
21	Min. rate (EP2)	FN
22	Stop criterion (EP2) [drift] [time] [off]	C
23	Stop drift (EP2)	IN
24	Delay time (EP2)	IN
25	Titration direction [+] [-] [auto]	C
26	Extraction time	IN
27	Temperature	FN
28	Time interval MP	FN
29	Stop volume [off]	FNC
30	Stop time [off]	INC
31	Filling rate [maximum]	FNC
32	Measuring input [1] [2]	C
33	Sensor	TC
34	Temp. meas. [continuous] [automatic] [off]	C
35	Dosing device [1] [2] [3] [4]	C
36	Titrant	TC
37	Stirrer [1] [2] [3] [4] [off]	C
38	Stirring rate	IN
39	Switch off auto.	X
40	Conditioning	X
41	Start drift	IN
42	Drift correction [auto] [manual] [off]	C
43	Drift value	FN
44	Measured value display	X
45	Cond. stop volume	FNC
46	Cond. stop time	INC
47	Delay reconditioning	X
48	Electrode check	X

3.7.11   ## SET U   Endpoint titration

No.	Parameter description	Type
1	Control device	TC
2	Signal drift [off]	FNC
3	Min. waiting time	IN
4	Max. waiting time	IN
5	Start volume	FN
6	Dosing rate [maximum]	FNC
7	Pause 1	IN
8	Pause 2	IN
9	EP1 at U [off]	FNC
10	Titration rate (EP1) [slow] [optimal] [fast] [User]	C
11	Dynamics (EP1) [off]	FNC
12	Max. rate (EP1) [maximum]	FNC
13	Min. rate (EP1)	FN
14	Stop criterion (EP1) [drift] [time] [off]	C
15	Stop drift (EP1)	IN
16	Delay time (EP1)	IN
17	EP2 at U [off]	FNC
18	Titration rate (EP2) [slow] [optimal] [fast] [User]	C
19	Dynamics (EP2) [off]	FNC
20	Max. rate (EP2) [maximum]	FNC
21	Min. rate (EP2)	FN
22	Stop criterion (EP2) [drift] [time] [off]	C
23	Stop drift (EP2)	IN
24	Delay time (EP2)	IN
25	Titration direction [+] [-] [auto]	C
26	Extraction time	IN
27	Temperature	FN
28	Time interval MP	FN
29	Stop volume [off]	FNC
30	Stop time [off]	INC
31	Filling rate [maximum]	FNC
32	Measuring input [1] [2]	C
33	Sensor	TC
34	Temp. meas. [continuous] [automatic] [off]	C
35	Dosing device [1] [2] [3] [4]	C
36	Titrant	TC
37	Stirrer [1] [2] [3] [4] [off]	C
38	Stirring rate	IN
39	Switch off auto.	X
40	Conditioning	X
41	Start drift	IN
42	Drift correction [auto] [manual] [off]	C
43	Drift value	FN
44	Measured value display	X
45	Cond. stop volume	FNC
46	Cond. stop time	INC
47	Delay reconditioning	X
48	Electrode check	X

3.7.12 ## SET Ipol Endpoint titration

No.	Parameter description	Type
1	Control device	TC
2	Signal drift [off]	FNC
3	Min. waiting time	IN
4	Max. waiting time	IN
5	Start volume	FN
6	Dosing rate [maximum]	FNC
7	Pause 1	IN
8	Pause 2	IN
9	EP1 at U [off]	FNC
10	Titration rate (EP1) [slow] [optimal] [fast] [User]	C
11	Dynamics (EP1) [off]	FNC
12	Max. rate (EP1) [maximum]	FNC
13	Min. rate (EP1)	FN
14	Stop criterion (EP1) [drift] [time] [off]	C
15	Stop drift (EP1)	IN
16	Delay time (EP1)	IN
17	EP2 at U [off]	FNC
18	Titration rate (EP2) [slow] [optimal] [fast] [User]	C
19	Dynamics (EP2) [off]	FNC
20	Max. rate (EP2) [maximum]	FNC
21	Min. rate (EP2)	FN
22	Stop criterion (EP2) [drift] [time] [off]	C
23	Stop drift (EP2)	IN
24	Delay time (EP2)	IN
25	Titration direction [+] [-] [auto]	C
26	Extraction time	IN
27	Temperature	FN
28	Time interval MP	FN
29	Stop volume [off]	FNC
30	Stop time [off]	INC
31	Filling rate [maximum]	FNC
32	Measuring input [1] [2]	C
33	Sensor	TC
34	I(pol)	FN
35	Electrode test	X
36	Temp. meas. [continuous] [automatic] [off]	C
37	Dosing device [1] [2] [3] [4]	C
38	Titrant	TC
39	Stirrer [1] [2] [3] [4] [off]	C
40	Stirring rate	IN
41	Switch off auto.	X
42	Conditioning	X
43	Start drift	IN
44	Drift correction [auto] [manual] [off]	C
45	Drift value	FN
46	Measured value display	X
47	Cond. stop volume	FNC
48	Cond. stop time	INC
49	Delay reconditioning	X

50	Electrode check	X

3.7.13 ## SET Upol   Endpoint titration

No.	Parameter description	Type
1	Control device	TC
2	Signal drift [off]	FNC
3	Min. waiting time	IN
4	Max. waiting time	IN
5	Start volume	FN
6	Dosing rate [maximum]	FNC
7	Pause 1	IN
8	Pause 2	IN
9	EP1 at I [off]	FNC
10	Titration rate (EP1) [slow] [optimal] [fast] [User]	C
11	Dynamics (EP1) [off]	FNC
12	Max. rate (EP1) [maximum]	FNC
13	Min. rate (EP1)	FN
14	Stop criterion (EP1) [drift] [time] [off]	C
15	Stop drift (EP1)	IN
16	Delay time (EP1)	IN
17	EP2 at I [off]	FNC
18	Titration rate (EP2) [slow] [optimal] [fast] [User]	C
19	Dynamics (EP2) [off]	FNC
20	Max. rate (EP2) [maximum]	FNC
21	Min. rate (EP2)	FN
22	Stop criterion (EP2) [drift] [time] [off]	C
23	Stop drift (EP2)	IN
24	Delay time (EP2)	IN
25	Titration direction [+] [-] [auto]	C
26	Extraction time	IN
27	Temperature	FN
28	Time interval MP	FN
29	Stop volume [off]	FNC
30	Stop time [off]	INC
31	Filling rate [maximum]	FNC
32	Measuring input [1] [2]	C
33	Sensor	TC
34	U(pol)	IN
35	Electrode test	X
36	Temp. meas. [continuous] [automatic] [off]	C
37	Dosing device [1] [2] [3] [4]	C
38	Titrant	TC
39	Stirrer [1] [2] [3] [4] [off]	C
40	Stirring rate	IN
41	Switch off auto.	X
42	Conditioning	X
43	Start drift	IN
44	Drift correction [auto] [manual] [off]	C
45	Drift value	FN
46	Measured value display	X
47	Cond. stop volume	FNC

48	Cond. stop time	INC
49	Delay reconditioning	X
50	Electrode check	X

3.7.14   ## KFT Ipol   Volumetric Karl Fischer titration

No.	Parameter description	Type
1	Control device	TC
2	Signal drift [off]	FNC
3	Min. waiting time	IN
4	Max. waiting time	IN
5	Start volume	FN
6	Dosing rate [maximum]	FNC
7	Pause 1	IN
8	Pause 2	IN
9	Endpoint at U [off]	FNC
10	Titration rate [slow] [optimal] [fast] [User]	C
11	Dynamics [off]	FNC
12	Max. rate [maximum]	FNC
13	Min. increment [minimum]	FNC
14	Stop criterion [drift] [time] [rel. drift] [off]	C
15	Stop drift	IN
16	Delay time	IN
17	Titration direction [+] [-] [auto]	C
18	Extraction time	IN
19	Temperature	FN
20	Time interval MP	FN
21	Stop volume [off]	FNC
22	Stop time [off]	INC
23	Filling rate [maximum]	FNC
24	Measuring input [1] [2]	C
25	Sensor	TC
26	I(pol)	FN
27	Electrode test	X
28	Temp. meas. [continuous] [automatic] [off]	C
29	Dosing device [1] [2] [3] [4]	C
30	Titrant	TC
31	Stirrer [1] [2] [3] [4] [off]	C
32	Stirring rate	IN
33	Switch off auto.	X
34	Conditioning	X
35	Start drift	IN
36	Drift correction [auto] [manual] [off]	C
37	Drift value	FN
38	Measured value display	X
39	Cond. stop volume	FNC
40	Cond. stop time	INC
41	Relative stop drift	IN
42	Delay reconditioning	X
43	Electrode check	X

3.7.15 ## KFT Upol   Volumetric Karl Fischer titration

No.	Parameter description	Type
1	Control device	TC
2	Signal drift [off]	FNC
3	Min. waiting time	IN
4	Max. waiting time	IN
5	Start volume	FN
6	Dosing rate [maximum]	FNC
7	Pause 1	IN
8	Pause 2	IN
9	Endpoint at I [off]	FNC
10	Titration rate [slow] [optimal] [fast] [User]	C
11	Dynamics [off]	FNC
12	Max. rate [maximum]	FNC
13	Min. increment [minimum]	FNC
14	Stop criterion [drift] [time] [rel. drift] [off]	C
15	Stop drift	IN
16	Delay time	IN
17	Titration direction [+] [-] [auto]	C
18	Extraction time	IN
19	Temperature	FN
20	Time interval MP	FN
21	Stop volume [off]	FNC
22	Stop time [off]	INC
23	Filling rate [maximum]	FNC
24	Measuring input [1] [2]	C
25	Sensor	TC
26	U(pol)	IN
27	Electrode test	X
28	Temp. meas. [continuous] [automatic] [off]	C
29	Dosing device [1] [2] [3] [4]	C
30	Titrant	TC
31	Stirrer [1] [2] [3] [4] [off]	C
32	Stirring rate	IN
33	Switch off auto.	X
34	Conditioning	X
35	Start drift	IN
36	Drift correction [auto] [manual] [off]	C
37	Drift value	FN
38	Measured value display	X
39	Cond. stop volume	FNC
40	Cond. stop time	INC
41	Relative stop drift	IN
42	Delay reconditioning	X
43	Electrode check	X

3.7.16 ## KFC   Coulometric Karl Fischer titration

No.	Parameter description	Type
1	Control device	TC
2	Endpoint at [off]	FNC

3	Titration rate [slow] [optimal] [fast] [User]	C
4	Dynamics [off]	FNC
5	Max. rate [maximum]	FNC
6	Min. rate	FN
7	Stop criterion [drift] [time] [rel. drift] [off]	C
8	Stop drift	IN
9	Delay time	IN
10	Extraction time	IN
11	Temperature	FN
12	Time interval MP	FN
13	Stop time [off]	INC
14	Measuring input [1]	C
15	Sensor	TC
16	I(pol)	FN
17	Electrode test	X
18	Temp. meas. [continuous] [automatic] [off]	C
19	Stirrer [1] [2] [3] [4] [off]	C
20	Stirring rate	IN
21	Switch off auto.	X
22	Conditioning	X
23	Start drift	IN
24	Drift correction [auto] [manual] [off]	C
25	Drift value	FN
26	Measured value display	X
27	Cond. stop time	INC
28	Relative stop drift	IN
29	Delay reconditioning	X
30	Pause	IN
31	Automatic start	X
32	Threshold value	IN
33	Stabilizing time	IN
34	Generator electrode [without diaphragm] [with diaphragm]	C
35	Generator current	C
36	Reagent monitoring	TC
37	Electrode check	X

3.7.17   ## BRC   Coulometric bromine index determ.

No.	Parameter description	Type
1	Control device	TC
2	Endpoint at [off]	FNC
3	Titration rate [slow] [optimal] [fast] [User]	C
4	Dynamics [off]	FNC
5	Max. rate [maximum]	FNC
6	Min. rate	FN
7	Stop criterion [drift] [time] [rel. drift] [drift & time] [off]	C
8	Stop drift	IN
9	Delay time	IN
10	Extraction time	IN
11	Temperature	FN
12	Time interval MP	FN
13	Stop time [off]	INC

14	Measuring input [1]	C
15	Sensor	TC
16	I(pol)	FN
17	Electrode test	X
18	Temp. meas. [continuous] [automatic] [off]	C
19	Stirrer [1] [2] [3] [4] [off]	C
20	Stirring rate	IN
21	Switch off auto.	X
22	Conditioning	X
23	Start drift	IN
24	Drift correction [auto] [manual] [off]	C
25	Drift value	FN
26	Measured value display	X
27	Cond. stop time	INC
28	Relative stop drift	IN
29	Delay reconditioning	X
30	Pause	IN
31	Stabilizing time	IN
32	Generator electrode [without diaphragm] [with diaphragm]	C
33	Generator current	C
34	Reagent monitoring	TC
35	Electrode check	X

3.7.18   ## STAT pH   Constant pH meas. value

No.	Parameter description	Type
1	Control device	TC
2	Signal drift [off]	FNC
3	Min. waiting time	IN
4	Max. waiting time	IN
5	Start volume	FN
6	Dosing rate [maximum]	FNC
7	Pause 1	IN
8	Pause 2	IN
9	Control point at pH [off]	FNC
10	Titration rate [50 µL/min] [100 µL/min] [500 µL/min] [User]	C
11	Dynamics [off]	FNC
12	Max. rate [maximum]	FNC
13	Min. rate	FN
14	Titration direction [+] [-] [auto]	C
15	Temperature	FN
16	Time interval MP	FN
17	Start time	IN
18	Start meas. value [off]	FNC
19	Start rate [off]	FNC
20	Stop volume [off]	FNC
21	Stop time [off]	INC
22	Since [Start] [Control reached] [Last dosing]	C
23	Stop rate [off]	FNC
24	Filling rate [maximum]	FNC
25	Measuring input [1] [2]	C
26	Sensor	TC

27	Temp. meas. [continuous] [automatic] [off]	C
28	Dosing device [1] [2] [3] [4]	C
29	Titrant	TC
30	Dosing device (Tandem dosing) [1] [2] [3] [4] [off]	C
31	Titrant (Tandem dosing)	TC
32	Filling rate (Tandem dosing device) [maximum]	FNC
33	Stirrer [1] [2] [3] [4] [off]	C
34	Stirring rate	IN
35	Switch off auto.	X
36	Monitoring measured value	X
37	Lower limit pH	FN
38	Lower hysteresis pH	FN
39	Upper limit pH	FN
40	Upper hysteresis pH	FN
41	Action [none] [Exit method] [Skip command] [Hold] [wait]	C
42	Monitoring temperature	X
43	Lower limit	FN
44	Lower hysteresis	FN
45	Upper limit	FN
46	Upper hysteresis	FN
47	Action [none] [Exit method] [Skip command] [Hold] [wait]	C
48	Monitoring dosing rate	X
49	Lower limit	FN
50	Lower hysteresis	FN
51	Upper limit	FN
52	Upper hysteresis	FN
53	Action [none] [Exit method] [Skip command] [Hold] [wait]	C
54	Number of defined assignments	IN
55	Assignment # [Measured value] [Temperature] [Dosing rate] [any]	C
56	Infringed limit # [upper] [lower] [any] [back in range]	C
57	Interface # [Remote box 1...4] [COM 1...n]	C
58	Output signal #	T
59	Data string #	T
60	: [4]	
61	Electrode check	X

3.7.19   ## STAT U   Constant meas. value U

No.	Parameter description	Type
1	Control device	TC
2	Signal drift [off]	FNC
3	Min. waiting time	IN
4	Max. waiting time	IN
5	Start volume	FN
6	Dosing rate [maximum]	FNC
7	Pause 1	IN
8	Pause 2	IN
9	Control point at U [off]	FNC
10	Titration rate [50 µL/min] [100 µL/min] [500 µL/min] [User]	C
11	Dynamics [off]	FNC
12	Max. rate [maximum]	FNC
13	Min. rate	FN

14	Titration direction [+] [-] [auto]	C
15	Temperature	FN
16	Time interval MP	FN
17	Start time	IN
18	Start meas. value [off]	FNC
19	Start rate [off]	FNC
20	Stop volume [off]	FNC
21	Stop time [off]	INC
22	Since [Start] [Control reached] [Last dosing]	C
23	Stop rate [off]	FNC
24	Filling rate [maximum]	FNC
25	Measuring input [1] [2]	C
26	Sensor	TC
27	Temp. meas. [continuous] [automatic] [off]	C
28	Dosing device [1] [2] [3] [4]	C
29	Titrant	TC
30	Dosing device (Tandem dosing) [1] [2] [3] [4] [off]	C
31	Titrant (Tandem dosing)	TC
32	Filling rate (Tandem dosing device) [maximum]	FNC
33	Stirrer [1] [2] [3] [4] [off]	C
34	Stirring rate	IN
35	Switch off auto.	X
36	Monitoring measured value	X
37	Lower limit U	FN
38	Lower hysteresis U	FN
39	Upper limit U	FN
40	Upper hysteresis U	FN
41	Action [none] [Exit method] [Skip command] [Hold] [wait]	C
42	Monitoring temperature	X
43	Lower limit	FN
44	Lower hysteresis	FN
45	Upper limit	FN
46	Upper hysteresis	FN
47	Action [none] [Exit method] [Skip command] [Hold] [wait]	C
48	Monitoring dosing rate	X
49	Lower limit	FN
50	Lower hysteresis	FN
51	Upper limit	FN
52	Upper hysteresis	FN
53	Action [none] [Exit method] [Skip command] [Hold] [wait]	C
54	Number of defined assignments	IN
55	Assignment # [Measured value] [Temperature] [Dosing rate] [any]	C
56	Infringed limit # [upper] [lower] [any] [back in range]	C
57	Interface # [Remote box 1...4] [COM 1...n]	C
58	Output signal #	T
59	Data string #	T
60	: [4]	
61	Electrode check	X

3.7.20   ## MAT pH   Manual titration

No.	Parameter description	Type

1	Control device	TC
2	Dosing rate [maximum]	FNC
3	Time interval MP	FN
4	Filling rate [maximum]	FNC
5	Measuring input [1] [2]	C
6	Sensor	TC
7	Temp. meas. [continuous] [automatic] [off]	C
8	Dosing device [1] [2] [3] [4]	C
9	Titrant	TC
10	Dosing device (Tandem dosing) [1] [2] [3] [4] [off]	C
11	Titrant (Tandem dosing)	TC
12	Filling rate (Tandem dosing device) [maximum]	FNC
13	Stirrer [1] [2] [3] [4] [off]	C
14	Stirring rate	IN
15	Switch off auto.	X
16	Measuring mode	T
17	Electrode check	X
18	Dosing ramp	IN

3.7.21   ## MAT U   Manual titration

No.	Parameter description	Type
1	Control device	TC
2	Dosing rate [maximum]	FNC
3	Time interval MP	FN
4	Filling rate [maximum]	FNC
5	Measuring input [1] [2]	C
6	Sensor	TC
7	Temp. meas. [continuous] [automatic] [off]	C
8	Dosing device [1] [2] [3] [4]	C
9	Titrant	TC
10	Dosing device (Tandem dosing) [1] [2] [3] [4] [off]	C
11	Titrant (Tandem dosing)	TC
12	Filling rate (Tandem dosing device) [maximum]	FNC
13	Stirrer [1] [2] [3] [4] [off]	C
14	Stirring rate	IN
15	Switch off auto.	X
16	Measuring mode	T
17	Electrode check	X
18	Dosing ramp	IN

3.7.22   ## MEAS pH   pH measurement

No.	Parameter description	Type
1	Control device	TC
2	Signal drift [off]	FNC
3	Min. waiting time	IN
4	Max. waiting time [off]	INC
5	Stop meas. value [off]	FNC
6	Temperature	FN
7	Time interval MP	FN
8	Measuring input [1] [2]	C
9	Sensor	TC

10	Temp. meas. [continuous] [automatic] [off]	C
11	Stirrer [1] [2] [3] [4] [off]	C
12	Stirring rate	IN
13	Switch off auto.	X
14	Electrode check	X

3.7.23   ## MEAS U   Voltage measurement

No.	Parameter description	Type
1	Control device	TC
2	Signal drift [off]	FNC
3	Min. waiting time	IN
4	Max. waiting time [off]	INC
5	Stop meas. value [off]	FNC
6	Temperature	FN
7	Time interval MP	FN
8	Measuring input [1] [2]	C
9	Sensor	TC
10	Temp. meas. [continuous] [automatic] [off]	C
11	Stirrer [1] [2] [3] [4] [off]	C
12	Stirring rate	IN
13	Switch off auto.	X
14	Electrode check	X

3.7.24   ## MEAS Ipol   Voltammetric measurement with Ipol

No.	Parameter description	Type
1	Control device	TC
2	Signal drift [off]	FNC
3	Min. waiting time	IN
4	Max. waiting time [off]	INC
5	Stop meas. value [off]	FNC
6	Temperature	FN
7	Time interval MP	FN
8	Measuring input [1] [2]	C
9	Sensor	TC
10	Temp. meas. [continuous] [automatic] [off]	C
11	I(pol)	FN
12	Electrode test	X
13	Stirrer [1] [2] [3] [4] [off]	C
14	Stirring rate	IN
15	Switch off auto.	X
16	Electrode check	X

3.7.25   ## MEAS Upol   Amperometric measurement with Upol

No.	Parameter description	Type
1	Control device	TC
2	Signal drift [off]	FNC
3	Min. waiting time	IN
4	Max. waiting time [off]	INC
5	Stop meas. value [off]	FNC
6	Temperature	FN

7	Time interval MP	FN
8	Measuring input [1] [2]	C
9	Sensor	TC
10	Temp. meas. [continuous] [automatic] [off]	C
11	U(pol)	IN
12	Electrode test	X
13	Stirrer [1] [2] [3] [4] [off]	C
14	Stirring rate	IN
15	Switch off auto.	X
16	Electrode check	X

3.7.26   ## MEAS T   Temperature measurement

No.	Parameter description	Type
1	Control device	TC
2	Signal drift [off]	FNC
3	Min. waiting time	IN
4	Max. waiting time [off]	INC
5	Stop meas. value [off]	FNC
6	Time interval MP	FN
7	Measuring input [1] [2]	C
8	Sensor	TC
9	Stirrer [1] [2] [3] [4] [off]	C
10	Stirring rate	IN
11	Switch off auto.	X

3.7.27   ## MEAS Conc   Concentration measurement

No.	Parameter description	Type
1	Control device	TC
2	Signal drift [off]	FNC
3	Min. waiting time	IN
4	Max. waiting time [off]	INC
5	Stop meas. value [off]	FNC
6	Temperature	FN
7	Time interval MP	FN
8	Measuring input [1] [2]	C
9	Sensor	TC
10	Temp. meas. [continuous] [automatic] [off]	C
11	Stirrer [1] [2] [3] [4] [off]	C
12	Stirring rate	IN
13	Switch off auto.	X
14	Addition [off] [auto] [auto dos] [manual]	C
15	Conc. standard [from list]	FNC
16	No. of addition	IN
17	Stop volume	FN
18	Unit standard	TC
19	Dosing device [1] [2] [3] [4]	C
20	Standard (from list of titrants)	TC
21	Dosing rate [slow] [medium] [fast]	C
22	Delta U	IN
23	V aux. solution	FN
24	Increment volume	FN

25	Increment volume	FN
26	Increment volume	FN
27	Increment volume	FN
28	Increment volume	FN
29	Increment volume	FN
30	Increment volume	FN
31	Increment volume	FN
32	Increment volume	FN
33	Increment volume	FN
34	Increment volume	FN
35	Increment volume	FN
36	Increment volume	FN
37	Increment volume	FN
38	Increment volume	FN
39	Increment volume	FN
40	Increment volume	FN
41	Increment volume	FN
42	Increment volume	FN
43	Stir solution during measurement	X
44	Stir before meas.	IN
45	Pause before meas.	IN

3.7.28   ## MEAS Cond   Conductivity measurement

No.	Parameter description	Type
1	Control device	TC
2	Signal drift [off]	FNC
3	Min. waiting time	IN
4	Max. waiting time [off]	INC
5	Stop meas. value [off]	FNC
6	Measuring temp.	FN
7	Time interval MP	FN
8	Measuring input [1] [2]	C
9	Sensor	TC
10	Temp. meas. [continuous] [automatic] [off]	C
11	Stirrer [1] [2] [3] [4] [off]	C
12	Stirring rate	IN
13	Switch off auto.	X
14	Reference temp.	FN
15	Temp. coefficient	FN

3.7.29   ## CAL pH   pH calibration

No.	Parameter description	Type
1	Control device	TC
2	Signal drift [off]	FNC
3	Min. waiting time	IN
4	Max. waiting time [off]	INC
5	Temperature	FN
6	Buffer type [Metrohm] [NIST] [DIN] [Fisher] [Fluka Basel] [Mettler] [Merck Tit.] [Beckman] [Radiometer] [Merck Cer.] [Baker] [Hamilton] [Precisa] [Custom] [Special]	C
7	Number of buffers	IN
8	Buffer 1 pH	FN

9	Buffer 2 pH [off]	FNC
10	Buffer 3 pH [off]	FNC
11	Buffer 4 pH [off]	FNC
12	Buffer 5 pH [off]	FNC
13	Stir solution during measurement	X
14	Stir before meas.	IN
15	Pause before meas.	IN
16	Measuring input [1] [2]	C
17	Sensor	TC
18	Temp. meas. [continuous] [automatic] [off]	C
19	Stirrer [1] [2] [3] [4] [off]	C
20	Stirring rate	IN
21	Sample Processor [off] [Remote] [USB]	C
22	Electrode check	X

3.7.30   ## CAL Conc   Concentration calibration

No.	Parameter description	Type
1	Control device	TC
2	Signal drift [off]	FNC
3	Min. waiting time	IN
4	Max. waiting time [off]	INC
5	Temperature	FN
6	Unit conc.	TC
7	Conc. standard 1	FN
8	Conc. standard 2 [off]	FNC
9	Conc. standard 3 [off]	FNC
10	Conc. standard 4 [off]	FNC
11	Conc. standard 5 [off]	FNC
12	Stir solution during measurement	X
13	Stir before meas.	IN
14	Pause before meas.	IN
15	Measuring input [1] [2]	C
16	Sensor	TC
17	Temp. meas. [continuous] [automatic] [off]	C
18	Stirrer [1] [2] [3] [4] [off]	C
19	Stirring rate	IN
20	Sample Processor [off] [Remote] [USB]	C
21	Electrode check	X

3.7.31   ## CAL Cond   Cell constant calibration

No.	Parameter description	Type
1	Control device	TC
2	Signal drift [off]	FNC
3	Min. waiting time	IN
4	Max. waiting time [off]	INC
5	Measuring temp.	FN
6	Stir solution during measurement	X
7	Stir before meas.	IN
8	Pause before meas.	IN
9	Measuring input [1] [2]	C
10	Sensor	TC

11	Temp. meas. [continuous] [automatic] [off]	C
12	Stirrer [1] [2] [3] [4] [off]	C
13	Stirring rate	IN
14	Request at calibration start	X
15	Conductivity std.	FN
16	Reference temp. std.	FN
17	Temp. coefficient	FN

3.7.32   ## ELT   Electrode test

No.	Parameter description	Type
1	Control device	TC
2	Temperature	FN
3	Buffer type [Metrohm] [NIST] [DIN] [Fluka Basel] [Mettler] [Merck Tit.] [Radiometer] [Merck Cer.] [Baker] [Hamilton] [Precisa]	C
4	Electrode type [Standard] [Gel] [Non-aqueous] [Custom]	C
5	Measuring input [1] [2]	C
6	Sensor	TC
7	Temp. meas. [continuous] [automatic] [off]	C
8	Stirrer [1] [2] [3] [4] [off]	C
9	Stirring rate	IN
10	Sample Processor [off] [Remote] [USB]	C
11	Electrode check	X

3.7.33   ## ADD   Dosing

No.	Parameter description	Type
1	Control device	TC
2	Volume	FN
3	Dosing rate [maximum]	FNC
4	Filling rate [maximum]	FNC
5	Dosing device [1] [2] [3] [4]	C
6	Stirrer [1] [2] [3] [4] [off]	C
7	Stirring rate	IN
8	Switch off auto.	X
9	Titrant	TC
10	Dosing device (Tandem dosing) [1] [2] [3] [4] [off]	C
11	Titrant (Tandem dosing)	TC
12	Filling rate (Tandem dosing device) [maximum]	FNC

3.7.34   ## LQH   Liquid handling

No.	Parameter description	Type
1	Control device	TC
2	Dosing device [1] [2] [3] [4]	C
3	Titrant	TC
4	Function [Dose] [Fill] [Aspirate] [Eject] [Exchange position] [Change port] [Compensate] [End volume]	C
5	In-/Outlet	C
6	Volume	FN
7	Flow rate [maximum]	FNC

3.7.35   ## PREP   Prepare

No.	Parameter description	Type
1	Control device	TC
2	Dosing device [1] [2] [3] [4]	C
3	Titrant	TC
4	Cylinder volume to [Port 1] [Port 2] [Port 3] [Port 4]	C

3.7.36 ## EMPTY   Empty Dosino

No.	Parameter description	Type
1	Control device	TC
2	Dosing device [1] [2] [3] [4]	C
3	Titrant	TC
4	Air inlet [Port 1] [Port 2] [Port 3] [Port 4]	C

3.7.37 ## DOS   Monitored dosing

No.	Parameter description	Type
1	Control device	TC
2	Dosing criterion [Volume/Dos. rate] [Volume/Dos. time] [Dos. rate/Dos. time]	C
3	Volume	FN
4	Dosing rate [maximum]	FNC
5	Dosing time	IN
6	Temperature	FN
7	Time interval MP	FN
8	Pause	IN
9	Stop volume [off]	FNC
10	Stop time [off]	INC
11	Filling rate [maximum]	FNC
12	Measuring input [1] [2]	C
13	Sensor	TC
14	Temp. meas. [continuous] [automatic] [off]	C
15	Dosing device [1] [2] [3] [4]	C
16	Titrant	TC
17	Dosing device (Tandem dosing) [1] [2] [3] [4] [off]	C
18	Titrant (Tandem dosing)	TC
19	Filling rate (Tandem dosing device) [maximum]	FNC
20	Stirrer [1] [2] [3] [4] [off]	C
21	Stirring rate	IN
22	Switch off auto.	X
23	Meas. quantity [pH] [U]	C
24	Monitoring measured value pH	X
25	Lower limit pH	FN
26	Lower hysteresis pH	FN
27	Upper limit pH	FN
28	Upper hysteresis pH	FN
29	Action [none] [Exit method] [Skip command] [Hold] [wait]	C
30	Monitoring measured value U	X
31	Lower limit U	FN
32	Lower hysteresis U	FN
33	Upper limit U	FN
34	Upper hysteresis U	FN
35	Action [none] [Exit method] [Skip command] [Hold] [wait]	C
36	Monitoring temperature	X
37	Lower limit	FN
38	Lower hysteresis	FN
39	Upper limit	FN
40	Upper hysteresis	FN
41	Action [none] [Exit method] [Skip command] [Hold] [wait]	C

42	Number of defined assignments	IN
43	Assignment # [Measured value] [Temperature] [any]	C
44	Infringed limit # [upper] [lower] [any] [back in range]	C
45	Interface # [Remote box 1...4] [COM 1...n]	C
46	Output signal #	T
47	Data string #	T
48	: [4]	

3.7.38   ## EVAL FIX-EP   Evaluation fixed endpoints

No.	Parameter description	Type
1	Meas unit	T
2	Fixed quantity [Measured value] [Time] [Volume]	C
3	Fix EP1 at [off]	FNC
4	Fix EP2 at [off]	FNC
5	Fix EP3 at [off]	FNC
6	Fix EP4 at [off]	FNC
7	Fix EP5 at [off]	FNC
8	Fix EP6 at [off]	FNC
9	Fix EP7 at [off]	FNC
10	Fix EP8 at [off]	FNC
11	Fix EP9 at [off]	FNC

3.7.39   ## EVAL MIN/MAX   Evaluation of minimum/maximum

No.	Parameter description	Type
1	Meas unit	T
2	Evaluation [Minimum] [Maximum]	C
3	Threshold value	FN

3.7.40   ## EVAL BREAK   Break point evaluation

No.	Parameter description	Type
1	Meas unit	T
2	EP criterion	FN
3	Slope	FN
4	Smoothing factor	IN
5	Set windows [Measured value] [Time] [Volume]	C
6	Lower limit	FN
7	Upper limit	FN

3.7.41   ## EVAL pK/HNP   Evaluation pK/HNP

no parameters

3.7.42   ## EVAL RATE   Rate evaluation

No.	Parameter description	Type
1	Lower limit 1	IN
2	Upper limit 1	IN
3	Lower limit 2	IN
4	Upper limit 2	IN

5	Lower limit 3	IN
6	Upper limit 3	IN
7	Lower limit 4	IN
8	Upper limit 4	IN
9	Lower limit 5	IN
10	Upper limit 5	IN
11	Lower limit 6	IN
12	Upper limit 6	IN
13	Lower limit 7	IN
14	Upper limit 7	IN
15	Lower limit 8	IN
16	Upper limit 8	IN
17	Lower limit 9	IN
18	Upper limit 9	IN
19	Meas unit	T
20	Number of defined windows	IN

3.7.43   ## SCAN   Wait for remote signal

No.	Parameter description	Type
1	Control device	TC
2	Remote box [1] [2] [3] [4]	C
3	Input signal	T
4	Timeout	IN
5	Timeout action	C

3.7.44   ## CTRL   Send remote signal

No.	Parameter description	Type
1	Control device	TC
2	Remote box [1] [2] [3] [4]	C
3	Output signal	T
4	Pulse length for "p"	IN

3.7.45   ## SCAN RS   Receive data

No.	Parameter description	Type
1	Serial port	C
2	Data string	T
3	Timeout	IN
4	Timeout action	C

3.7.46   ## CONTROL RS   Send data

No.	Parameter description	Type
1	Serial port	C
2	Data string	T

3.7.47   ## CALC   Calculation

R#

No.	Parameter description	Type
1	Result variable	IN
2	Result name	T
3	Calc. formula Rn	T
4	Decimal places	IN
5	Result unit	TC
6	Variable for mean [0],[1],[2]...[9] => (SMN1...SMN9, off)	C
7	Save result as titer [Single value] [Mean value] [off]	C
8	Save result as common variable	X
9	Variable [0],[1],[2]...[24] => (CV01...CV25)	C
10	Display result	X
11	Save result in result silo	X
12	Precision [Round] [Truncate] [Full precision]	C
13	Monitoring result limits	X
14	Lower limit	FN
15	Upper limit	FN
16	Action [Display message] [Document message] [Cancel determination]	C
17	Note	T
18	Note for wizard	T

3.7.48   ## MOVE   Rotate rack

No.	Parameter description	Type
1	Tower [1] [2]	C
2	Destination	C
3	Position	IN
4	Beaker test action [Turn rack] [Show message]	C
5	Shift rate	IN
6	Shift direction [auto] [+] [-]	C
7	Swing rate	IN

3.7.49   ## LIFT   Change lift position

No.	Parameter description	Type
1	Tower [1] [2]	C
2	Lift position [Work pos.] [Shift pos.] [Rinse pos.] [Special pos.] [Home pos.]	INC
3	Lift rate	IN

3.7.50   ## PUMP   Switch pump

No.	Parameter description	Type
1	Tower [1] [2]	C
2	Pump [1] [2] [1+2]	C
3	Status / Duration [on] [off]	INC

3.7.51   ## RACK   Reset rack

No.	Parameter description	Type
1	Check rack	X

3.7.52 ## SAMPLE   Set sample variable

No.	Parameter description	Type
1	Sample variable [=] [+] [-]	C
2	Value	IN

3.7.53 ## SUBSEQ   Subsequence

No.	Parameter description	Type
1	Subsequence type	C
2	Cycles [Calibration]	INC
3	Note	T
4	Autom. after loading the subsequence	X

3.7.54 ## REPORT   Report

Reportoptions Vx

No.	Parameter description	Type
1	Report header [off] [once] [on each page]	C
2	Signature line [off] [once] [on each page]	C
3	Frame	X

Result report

No.	Parameter description	Type
1	Determination properties	X
2	Sample data	X
3	Sensor data	X
4	Titrant data	X
5	Raw data	X
6	Used common variables	X
7	Results	X
8	Statistics short	X
9	Messages	X
10	Line between sections	X

Curve

No.	Parameter description	Type
1	Mode	IN
2	Determination properties	X
3	x axis [Meas. value] [Time] [Temperature] [M drift] [Volume] [V drift] [ERC] [Delta MV]	C
4	y1 axis [Meas. value] [Time] [Temperature] [M drift] [Volume] [V drift] [ERC] [Delta MV]	C
5	Color y1 [black] [red] [green] [yellow] [blue] [magenta] [cyan] [grey]	C
6	y2 axis [Meas. value] [Time] [Temperature] [M drift] [Volume] [V drift] [ERC] [Delta MV] [none]	C
7	Color y2 [black] [red] [green] [yellow] [blue] [magenta] [cyan] [grey]	C
8	Grid	X
9	Display measured values	X
10	x axis	IN
11	y axis	IN

Measuring point list

No.	Parameter description	Type
1	Mode	IN
2	Determination properties	X

Calculations

No.	Parameter description	Type
1	Determination properties	X
2	Precision [full] [as displayed]	C

Statistics short

No.	Parameter description	Type
1	Printout [for each determination] [at the end of a series]	C

Statistics overview

No.	Parameter description	Type
1	Printout [for each determination] [at the end of a series]	C

Sample data silo

No.	Parameter description	Type
1	Properties	X

Result silo

No.	Parameter description	Type
1	Printout [for each determination] [end of sample data silo] [at the end of a series]	C
2	Properties	X

Used devices

No.	Parameter description	Type
1	Determination properties	X

Variables

No.	Parameter description	Type
1	Determination properties	X

The following Report Commands do not contain any parameters.

Form feed

Method sequence

Parameters full

Titration & measuring param.

Modified parameters

Non default parameters

System settings

Dialog options

Titrant list

All titrant data short

All titrant data full

Sensor list

All sensor data short

All sensor data full

Device list

All device properties

GLP data

Common variable list

All common variable properties

Templates sample data

Result template list

All result templates details

Input/Output lines

Custom calibration buffers

Rack tables

3.7.55   ## STIR   Stir

No.	Parameter description	Type
1	Control device	TC
2	Stirrer [1] [2] [3] [4]	C
3	Stirring rate	IN
4	Status / Duration	INC

3.7.56   ## WAIT   Wait

No.	Parameter description	Type
1	Waiting time	IN
2	Message text	T
3	Hold sequence	X
4	Message	X

3.7.57   ## REQUEST   Data request

No.	Parameter description	Type
1	Sample ident. [off] [Identification 1] [Identification 2] [id 1 & id 2]	C
2	Sample size	X
3	Sample size unit	X
4	Common variable [0],[1],[2]...[24],[off] => (CV01...CV25, off)	C
5	Hold sequence	X

3.7.58   ## BEEP   Acoustic signal

No.	Parameter description	Type
1	Number of sounds	IN

3.7.59   ## SIGN   Sign results

no parameters

3.7.60   ## END   End

no parameters

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[1] A '+' in front of this value indicates more than one endpoint in a window.

[2] For direct measurements, the evaluations "Fixed endpoint", "Minimum / Maximum" and "Break point evaluation" produce three report entries instead of four. In this case, the unused parameter "Volume" is missing.

[3] Calculation variables are written as pairs of short name and value, each followed by a tabulator. Therefore, the final tabulator is not followed by a significant entry.

[4] A maximum of 18 assignments can be defined. Each assignment is written as a set of five parameters, each followed by a tabulator. Therefore, the final tabulator is not followed by a significant entry.