

Autosampler AS 110

Minute sample handling

- **Single or dual loop injections**
- **Small sample handling w/o sample loss**
- **Cooled sample tray**
- **Well plates or vials**

Flexibility: Single or dual loop injections

The AS 110 is a fast, robust and easy to use auto-sampler combining accuracy, reproducibility and flexibility. It has a dual needle with positive head-space pressure, extensive wash routines for minimal carry over and 3 injection modes including full loop, partial loop fill and μL pick-up. The AS110 can be equipped with a 6 port valve (for standard single loop injections) or with a 10 port valve (for dual loop injections, i.e., 1 x sample \rightarrow 2 x chromatograms). UHPLC compatible versions of the AS 110 allow injections up to 1000 bar (15.000 psi).



Small sample handling without sample loss

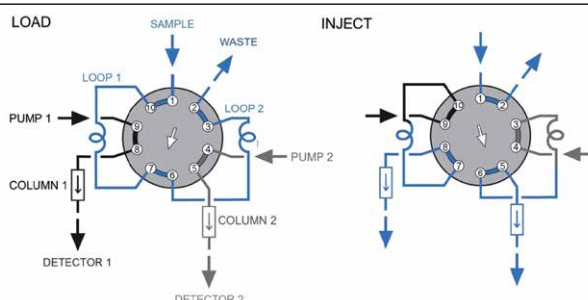
The AS 110 can handle small sample volumes down to 1 μL accurately and reproducibly with virtually zero sample loss using the μL pick-up routine or user-defined injection programs. The sample tray offers temperature control down to 4°C. The fast needle movements result in unsurpassed speeds of less than 30s for a full cycle. These features make the AS 110 also a perfect fit for high throughput routine analysis.

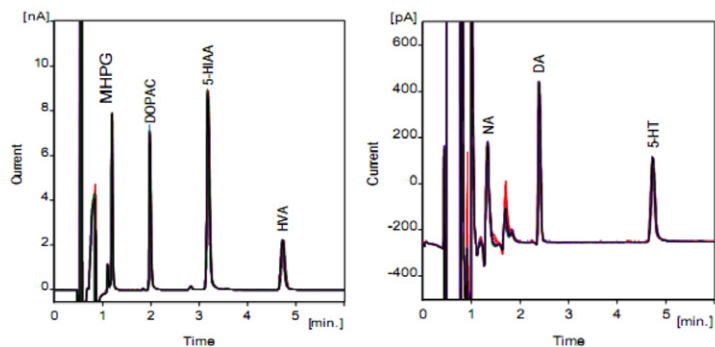
Well plates or vials

The AS 110 can accommodate almost any type of well plate (12, 48, 96 and 384 positions) sealed or unsealed as well as a large variety of HPLC sample vials (1.5 ml, 10 ml etc.).

Dual loop injection (10 port valve)

Equipped with a 10 port valve, the AS 110 allows for dual loop injections, whereby a small sample is reproducibly spitted and injected onto 2 different HPLC columns, for highest selectivity. Hereby the sample is injected simultaneously on both columns in one injection cycle resulting in minimal sample loss.





Reproducibility
using dual loop
injection: 0.3 - 1.8 %
RSD (n=8)

One sample →
two chromatograms



Specifications

Power requirements	95 - 240 Volt AC ± 10%; 50 - 60 Hz; 200VA
Sound pressure level	LeAq < 70 dB
Operating conditions	10 - 40°C (50 - 104 °F), 20 - 80% RH, non -condensing (indoor use only)
Cooling (optional)	Minimum 4 ± 2°C (for maximum ambient temp of 25 °C and max. humidity of 80%)
Viscosity range	0.1 - 5 cP
Regulatory	CE, cCSAus (file no. 241352) , RoHS compliance

Analytical performance

Injection modes	Full loop, partial loopfill, µL pickup and user-defined injection programming, PASA™ (pressure-assisted sample aspiration)
Reproducibility AS 110	RSD ≤ 0.3% for full loop injections, injection volumes > 5 µL RSD ≤ 0.5% for partial loopfill injections, injection volumes > 5 µL RSD ≤ 1.0% for µL pickup injections, injection volumes > 5 µL
Pressure rating	AS110 with 6-port valve: max 350 bar (5000 psi) AS110 UHPLC with 6-port valve: max 1000 bar (15000 psi) AS110 UHPLC with 10-port valve: max 700 bar (10000 psi)

Sampling

Sample capacity	2 micro titre plates according to SBS standards; 96-well high/low and 384-well low formats, 48-vial or 12-vial trays; combination are allowed, except 384 low left & 96 High right.
Vial/Plate dimensions	Max. plate/vial height: 47 mm (incl. septa or capmat)
Loop volume	Standard: 1 - 5000 µL programmable, optional 10 mL loop
Dispenser syringe	Standard: 500 µL, optional 250, 1000 or 2500 µL
Vial detection	Missing vial/well plate detection by sensor
Headspace pressure	Built-in compressor, but only for vials with septa
Switching time valve	Electrically < 100 msec
Wash solvent	Integrated wash solvent bottle
Wetted parts in flow path	SS316, PTFE, TEFZEL, VESPEL, Glass, Teflon and PEEK
Injection cycle time	< 60s in all injection modes for 1 injection ≤ 100 µL including 300 µL wash

Physical specifications

Dimensions	300 mm x 510 mm x 360 mm (without cooling option) 300 mm x 575 mm x 360 mm (with cooling option)
Weight	19 kg (without cooling), 21 kg (with cooling)

Part no	Description
191.0056L	AS 110 autosampler std 6p, LAN, white
191.0055L	AS 110 autosampler std cool 6p, LAN, white
191.0055UL	AS 110 autosampler UHPLC cool 6p, LAN, white
191.0051L	AS 110 autosampler std cool 10p, LAN, white
191.0051UL	AS 110 autosampler UHPLC cool 10p, LAN, white

Features

- Handling of small samples with minimal sample loss
- UHPLC compatible versions
- 10 port valve for dual channel LC
- Programmable methods
- Temperature control
- IQ, PQ and OQ available

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