



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

Program version viva 4.0 - 78
2026-09-15 15:15:08 UTC+2

Method parameters

Method MVA-25 – Maintenance - Electrochemical
cleaning
Method saving date 2026-09-15 15:02:36 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 off

Application note

Note! Electrolyte alkaline is used for the electrochemical cleaning of the electrodes.
Repetition of the cleaning measurement will stop when the relative standard deviation of
the current at +0.9 V for the last two curves is less than 3%, or after 10 replications.

Sample data variables

Name	Type	Assignment	Fixed value	Comment	Monitoring
ID1	Text	ID1	Electrochemic	Sample identification 1	off
ID2	Text	ID2		Sample identification 2	off
ID3	Text	ID3		Sample identification 3	off

Name ID1

Type Text

Assignment on, ... ID1

Fixed value on, ... Electrochemical cleaning

Check at start on

Comment Sample identification 1

Name ID2

Type Text

Assignment on, ... ID2

Fixed value off, ...

Check at start on

Comment Sample identification 2

Name ID3



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Type Text
Assignment on. ID3
Fixed value off.
Check at start on
Comment Sample identification 3

Command comment

800105030: MVA-25 - Electrochemical cleaning of electrodes

CALL Empty measuring vessel

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

LQH Dose cleaning alkaline

General/Hardware

Dosing device

Dosing unit Electrolyte alkaline

Parameters

Function Dosing
Port 3
Volume 5 mL
Rate maximum mL/min

CALL COND Condition electrodes

Call text Condition electrodes

Track name VA track

Stop criteria

Evaluation quantity on
Voltammetry command Sweep DP
Substance I@900mV
Standard deviation 3 %
Number of runs on
Number of runs 10
Action Cancel command
Run time off
Condition off

CALL VA Cleaning measurement

Call text Cleaning measurement

Track name VA track

Condition off

CALL Rinse measuring vessel



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Call text	Track name	Sample type	Condition
Rinsing cycles	Rinsing Cycles	off Sample	off

VA TRACK VA track

Return immediately off

DP

Sweep DP

General/Hardware

Device

Device name 884_1

Device type 884 Professional VA

Sensors/Electrodes

Working electrode RDE

Sensor type RDE/SSE

Reference electrode Reference electrode

Auxiliary electrode Auxiliary electrode

Electrode check off

Stirrer

Stirring rate 2000 min⁻¹

Hydrodynamic measurement off

Pretreatment

Stirring time 5.0 s

Cyclovoltammetric pretreatment

Start potential -1.2 V

Vertex potential -0.100 V

Sweep rate 1 V/s

Cycles off

Duration s

Potentiostatic pretreatment

Potential 1 off V

Waiting time 1 0.0 s

Potential 2 off V

Waiting time 2 0.0 s

Potential 3 off V

Waiting time 3 0.0 s

Potential 4 off V

Waiting time 4 0.0 s

Potential 5 off V

Waiting time 5 0.0 s

Equilibration time 5.0 s

Sweep

Start potential -0.1 V

End potential 1 V

Potential step 0.006 V



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Potential step time 0.1 s
Sweep rate 0.060 V/s
Pulse amplitude 0.05 V
Pulse time 0.04 s
Measuring time 0.02 s
Sweep duration 18.33 s

Post-treatment

Cleaning

Cleaning potential off V
Cleaning time 0.0 s

Standby potential

Standby potential off V

Potentiostat

Current measuring range

Highest range 2 mA
Lowest range 20 µA
Automatically select optimum current measuring range on

TRACK

Rinsing Cycles

Return immediately off
Delete old data off

**STIR &
PURGE**

Stirrer ON

Device

Device name 884_1
Device type 884 Professional VA

Stir

Stirring rate 2000 min⁻¹
Switch on on
Switch off off
Duration off

Purge

Switch on off
Switch off on
Duration off

LOOP

LOOP Rinsing

Stop criteria

Max. run number on
Max. run number 2
Maximum run time off
Signal assessment for DT off
Condition off

CALL

CALL Drain



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	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	Drain			
	Return immediately			off
	Delete old data			off
PUMP	Pump - Drain			
	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			15 s
TRACK	Rinse			
	Return immediately			off
	Delete old data			off
PUMP	Pump - Rinse			
	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			4 s
TRACK	Shut off			
	Return immediately			off
	Delete old data			off



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PUMP

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

STIR & PURGE

Stir & Purge OFF

Device

Device name 884_1
Device type 884 Professional VA

Stir

Stirring rate 2000 min⁻¹
Switch on off
Switch off on
Duration off

Purge

Switch on off
Switch off on
Duration off

LQH

DU Electrolyte alkaline

General/Hardware

Dosing device

Dosing unit Electrolyte alkaline

Parameters

Function Fill
Port 2
Rate maximum mL/min

EXIT

Exit track

CALL

Exit shut off

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

ERROR

Error track



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CALL Error shut off

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

Evaluation parameters

General

Sweep DP

Data processing

Smoothing 1

Reversed peaks off

Curve evaluation

Fixed point evaluation off

Substances

Sweep DP

Substances - Recognition

Substance	Active	Characteristic potential	Tolerance	Min. width	Max. width	Min. measured quantity
I@900mV	on	0.9 V	0.05 V	0.01 V	0.5 V	200 pA

Sweep DP

Substances - Baseline

Substance	Baseline type	Start base point	End base point
I@900mV	Measured value	Automatically	Automatically

Sweep DP

Calibration curves

Results

Substance concentration in the sample

Sweep DP

Substance	Decimal places	Assignment
I@900mV	3	none

Results

Additional results



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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
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		%

User-defined results

Result type	Result name	Formula	Unit	Decimal places	Assignment	Description
Single result	Current @900mV	= 'RS.Sweep DP. I@900mV.VAR{1}. MVAL.MNV' * 1000000	µA	2	RS01	
Single result	RSD Conditioning	= 'Condition electrodes.SDV'	%	2	RS02	

Database

Name database viva