



License ID 1874704
Client ID 001-nbk-03142
User Metrohm

Program version viva 4.0 - 78
2026-09-21 13:52:51 UTC+2

Method parameters

Method MVA-23 – Maintenance - Prepare dosing units
Method saving date 2026-09-21 13:39:22 UTC+2
Method version 1
Method group Main group
Method status original
Method saved by (full name) Metrohm International Headquarters
Method saved by (short name) Metrohm

START

Main track

General

Workplace view

Current view on

Track view for live window

Live display 1 Main track

Live display 2 Main track

Electrode check on

Application note

Enter the number of preparation cycles for each Dosing Unit. If the Dosing Unit should not be prepared, enter 0. 50 mL VMS - Prep cycles – Number of preparation cycles for DU «50 mL VMS» 2 mL Suppressor- Prep cycle – Number of preparation cycles for DU «2 mL Suppressor» 2 mL Brightener- Prep cycle – Number of preparation cycles for DU «2 mL Brightener» 2 mL Leveler - Prep cycle – Number of preparation cycles for DU «2 mL Leveler» 2 mL Standard or sample - Prep cycle – Number of preparation cycles for DU «2 mL Standard or sample» Position rinsing solution – Rack position of the solution used to prepare DU «2 mL Standard or sample»

Sample data variables

Name	Type	Assignment	Fixed value	Comment	Monitoring
ID1	Text	ID1	Preparation of	Sample identification 1	off
50 mL VMS - Prep	Number	ID2		Number of preparation	off
2 mL Suppressor -	Number	ID3		Number of preparation	off
2 mL Brightener - Prep	Number	ID4		Number of preparation	off
2 mL Standard or	Number	ID5		Number of preparation	off
Position rinsing	Number	ID6	28	Position on the rack for the	off

Name ID1
Type Text
Assignment on ID1
Fixed value on Preparation of 807 Dosing Units
Check at start on
Comment Sample identification 1



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Name **50 mL VMS - Prep cycles**
Type Number
Assignment on. ID2
Fixed value off.
Check at start on
Comment Number of preparation cycles for DU «50 mL
VMS»
Variable monitoring off
Lower limit
Upper limit
Message
Display message on
Record message on
Message by e-mail off
E-mail template
Subject Message from viva - method 'New method 4' - command 'Main
track'
Acoustic signal off
Action off
Cancel determination on
Cancel determination and series off

Name **2 mL Suppressor - Prep cycles**
Type Number
Assignment on. ID3
Fixed value off.
Check at start on
Comment Number of preparation cycles for DU «2 mL
Suppressor»
Variable monitoring off
Lower limit
Upper limit
Message
Display message on
Record message on
Message by e-mail off
E-mail template
Subject Message from viva - method 'New method 4' - command 'Main
track'
Acoustic signal off
Action off
Cancel determination on
Cancel determination and series off

Name **2 mL Brightener - Prep cycles**
Type Number



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Assignment on. ID4
Fixed value off.
Check at start on
Comment Number of preparation cycles for DU «2 mL
Brightener»
Variable monitoring off
Lower limit
Upper limit
Message
Display message on
Record message on
Message by e-mail off
E-mail template
Subject Message from viva - method 'New method 4' - command 'Main
track'
Acoustic signal off
Action off
Cancel determination on
Cancel determination and series off

Name **2 mL Standard or sample - Prep cycles**
Type Number
Assignment on. ID5
Fixed value off.
Check at start on
Comment Number of preparation cycles for DU «5 mL
Standard or sample»
Variable monitoring off
Lower limit
Upper limit
Message
Display message on
Record message on
Message by e-mail off
E-mail template
Subject Message from viva - method 'New method 4' - command 'Main
track'
Acoustic signal off
Action off
Cancel determination on
Cancel determination and series off

Name **Position rinsing solution**
Type Number
Assignment on. ID6
Fixed value on. 28



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Check at start on
Comment Position on the rack for the solution used to
prepare DU «5 mL Sample or standard»
Variable monitoring off
Lower limit
Upper limit
Message
Display message on
Record message on
Message by e-mail off
E-mail template
Subject Message from viva - method 'New method 4' - command 'Main
track'
Acoustic signal off
Action off
Cancel determination on
Cancel determination and series off

Command comment

800105023: MVA-23 - Preparation of dosing units «50 mL VMS», «2 mL Suppressor»,
«2 mL Brightener», and «2 mL Standard or sample»

CALL Empty measuring vessel

Call text	Track name	Sample type		Condition
Empty measuring vessel	Drain	off	Sample	off

CALL Prepare DUs

Call text	Track name	Sample type		Condition
Prep 50 mL VMS	50 mL VMS	off	Sample	on = 'SD.50 mL VMS - Prep cycles' > 0
Prep 2 mL Suppressor	2 mL Suppressor	off	Sample	on = 'SD.2 mL Suppressor - Prep cycles' > 0
Prep 2 mL Brightener	2 mL Brightener	off	Sample	on = 'SD.2 mL Brightener - Prep cycles' > 0
Prep 2 mL Standard or sample	2 mL Standard or sample	off	Sample	on = 'SD.2 mL Standard or sample - Prep cycles' > 0

CALL Final rinsing



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Call text	Track name	Sample type	Condition
Final rinsing	Rinsing	off Sample	off

TRACK 50 mL VMS
Return immediately off
Delete old data off

LOOP Cycles - 50 mL VMS
Stop criteria
Max. run number on
Max. run number = 'SD.50 mL VMS - Prep cycles'
Maximum run time off
Signal assessment for DT off
Condition off

PREP Prep 50 mL VMS
Dosing device
Dosing unit 50 mL VMS

PUMP Drain 50mL VMS
Device
Device name 858 Professional Sample Processor 1
Device type 858.0020 Professional Sample Processor
Pumps
Tower 1
Pump(s) 1
Action
Switch on off
Switch off off
Duration on
Time 5 s

TRACK 2 mL Suppressor
Return immediately off
Delete old data off

LOOP Cycles - 2 mL Suppressor
Stop criteria
Max. run number on
Max. run number = 'SD.2 mL Suppressor - Prep cycles'
Maximum run time off
Signal assessment for DT off
Condition off

PREP Prep 2 mL Suppressor
Dosing device
Dosing unit 2 mL Suppressor



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PUMP Drain 2mL Suppressor

Device

Device name 858 Professional Sample Processor 1
Device type 858.0020 Professional Sample Processor

Pumps

Tower 1
Pump(s) 1

Action

Switch on off
Switch off off
Duration on
Time 5 s

TRACK 2 mL Brightener

Return immediately off
Delete old data off

LOOP Cycles - 2 mL Brightener

Stop criteria

Max. run number on
Max. run number = 'SD.2 mL Brightener - Prep cycles'
Maximum run time off
Signal assessment for DT off
Condition off

PREP Prep 2 mL Brightener

Dosing device

Dosing unit 2 mL Brightener

PUMP Drain 2mL Brightener

Device

Device name 858 Professional Sample Processor 1
Device type 858.0020 Professional Sample Processor

Pumps

Tower 1
Pump(s) 1

Action

Switch on off
Switch off off
Duration on
Time 5 s

TRACK 2 mL Standard or sample

Return immediately off
Delete old data off

MOVE Move to rinsing vial

Device



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Device name 858 Professional Sample Processor 1
Device type 858.0020 Professional Sample Processor
Target
Tower 1
Move Rack position
Number = 'SD.Position rinsing solution'
Beaker test
Display message on
Cancel determination off
Cancel determination and series off
Parameters
Shift rate 20 %/s
Shift direction auto
Swing rate 55 %/s

LIFT Lift → Work position

Device
Device name 858 Professional Sample Processor 1
Device type 858.0020 Professional Sample Processor
Target
Tower 1
Lift position Work position mm
Parameters
Lift rate 25 mm/s

LOOP Cycles - 2 mL Std Sample

Stop criteria
Max. run number on
Max. run number = 'SD.2 mL Standard or sample - Prep cycles'
Maximum run time off
Signal assessment for DT off
Condition on
Condition

PREP Prep 2 mL Standard or sam

Dosing device
Dosing unit 2 mL Standard or sample

PUMP Drain after 5mL DU

Device
Device name 858 Professional Sample Processor 1
Device type 858.0020 Professional Sample Processor
Pumps
Tower 1
Pump(s) 1
Action
Switch on off



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Switch off off
Duration on
Time 5 s

LIFT Lift → Shift position

Device

Device name 858 Professional Sample Processor 1
Device type 858.0020 Professional Sample Processor

Target

Tower 1
Lift position Shift position mm

Parameters

Lift rate 25 mm/s

PUMP Empty needle

Device

Device name 858 Professional Sample Processor 1
Device type 858.0020 Professional Sample Processor

Pumps

Tower 1
Pump(s) Peristaltic
Rate 10

Action

Switch on off
Switch off off
Duration on
Time 30.0 s

TRACK Rinsing

Return immediately off
Delete old data off

STIR Stirrer ON

Device

Device name 884_1
Device type 884 Professional VA

Stirrer

Stirring rate 2500 min⁻¹

Action

Switch on on
Switch off off
Duration off
Time 300 s

CALL Flush with water



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Call text	Track name	Sample type	Condition
Rinse	Rinse	off Sample	off

LOOP

Rinsing cycles

Stop criteria

Max. run number on
Max. run number 1
Maximum run time off
Signal assessment for DT off
Condition off

CALL

CALL Drain

Call text	Track name	Sample type	Condition
Drain	Drain	off Sample	off

CALL

CALL Rinse

Call text	Track name	Sample type	Condition
Rinse	Rinse	off Sample	off

TRACK

Rinse

Return immediately off
Delete old data off

PUMP

Rinsing time

Device

Device name 858 Professional Sample Processor 1
Device type 858.0020 Professional Sample Processor

Pumps

Tower 1
Pump(s) 2

Action

Switch on off
Switch off off
Duration on
Time 9 s

TRACK

Drain

Return immediately off
Delete old data off

PUMP

Draining time

Device

Device name 858 Professional Sample Processor 1
Device type 858.0020 Professional Sample Processor



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Pumps

Tower 1
Pump(s) 1

Action

Switch on off
Switch off off
Duration on
Time 50 s

TRACK

Shut OFF

Return immediately off
Delete old data off

PUMP

Rinse Drain pumps OFF

Device

Device name 858 Professional Sample Processor 1
Device type 858.0020 Professional Sample Processor

Pumps

Tower 1
Pump(s) 1+2

Action

Switch on off
Switch off on
Duration off
Time 8.0 s

PUMP

Peristaltic pump OFF

Device

Device name 858 Professional Sample Processor 1
Device type 858.0020 Professional Sample Processor

Pumps

Tower 1
Pump(s) Peristaltic
Rate 10

Action

Switch on off
Switch off on
Duration off
Time 300.0 s

STIR

Stirrer OFF

Device

Device name 884_1
Device type 884 Professional VA

Stirrer

Stirring rate 2500 min⁻¹

Action



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Switch on off
Switch off on
Duration off
Time 300 s

**SERIES
START** **Series start track**

RACK **RACK INIT**

Device
Device name 858 Professional Sample Processor 1
Device type 858.0020 Professional Sample Processor
Rack test on
Test rack 6.2041.450

MOVE **Move to Pos 1**

Device
Device name 858 Professional Sample Processor 1
Device type 858.0020 Professional Sample Processor
Target
Tower 1
Move Rack position
Number 1
Beaker test
Display message on
Cancel determination off
Cancel determination and series off
Parameters
Shift rate 20 °/s
Shift direction auto
Swing rate 55 °/s

**SERIES
END** **Series end track**

CALL **Series end shut OFF**

Call text	Track name	Sample type		Condition
Shut OFF	Shut OFF	off	Sample	off

LIFT **Needle → Shift position**

Device
Device name 858 Professional Sample Processor 1
Device type 858.0020 Professional Sample Processor
Target
Tower 1
Lift position Shift position mm



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Parameters

Lift rate 25 mm/s

EXIT Exit track

CALL Exit shut off

Call text	Track name	Sample type		Condition
Exit shut off	Shut OFF	off	Sample	off

ERROR Error track

CALL Error shut off

Call text	Track name	Sample type		Condition
Error shut off	Shut OFF	off	Sample	off

Evaluation parameters

Results

Results

Additional results

Result	Places	Prefix	Unit
Peak potential	3		V
Height	2	#	A
RSD of the heights of all replications	1		%
Measured value	2	#	A
RSD of the measured values of all replications	1		%
Area	2	#	C
RSD of the areas of all replications	1		%
Start base point	3		
End base point	3		
Normalized area	3		
Normalized height	3		
Normalized measured value	3		
Total volume	3	#	L



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Result	Places	Prefix	Unit
Zero-order coefficient	3		
First-order coefficient	3		
Second-order coefficient	3		
Fourth-order coefficient	3		
Coefficient of determination	5		
Substance concentration in measuring vessel	2	#	
RSD of the substance concentration in measuring vessel	1		%
Amount of substance	2	#	
RSD of the substance concentration in the sample	1		%
Effective addition volume of the standard solution for the evaluation ratio	2	#	L
RSD of the effective addition volume of the standard solution for the evaluation ratio	1		%
Calibration factor DT	2	#	
RSD of the calibration factor DT	1		%
Effective addition volume of the sample solution for the evaluation ratio	2	#	L
RSD of the effective addition volume of the sample solution for the evaluation ratio	1		%

Database

Name database viva