



License ID 459712
 Client ID 001-NBK-00348
 User Metrohm

Program version viva 2.0 - 54
 2017-05-24 13:33:48 UTC+2

Method parameters

Method AB 422 Determination Hg
 Method saving date 2017-05-23 10:57:56 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 test off

Application note

Sample data variables

Name	Type	Assignment	Fixed value	Comment	Monitoring
ID1	Text	ID1		Sample identification 1	off
ID2	Text	ID2		Sample identification 2	off
ID3	Text	ID3		Sample identification 3	off
Sample type	Text	Sample type		Sample type	off
Sample amount	Number	Sample amount		Sample amount	off
Sample amount unit	Text	Sample amount unit		Sample amount unit	off
Sample position	Number	Sample position		Sample position	off

Name **ID1**
 Type Text
 Assignment on. ID1
 Fixed value off.
 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**
 Type Text
 Assignment on. ID3
 Fixed value off.
 Check at start on
 Comment Sample identification 3

Name **Sample type**
 Type Text
 Assignment on. Sample type
 Fixed value off.
 Check at start on
 Comment Sample type

Name **Sample amount unit**
 Type Text
 Assignment on. Sample amount unit
 Fixed value off.
 Check at start on
 Comment Sample amount unit

Name **Sample amount**
 Type Number
 Assignment on. Sample amount
 Fixed value off.
 Check at start on
 Comment Sample amount
 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 3' - command 'Main track'
 Acoustic signal off
 Action off
 Cancel determination on
 Cancel determination and series off

Name **Sample position**
 Type Number



Device type 884 Professional VA

Sensors/Electrodes

Working electrode scTRACE Gold

Sensor type scTRACE Gold

Reference electrode Reference electrode

Auxiliary electrode Auxiliary electrode

Electrode test off

Stirrer

Stirring rate 2000 min⁻¹

Hydrodynamic measurement off

Pretreatment

Stirring time 5 s

Cyclovoltammetric pretreatment

Start potential -0.3 V

Vertex potential 0.85 V

Sweep rate 1 V/s

Cycles 5

Duration 11.50 s

Potentiostatic pretreatment

Potential 1 0.75 V

Waiting time 1 10 s

Potential 2 0.3 V

Waiting time 2 90 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 s

Sweep

Start potential 0.3 V

End potential 0.6 V

Potential step 0.004 V

Potential step time 0.4 s

Sweep rate 0.010 V/s

Pulse amplitude 0.05 V

Pulse time 0.04 s

Measuring time 0.02 s

Sweep duration 30.00 s

Post-treatment

Cleaning

Cleaning potential off V

Cleaning time 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 Sample

Return immediately off

Delete old data off

ADD SAMPLE Add sample

Addition

Add manually on

Display standard message on

Display message defined by the user off

Already added off

Add with dosing device off

ADD AUX Add electrolyte

Auxiliary solution

Solution Electrolyte

Volume 1 mL

Include volume in calculation on

Addition

Add manually on

Display standard message on

Display message defined by the user off

Already added off

Add with dosing device off

CALL VA Measure sample

Call text Measure sample

Track name VA track

Condition off

TRACK Standard addition

Return immediately off

Delete old data off

LOOP Variations

Stop criteria

Max. run number on

Max. run number 2

Maximum run time off

Signal assessment for DT off

Condition off

Add standard



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ADD STD Standard

Solution Standard
 Addition increments
 Number 1
 Addition volume 1 0.05 mL
 Addition
 Add manually on
 Display standard message on
 Display message defined by the user off
 Already added off
 Add with dosing device off

CALL VA Measure additions

Call text Measure additions
 Track name VA track
 Condition off

TRACK Shut off

Return immediately off
 Delete old data off

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

MAIN VALVE N2 OFF

Device
 Device name 884_1
 Device type 884 Professional VA
 Action
 Open off
 Close on

EXIT Exit track

Exit shut off



CALL

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

General

ASV

Data processing

Smoothing 1
 Reversed peaks off

Curve evaluation

Fixed point evaluation off

Substances

ASV

Substances - Recognition

Substance	Active	Characteristic potential	Tolerance	Min. width	Max. width	Min. measured quantity
Hg	on	0.475 V	0.05 V	0.01 V	0.2 V	200 pA

ASV

Substances - Baseline

Substance	Baseline type	Start base point	End base point
Hg	Linear	Automatically	Automatically

Standards

Standards

Name	Standard
Hg	1.0 mg/L

Calibration

General

Calibration method Standard addition



Blank value correction with evaluation quantity off

ASV

Calibration curves

Substance	Evaluation quantity	Curve type	Weighting
Hg	Height	Linear regression	on

Results

Substance concentration in the sample

ASV

Substance	Decimal places	Assignment
Hg	3	RS01

Results

Additional results

Result	Places	Prefix	Unit
Peak potential	3		V
Height	2	#	A
RSD of the heights of all replications	1		%
Area	2	#	C
RSD of the areas of all replications	1		%
Start base point	3		
End base point	3		
Standardized area	3		
Standardized height	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



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Result	Places	Prefix	Unit
RSD of the effective addition volume of the sample solution for the evaluation ratio	1		%

Database

Name database viva