Method parameters

Method . . . . AB445 - Maintenance - Cleaning
measurement
Method saving date . . . . 2024-03-27 09:19:11 UTC+1
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

- Specify the number of repeated cleaning measurements in the «Run» window under
«Cleaning cycles». Usually 3-5 cycles are sufficient. Note! Electrolyte alkaline is used
for the electrochemical cleaning of the electrodes.

Sample data variables

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

Name **ID1**
Type . . . . Text
Assignment . . . . on ID1
Fixed value . . . . on . . . . Cleaning measurement
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 . . . . **Cleaning cycles**

Type . . . . Number
Assignment . . . . on ID3
Fixed value . . . . off . . . .
Check at start . . . . on
Comment . . . . Sample identification 3
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 'AOx - Clean electrode' - command
                                      'Main track'
Acoustic signal . . . . off
Action . . . . off
Cancel determination . . . . on
Cancel determination and series . . . . off

Command comment

    Measurement for electrochemical cleaning of electrodes - fully automated system

CALL   **Empty measuring vessel**

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

LQH   **Dose cleaning solution**

General/Hardware

Dosing device

    Dosing unit . . . . Electrolyte alkaline

Parameters

    Function . . . . Dosing
    Port 3
    Volume 5   mL
    Rate 30   mL/min

CALL VA   **Clean electrode**

    Call text . . . . Clean electrode
    Track name . . . . VA track
    Condition . . . . off

CALL   **CALL Rinsing**

Call text	Track name	Sample type	Condition
Rinsing cycle	Rinsing cycle	off Sample	off

VA TRACK **VA track**

Return immediately . . . . off

LOOP **Replications**

Stop criteria

Max. run number . . . . on

Max. run number . . . . = 'SD.Cleaning cycles'

Maximum run time . . . . off

Signal assessment for DT . . . . off

Condition . . . . off

DP **Sweep**

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 . . . . 1.0 V

Potential step . . . . 0.006 V

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 cycle**

Return immediately . . . . off

Delete old data . . . . 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**

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 Sample Processor
   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 Sample Processor
   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

PUMP   **PUMPS OFF**

Device
   Device name . . . . 858 Sample Processor
   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   **Fill DU electrolyte**

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
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