



FIG. 1: CHRONECT® Workstation GLYPHOSATE

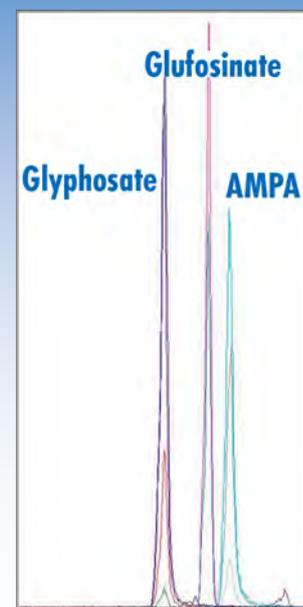


FIG. 2: Chromatogram
3 µg/kg Glyphosate

CHRONECT® Workstation Glyphosate

With this workstation by Axel Semrau® it is possible to properly determine Glyphosate, Glufosinate and AMPA in complex matrices as for example foodstuff. Manual steps during sample preparation are reduced to 10 minutes only, the entire remaining preparation and measurement are performed fully automated and interlaced within approx. 40 minutes.

Using online SPE-LC-MS/MS Glyphosate is concentrated on specific cartridges. Combined with a Sciex Triple Quad 5500 system the determination limit for black tea, a very difficult matrix, is below 3 µg/kg. Featuring an excellent recovery between 86 and 96 % and a repeatability of ~ 10 % the detection of glyphosate, AMPA and Glufosinate is still reliable.

The CHRONECT Workstation Glyphosate consists of a XYZ robot with a centrifuge, vortexer and agitator, an online SPE unit with prepared methods and the specialized cartridges **CHRO^{SPE} Glyphosate**. Utilization of standard SPE cartridges for simple matrices, e.g. C8 or C18 phases, is possible. CHRONECT Workstation Glyphosate will be delivered with ready-to-use methods for different matrices.

Being a front-end solution, the workstation can be coupled to various LC-MS/MS systems. Direct injection, online SPE (with or without derivatization of the sample) are readily available on the device.

System configuration

- 1x SPH1299 UHPLC pump
- ACE one clamp 250 bar, 3x UHPLC valves
- HPD with Organizer MISTRAL™ column oven
- CHRONECT Symbiosis XYZ autosampler, with Park Station & tool change, centrifuge, vortexer, agitator, Fast Wash module, solvent module, tray plate with 3 trays VT15 10/20 mL
- **CHRONOS Symbiosis** for control

Features

- High sample throughput, approx. 60 samples/24 h
- Ready-to-use methods and special cartridges for enrichment
- High level of automation, good recovery and precision, less manual work steps
- High sensitivity even in complex matrices
- All methods possible: online SPE, direct injection with or without derivatization
- Easy control and automatically optimized time schedules by CHRONOS Symbiosis

Many options available

- MISTRAL™ CS Cool UHPLC for easy column handling
- Sample cooling with Peltier Stacks (4 to 40 °C)
- Higher capacity with more racks
- Integration in workflows with 2D Barcode Reader

Many more options are available...

Specifications

- Direct UHPLC injection (LC mode)
- ACE single cartridge clamp (SPE-LC mode): 250 bar or 1000 bar clamp & cartridges, 2 UHPLC valves
- HPD Mix 1x SSM: 7 SPE solvents to select
- HPD syringe volume steps: 10 µL to 2 mL
- HPD SPE syringe flow rates: 100 µL/min up to 10 mL/min
- SPH1299 UHPLC gradient pump (binary gradient): 1300 bar, including degasser, 2x2 solvent selection for four different binary gradients, automatic purge and prime valves
- Mistral Cool column oven: 4 °C to 90 °C

PAL Symbiosis standard specifications

- PAL3 RTC, 1 or 2 tray plates with 3 or 6 racks (VT54: racks for 3x54 2 mL vials)
- 2 Valco valves: injection and column switching
- 1 - 250 µL syringe (fixed needle, gauge 22, PST3, different syringes available, if needed)
- Standard: 100 µL sample loop, various loops possible
- Fast Wash module with pump and reservoirs for 2 solvents

- Vortexer: 2 mL / 10 mL / 20 mL, one slot for custom specific vials, mixing with up to 2000 rpm
- Agitator: 6 positions for 20 mL vials, adapters for 2 or 10 mL vials (optional), temperature range 40 to 100 °C, agitation speed 250-750 rpm

Specifications of options

- Mistral CS Cool UHPLC: 5 columns plus drain, 4 °C to 75 °C, 1000 bar
- Sample cooling with Peltier Stacks 2DW or 6DW: 2 or 6x 54 2mL vials, 4 °C to 40 °C

CHRONOS Symbiosis software features

- Controls the entire system including integration in the lab environment
- Allows one sample list for front-end and LC-MS for MassHunter, OpenLAB, Analyst, LabSolutions, Masslynx, Clarity, Xcalibur & more
- Creates time schedules automatically with overlapping functions, comfortable functions to create task lists, easy navigation through bundling of tasks
- Ready-to-use methods, easy and safe method development, simple cut/copy/paste functions

CHRONOS specifications see: www.axel-semrau.de

Ordering Information

Article number	Description
AS-WS-0600	CHRONECT® Workstation Glyphosate
AS-SP-886.202-UP	Upgrade MISTRAL™ CS Cool UHPLC (with column selector module)
AS-CC-7420-SP	Upgrade Sample Cooling with Peltier Stacks 2DW (VT54, with two racks, 54x 2 mL vials without vials)
AS-CC-7420-SP	Upgrade Sample Cooling with Peltier Stacks 6DW (VT54, with 6 racks, 54x 2 mL vials without vials)
AS-CC-5095	2D Barcode Reader - encoding up to 10 items of information on a 2 mL vial

Attention: Many PAL options may require an upgrade of the standard 50 cm PAL LSI.

CHRO^{SPE}
Glyphosate

