KNAUER

Smartline

► Autosampler 3950

The universal autosampler for HPLC

The Smartline Autosampler 3950 is a high throughput autosampler of robust design, developed to meet the challenges of the modern analytical laboratory. The Smartline Autosampler 3950 offers:

- flexible use of microtiter well plates or trays for standard vials
- 2 x 384 positions maximum sample capacity
- injection cycle time < 60 s, including needle wash
- full or partial loopfill injection, as well as µl-pickup
- easy internal standard addition, sample dilution or derivatization
- priority sample feature
- convenient access for loading and maintenance
- optional sample tray cooling and biocompatible liquid handling

Confident injection – For all injection modes, sample injection with pressure-assisted sample aspiration (PASA™) is selectable. The sample needle will not be moved to an extra port for injection. This technique not only provides for excellent accuracy and precision, but reduces the risk of bubbles and avoids contamination.

Thorough cleaning – Highly efficient washing of tubing and needle (inside and outside) avoids sample carryover.

Easy control – Complete integration into KNAUER's ChromGate® (based on the EZChrom Elite™ kernel) and ClarityChrom® chromatography data software make the autosampler easy to control, including context-sensitive online help.

Technical data

Sampling

Sample capacity	max. 768 positions with well plates; max. 96 positions for vials
Sample trays	2 microtiter plates (SBS standard); 96-well high/low and 384-well low formats; vial trays for 48 (2 ml) or 12 (10 ml) vials each; any combination of plates is allowed, except for 384-low on the left and 96-high on the right
Vial/plate dimensions	max. plate/vial height: 47 mm (incl. septa or capmat)
Injection volume	1–5 000 µl programmable
Sample loop	100 µl standard; 10 ml for preparative option
Dispenser syringe	500 µl standard; 2 500 µl for preparative option
Vial detection	missing vial/well plate detection by sensor
Headspace pressure	built-in compressor
Switching time inj. valve	< 100 ms
Piercing precision needle	± 0.6 mm
Wash solvent	external wash solvent bottle
Wetted materials	stainless steel (SS316), Tefzel®, Vespel®, glass, Teflon® (PTFE). For biocompatible version: PEEK
Injection cycle time	minimum 7 s from the same vial, 14 s from different vials; < 60 s for ≤ 100 µl sample injection in all injection modes, incl. 300 µl needle wash

Analytical performance

Injection modes	full loop, partial loopfill and µl pickup mode; PASA™ (pressure-assisted sample aspiration)
Injection volume	full loop injection: max. 5 000 µl partial loopfill injection: 1 µl–450 µl (1 µl increment) µl pickup injection: max. 400 µl
Injections per vial/well	max. 9 injections
Analysis time	max. 9 h, 59 min, 59 s
Reproducibility	≤ 0.3 % RSD for full loop injections ≤ 0.5 % (prep. ≤ 1.0 %) RSD for partial loopfill, injection volume > 10 µl ≤ 1.0 % RSD for µl pickup injections, injection volume > 10 µl
Sample carryover	< 0.05 % (prep. < 0.1 %) with programmable needle wash

Communication

Outputs	1 programmable relay output (inject marker, auxiliary, alarm)
Inputs	2 programmable TTL inputs (next injection, freeze, stop)
Control	LAN (Ethernet)

General

Power supply	90–230 V AC ± 10 %; 50–60 Hz; 200 VA
Dimensions	300 x 360 x 510 mm (575 mm incl. cooling option) (W x H x D)
Weight	19 kg (21 kg incl. cooling option)

Ordering information

Order no.	**Smartline Autosampler 3950**
A5005-1	standard version, including two vial trays for 48 vials each
A50051-1	standard version, including sample cooling option
A50052-1	biocompatible version
A50053-1	biocompatible version, including sample cooling option
A50054-1	preparative version

Technical data are subject to change without notice.

Visit www.knauer.net for details on complete HPLC systems, HPLC columns, and osmometers.

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