



Metrohm meets Empower 3

Ion chromatography with the
Chromatography Data Software (CDS) from Waters



Leading chromatography data software now also for IC

Waters™ is the world's leading specialty measurement company and manufacturer of systems for high-performance and ultra-high-performance liquid chromatography. With Empower™ 3 Software, Waters also provides the most popular and widely used chromatography data software (CDS). Metrohm ion chromatographs can now also be controlled by Empower 3 Software, enabling the comfortable analysis of anions and cations in almost any matrix.

In addition to the standard IC systems with conductivity detection, the available driver integrates the amperometric and the UV/VIS detector as well as various autosamplers and sample preparation techniques from Metrohm into Empower. Examples of this are Inline Ultrafiltration and Inline Dilution. Also integrated is the 889 IC Sample Center, an autosampler, which enables the cooling of temperature-sensitive biochemical samples.

The screenshot displays the 'Sample List Method: Rahul_samples' window. It features a table with columns for 'Var', 'P1 Vol (uL)', '# of Inj', 'Label', 'Sample Name', 'Level', 'Function', 'Method Set/ Report Method', 'Label Reference', 'Processing', 'Run Time (Minutes)', and 'Data Start (Minutes)'. The table lists 12 rows of samples, including standards and apple juice samples. Below the table, there are two panels: 'Status Manual Control' showing instrument parameters like Pump Flow, Pump Press, and Cell Status, and 'Instrument Method' showing the selected method 'Sugars_Cations_1' with 'Edit', 'Monitor', and 'Setup' buttons.

All system components are controlled and monitored by Empower 3 Software.



One software for everything

With complete integration of the Metrohm IC systems by the relevant drivers, all system components can be programmed, controlled, and monitored with Empower.

For example, the «Instrument Method» field can be used to set the relevant parameters and to create flexible time programs and subprograms to map a wide variety of control sequences.

In addition, different instruments can be combined in the same method and, for instance, a Metrohm ion chromatography system can be operated together with a SQ Detector 2 mass spectrometer from Waters.

As the system is controlled completely via Empower, the data acquisition, evaluation, and reporting are also performed in the familiar Empower environment. The requirements of the FDA for the application of software in a regulated area 21 CFR Part 11 are fully met too. Empower 3 Software ensures integrity and traceability for all data and results.

The screenshot shows the 'Manual Control' window for a 'Professional IC Vario TWVO/SeI'. It lists various instrument components such as Column Heater, Conductivity Detector, Degasser, Injectors, MCS, MSM, Peristaltic Pump, and Pump 1/2. On the right, there are control fields for 'Cell' (ON), 'Charge' (67.667 nC), 'Current' (676.666 nA), 'Potential' (0.050 V), and 'Cell Temp.' (35.0 °C). There are 'Set', 'On', and 'Off' buttons at the bottom.

The screenshot shows the 'Instrument Method Editor' window. It displays a table with columns for 'Time', 'Device', 'Module', 'Command', and 'Parameter'. The table lists various instrument components and their configurations for different time points. At the bottom, there are 'Sub Program' and 'Run' buttons.

Screenshots: Instrument method and its possibilities.

THE ADVANTAGES

- One software for all chromatographic applications
- One software for all hyphenated techniques (IC-ICP/MS, IC-MS)
- Reduced training and software revalidation effort
- All data in one database

ORDERING INFORMATION

Instrument	
6.6070.220	Metrohm IC Driver 2.2 for Empower™ 3
6.6070.922	Upgrade Metrohm IC Driver 2.2 for Empower™ 3