



License ID 459712  
Client ID MET0558  
User Metrohm

Program version viva 2.0 - 54  
2016-03-10 15:04:52 UTC+1

## Method parameters

Method . . . . . AB 416 Cleaning of scTRACE Gold  
Method saving date . . . . . 2016-03-10 14:29:19 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 test . . . . . on

#### Application note

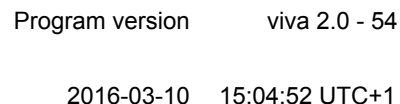
Measuring solution: 10 mL cleaning solution ( $c(\text{H}_2\text{SO}_4) = 0.5 \text{ mol/L}$ ,  $c(\text{KCl}) = 0.05 \text{ mol/L}$ )

#### 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			off
Sample amount	Number	Sample amount			off
Sample amount unit	Text	Sample amount unit			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



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	

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

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

## AB 416/2: Cleaning of scTRACE Gold

## Page 2 of 7



License ID 459712  
Client ID MET0558  
User Metrohm

Program version viva 2.0 - 54  
2016-03-10 15:04:52 UTC+1

**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

**CALL VA**

**Call cleaning**

Call text . . . . . Call cleaning  
Track name . . . . . VA track  
Condition . . . . . off

**VA TRACK**

**VA track**

Return immediately . . . . . off

**LOOP**

**Replications**

**Stop criteria**

Max. run number . . . . . on  
Max. run number . . . . . 4  
Maximum run time . . . . . off  
Signal assessment for DT . . . . . off  
Condition . . . . . off

**CVS**

**Cleaning**

**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 test . . . . . on

**Stirrer**

Stirring rate . . . . . 2000 min<sup>-1</sup>  
Hydrodynamic measurement . . . . . off

**Pretreatment**

Stirring time . . . . . 10 s

**Cyclovoltammetric pretreatment**

Start potential . . . . . -1.0 V  
Vertex potential . . . . . 1.0 V  
Sweep rate . . . . . 1 V/s  
Cycles . . . . . 10  
Duration . . . . . 40.00 s

**Potentiostatic pretreatment**



License ID 459712  
Client ID MET0558  
User Metrohm

Program version viva 2.0 - 54  
2016-03-10 15:04:52 UTC+1

Potential 1 . . . . . -0.3 V  
Waiting time 1 . . . . . 5 s  
Potential 2 . . . . . off V  
Waiting time 2 . . . . . 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 . . . . . -0.3 V  
1st vertex potential . . . . . 0.2 V  
2nd vertex potential . . . . . -0.3 V  
Potential step . . . . . 0.01 V  
Potential step time . . . . . 0.025 s  
Sweep rate . . . . . 0.4 V/s  
Preparation cycles . . . . . 0  
Measuring cycles . . . . . 1  
Sweep duration . . . . . 2.55 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 . . . . . 224 mA  
Lowest range . . . . . 20  $\mu$ A

#### 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<sup>-1</sup>  
Switch on . . . . . off  
Switch off . . . . . on  
Duration . . . . . off

##### Purge



License ID 459712  
Client ID MET0558  
User Metrohm

Program version viva 2.0 - 54  
2016-03-10 15:04:52 UTC+1

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**

**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**

**General**

**Cleaning**

**Data processing**

Smoothing . . . . . 1

Reversed peaks . . . . . off

**Curve evaluation**

Fixed point evaluation . . . . . on

**Fixed points**

Fixed point	Measured quantity	Fixed value	Sweep direction
1	Potential	0.075 V	anodic
2	Potential	0.075 V	cathodic

**Substances**

**Cleaning**

**Substances - Recognition**



License ID 459712  
Client ID MET0558  
User Metrohm

Program version viva 2.0 - 54  
2016-03-10 15:04:52 UTC+1

**Cleaning**  
**Substances - Baseline**

**Cleaning**  
**Calibration curves**

**Results**  
**Substance concentration in the sample**  
**Cleaning**

**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
RSD of the effective addition volume of the sample solution for the evaluation ratio	1		%

**User-defined results**



License ID 459712  
Client ID MET0558  
User Metrohm

Program version viva 2.0 - 54  
2016-03-10 15:04:52 UTC+1

Result type	Result name	Formula	Unit	Decimal places	Assignment	Description
Single result	Delta I (75 mV) - 1-1	= ( 'RS.Cleaning. VAR{1}.REP{1}.FP {1}.CUR' - 'RS. Cleaning.VAR{1}. REP{1}.FP{2}.CUR' ) * 1000000000	nA	1	RS01	
Single result	Delta I (75 mV) - 1-2	= ( 'RS.Cleaning. VAR{1}.REP{2}.FP {1}.CUR' - 'RS. Cleaning.VAR{1}. REP{2}.FP{2}.CUR' ) * 1000000000	nA	1	RS02	
Single result	Delta I (75 mV) - 1-3	= ( 'RS.Cleaning. VAR{1}.REP{3}.FP {1}.CUR' - 'RS. Cleaning.VAR{1}. REP{3}.FP{2}.CUR' ) * 1000000000	nA	1	RS03	
Single result	Delta I (75 mV) - 1-4	= ( 'RS.Cleaning. VAR{1}.REP{4}.FP {1}.CUR' - 'RS. Cleaning.VAR{1}. REP{4}.FP{2}.CUR' ) * 1000000000	nA	1	RS04	

#### Database

Name database . . . . . viva