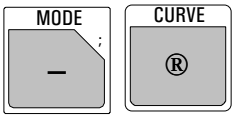
KFP Titrino 784

Metrohm

Quick References

8.784.1013

Mode selection



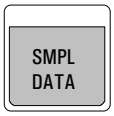
Press key <MODE>to open the dialoque mode, press <ENTER> to confirm. Select Ipol or Upol with the cursor keys < Ⓡ > or < ¬ >, and confirm with <ENTER>.

Recall method from method memory (key <USER METH:
>Recall method <ENTER>
Select method name with < Ⓡ > or < ¬ > or by entering its name.

Modes:

KFT Ipol, Upol Karl Fisher Titration (Determination of water content).

Sample data

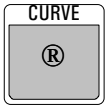


Input for sample data:
- Sample identification. Can be used as sample specific calculation values
- Sample size

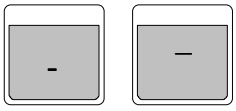
Inquiries with silo = OFF (LED "silo" is OFF).

Display	*Initial value*	*Meaning*	*Input range*
id#1 or C21 **id#2 or C22** **id#3 or C23**		Sample identification. Can be used as sample specific calculation values C21...C23.	up to 8 ASCII characters
smpl size **smpl unit:**	**1.0 g** **g**	Sample size, value C00. Unit of sample size.	0... ±999999 g, mg, mL, µL, pc or up to 5 ASCII characters

Display of the curve

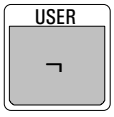


Display of the curve.
After the titration (in the ground state) you can switch between curve and result display using the key <CURVE>.



You can trace the curve with the keys < - > and < ¯ >. In the text field, to the left of the curve, the index of the current measured value is displayed in the first line. In the subsequent lines, the corresponding measured values are shown.

User name

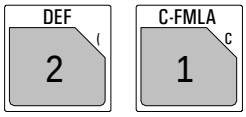


Manage user names.

The user name is printed out in the report.

Display	*Initial value*	*Meaning*	*Input range*
name:		Enter the name dirctly or select it with the keys < ¬ > or < Ⓡ >.	up to 10 ASCII characters
>delete		**Delete user name**	
name:		Enter the name dirctly or select it with the keys < ¬ > or < Ⓡ >.	

Calculations and definitions for data output



Input of formula.
Preselection of automatic report output at the end of a determination.
Allocations of values for statistics, common variables and silo.

Display *Initial value*	*Meaning*	*Input range*
>formula	**Input of formulas**	
RS? **RS1=EP1*C01/C00**	Enter formula number. Enter formula by means of 3rd functions of keyboard and confirm with <ENTER>. CXX are calculations variables, see below.	1...9
RS1 text RS1	Text for result output.	RS1 or up to 8 ASCII characters
RS1 decimal places 2	Number of decimal places for result output.	0...5
RS1 unit: %	Selection of result unit. Select the unit with < ® > or < ¬ > or enter a unit.	**%,** ppm, g/L, mg/mL, mol/L, mmol/L, g, mg, mL, mg/pc, s, mL/min, none or up to 6 ASCII characters
RS1 limit control: OFF	Limits for the result may be entered. Enter the values of calculation variables C01...C19 with <C-fmla>.	ON, OFF
>silo calculations	**Allocations for silo calculations**	
>common variables	**Allocations for common variables**	
>report	**Selection of report blocks for data output**	
report COM1:	Output to COM1. Identical for COM2. Press < ® > or < ¬ > for selection. If you wish several reports, use ";" as separator.	param, full, short, mplist, curve, scalc full, scalc srt, calc, ff
>mean	**Allocations for statistics calculations**	

Meaning of the calculation variables CXX

Variable	*Meaning*
C00	Sample size, key <SMPL DATA>.
C01...C19	Method specific calculation values, such as molecular mass, factors, key <C-FMLA>.
C21...C23	Sample specific calculation values, such as dilution factors, identifications, key <SMPL DATA>.
C24, C25	Variables for storing determination results in the silo memory.
C26, C27	Means from silo calculations (C26 is mean of C24 and C27 is mean of C25).
C30...C39	Common variables, i.e. for titer.
C40	Initial measured value of the sample.
C41	End volume.
C42	Determination time.
C43	Volume drift with conditioning.
C44	Temperature.
C45	Dispensed start volume.

Configuration

Settings of peripheral units
General settings
Settings of RS232 interface, values of the common variables
Settings for dosing units

Display *Initial value*	*Meaning*	*Input range*
>monitoring	**Monitoring functions**	
validation: OFF **time interval 365 d** **time counter 0 d**	Monitoring of a time interval for instrument validation. Time interval for validation. Time counter (Counts the number of days since the last reset of the counter.)	ON, OFF 1...9999 d 0...9999 d
service: OFF **next service YYYY-MM-DD**	Monitoring of the date for the next instrument service. Date of next service.	ON, OFF
system test report: OFF	Print-out of a system test report after switching on.	ON, OFF
>peripheral units	**Settings of peripheral units**	
send to COM1: IBM	Selection of printer at COM1. Identical for COM2.	Epson, Seiko, Citizen, HP, IBM
man.reports to COM: 1	Output of manually triggered reports.	1, 2, 1&2
balance: Sartorius	Selection of balance.	Sartorius, Mettler, Mettler AT, AND, Precisa
stirrer control: OFF	Stirrer control in the titration sequences.	ON, OFF
remote box: OFF **keyboard: US** **barcode: input**	Connection of a remote box. Type of connected PC keyboard. Target of data from the barcode reader. "input" means current input field.	ON, OFF US, Deutsch, français, espanol, schweiz. input, method, id1, id2, id3, smpl size
>auxiliaries	**General settings**	
dialog: english	Selection of dialog language.	english,deutsch,français,español, portugese, italiano, svenska
date YYYY-MM-DD **time hh:mm**		
run number 0	Current run number for result output.	0...999999
auto start OFF	Automatic starts of titrations.	1...9999, OFF
start delay 0 s	Waiting time before start of titration.	0...999999 s
result display: bold	Result display at the end of the determinations.	bold, standard
device label	Device label.	8 ASCII characters
program 784.0010	Program version.	read only
>RS232 settings COM1	**RS232-sttings for COM1. Identical for COM2.**	
baud rate: 9600	Baud rate.	300,600,1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200
data bit: 8	Data bit.	7, 8
stop bit: 1	Stop bit.	1, 2
parity: none	Parity.	none, odd, even
handshake: HWs	Handshake.	HWs, SWchar, SWline, none
>common Variables	**Values of common variables**	

Parameters for KFT

Display	*Initial value*	*Meaning*	*Input range*
>control parameters		**Control parameters for EP**	
EP at U	**250 mV**	Preset endpoint.	Ipol: 0... ±2000 mV Upol: 0... ±200.0 µA
dynamics	**100 mV**	Distance from EP where constant dosing should stop and controlling begins.	Ipol: 1...2000 mV Upol: 0.1...200.0 µA
max.rate	**max. ml/min**	Maximum dosing rate.	0.01...150 mL/min, max.
min.volume incr.	**min ml**	Minimum volume increment.	0.1...9.9 µL, min.
stop crit: **stop drift** **t(delay)** **stop time**	**drift** **20 ml/min** **10 s** **OFF s**	Type of stop criteria. Titration stops if stop drift is reached. Titration stops if there is no dosing during t(delay). If t(delay) is "INF" stop after at time.	drift, time 1...999 µL/min 0...999 s, INF 0...999999 s, OFF
>titration parameters		**General titration parameters**	
titr.direction:	**–**	+/–: Titration to higher/lower voltage or currents auto: Direction is set automatically.	+, –, auto
pause 1	**0 s**	Waiting time *before* start volume.	0...999999 s
start V: **start V** **factor** **dos.rate. max.**	**OFF** **0.00 ml** **0** **.ml/min**	Type of start volume: absolute or relative. Volume for *absolute* start volume. Factor for *relative* start volume: factor ∗ smpl size Dosing rate for start volume.	abs., rel., OFF 0...999.99 mL 0... ±999999 0.01...150 mL/min, max.
pause 2	**0 s**	Waiting time *after* start volume.	0...999999 s
extr.time	**0 s**	Extraction time.	0...999999 s
I(pol)	**50 mA**	Polarization current.	–127...127 µA
U(pol)	**400 mV**	Polarization potential.	–1270...1270 mV
electrode test:	**OFF**	Electrode test.	ON, OFF
temperature	**25.0 °C**	Titration temperature.	–170.0...500.0 °C
time interval	**2 s**	Time interval for data acquisition.	1...999999 s
>stop conditions		**Stop conditions for titration**	
stop V: **stop V:** **factor**	**abs.** **99.99 ml** **999999**	Type of stop volume. Volume for *absolute* stop volume. Factor for *relative* stop volume: factor ∗ smpl size.	abs., rel., OFF 0...9999.99 mL 0... ±999999
filling rate	**max. ml/min**	Filling rate.	0.01...150 mL/min, max.
>statistics		**Statistics calculation**	
status: **mean** **res.tab:** **delete**	**OFF** **n= 2** **original** **n= 1**	Status of statistics calculation. Number n of single values for statistics calculation. Result table for statistics calculation. Delete data from sample number n.	ON, OFF 2...20 original, delete n, delete all 1...20
>preselections		**Preselections for the sequence**	
conditioning: **display drift:** **drift corr:** **drift value**	**OFF** **ON** **OFF** **0 ml/min**	Automatic conditioning of titration vessel. Display of drift during conditioning. Type of drift correction. Value for manual drift correction.	ON, OFF ON, OFF auto, man., OFF 0.0...99.9 µL/min
req.ident:	**OFF**	Request of identfications after start of titration.	id1, id1 & 2, all, OFF
req.smpl size:	**OFF**	Request of sample size after start of titration.	value, unit, all, OFF
limit smpl size:	**OFF**	Limit control of sample size entries.	ON, OFF
oven:	**no**	Connection of a KF oven.	COM1, COM2, no
activate pulse:	**OFF**	Pulse output on I/O line L6.	first, all, cond., OFF