

1 Purpose

The new software version viva 2.1 includes the expansion of the parameterizable range for **Cyclic Pulse Voltammetric Stripping** with the **CPVS** command. In addition, the **CALC** command has been introduced for carrying out calculations in determinations. Results can also be monitored.

A number of further adjustments, improvements and bug fixes expand the application range and increase the analysis system's usability and operational reliability.

2 New features

Method program part

Parameters for CPVS measurements expanded

- In the **CPVS** command, the Stripping time, Equilibration time, Cleaning time and Plating time are open from 0 to 3600 seconds.
- The existing measurement intervals for data acquisition during **Plating** and **Stripping** have been expanded to include the selection of 245.76 ms, 491.52 ms, 983.04 ms, 2,539.52 ms, 4,997.12 ms and 9,994.24 ms.
- The total number of measuring points must be less than 250,000.

CALC command for calculations

- The new **CALC** command can be used to calculate end results and intermediate results during determinations. The results can be assigned to a common variable or a global variable.
- The parameters defined for a result can be stored as a template for the generation of new results.
- Result monitoring can be configured within the **CALC** command.

Result monitoring

- With result monitoring, a check can be carried out during a determination at the time a result is calculated to see whether it lies within the defined limit values. In the event that limit values are breached (if the lower limit value is not reached or the upper limit value is exceeded), a previously selected action will be executed automatically.
- The result monitoring can be viewed in the **Evaluation - Results** sub-window in the **Monitoring** area.

3 Improvements

General

New Windows versions

- The following Windows versions are supported for the installation of viva 2.1:
 - Windows 10 Pro/Enterprise
 - Windows 8.1 Professional/Enterprise
 - Windows 7 Professional/Ultimate/Enterprise
 - Windows Server 2019 **(64-bit only)**
 - Windows Server 2016 **(64-bit only)**
 - Windows Server 2012 R2 **(64-bit only)**
 - Windows Server 2012 **(64-bit only)**
 - Windows Server 2008 R2
 - Windows Server 2008 **(32-bit only)**

The following Windows versions are no longer supported:

- Windows 8 Professional/Enterprise
- Windows Vista Business/Enterprise/Ultimate
- Windows Server 2003

Current version of the USB driver software

- Version 3.12.0.168 of the USB driver software is installed at the same time as the installation of viva.
- With the new driver software, viva 2.1 can also be installed after the OMNIS Software has already been installed.

4 Fixed bugs and problems

Several small errors have been eliminated.

General

Database program part

Evaluation of the height with horizontal baseline type through 0

- The evaluation of peaks with the **Horizontal through 0 automatically** or **Horizontal through 0 manually** baseline type provides correct results for the curve height.

Data in fixed report

- The respective information for smoothing and fixed point evaluation for the determination with the **SQW** command appears in the **Evaluation parameters - General** fixed report.

Recalculation with Chinese language setting

- The recalculation of results with changes in sample variables, values or parameters in the result view functions in all language versions.

Method program part

Maximum number of characters increased

- The maximum number of characters has been increased for the **Device name** field in the dialog window of the **SCAN** command.

The VOL variable outputs volumes in liters (L)

- The **VOL** variable of the **LQH** command outputs the currently dosed volume in liters (L).

Filling rate of the LQH command during refilling

- During automatic filling in the **LQH** command, a suitable filling rate is used to prevent the formation of any vacuum or any air bubbles in the piston.

Manual program part

Valves switch reliably

- The valves of an instrument of the **884 Professional VA** type switch reliably when they are actuated via manual control or in the service area.

Stirrer status display

- The display works reliably during the manual control of the stirrer. Pressing **[Start]** causes the stirrer to run and the status display to switch to **[Stop]**. Pressing **[Stop]** causes the stirrer to stop and the status display to switch to **[Start]**. This sequence can be repeated at any speed, during which the respectively correct status will be displayed and the correct action will run.