

AZURA® Autosampler AS 6.1L

The Autosampler AS 6.1L can inject from up to 768 positions when equipped with microtiter plates (either high or low formats) or from up to 108 standard 2 ml sample vials. Sample carryover is significantly minimized thanks to a highly-effective interior and exterior needle wash procedure. This autosampler is also fast and flexible: one complete sample injection cycle takes less than one minute, including needle wash. Three different injection modes are supported; "full loop filling" (highest reproducibility), "partial loop filling" (variable volumes, e.g. for dilution series) and "µl pickup" (loss-free injection of extremely small sample volumes), allowing the user to optimize sample usage. The headspace pressure function prevents bubbles from forming in the vial during sample uptake. Precolumn derivatization is supported.

For high-pressure injections of up to 1240 bar, the autosampler is equipped with a so-called ILDTM valve (Intermediate Loop Decompression). This valve consists of a rotor-stator combination and includes a central port for depressurizing. For highpressure applications, the sample loop is depressurized prior to receiving the sample. This way, the sample is not diluted with solvent. Because the valve is switched extremely fast, pressure spikes are reduced. Analyses are more precise and wear of the column is reduced.



KNAUER offers various software control options:
www.knauer.net/softwarecontrol



For autosampler accessories see p. 40

Specifications

Sample injection

Maximum back pressure	see device versions
Vial/plate dimensions	max. plate/vial height: 47 mm (incl. septa or capmat)
Injection volume range	0.1 µl - 10 ml depending on sample loop
Sample loop	see device versions
Dispenser syringe	see device versions
Headspace pressure	built-in compressor, only for sample vials with septum
Switching time inj. valve	< 100 ms
Piercing needle precision	± 0.6 mm
Sample tray cooling	optional
Vial detection	missing vial/well plate detection by sensor
Needle wash	programmable: wash between injections and wash between vials
Wetted materials	Tefzel® (ETFE), Glass, Teflon® (PTFE), Kel-F® (PCTFE), stainless steel, PEEK, Vespel

Analytical performance

Injection modes	full loop filling, partial loop filling and microliter pickup
Injection precision	full loop filling: < 0.3 % RSD partial loop injection at injection volumes > 5 µl: < 0.5% RSD microliter pickup at injections > 5 µl: < 1.0% RSD
Sample carryover	< 0,01 % under typical conditions using needle wash; < 0.003 % under special conditions with extended needle wash
Injections per vial	max. 9 injections
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
Analysis time	max. 9 h, 59 min, 59 s

Communication

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

Technical parameters

Ambient conditions	temperature range: 10-40 °C; 50-104 °Fair humidity: 20 - 80%
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General

Power supply	95-240 V AC
Dimensions	361 x 375 x 570 mm (W x H x D)
Weight	30 kg

Device versions

	HPLC+	UHPLC	Bio	Prep
Maximum back pressure	860 bar	1240 bar	345 bar	200 bar
Sample needle	15 µl	15 µl	15 µl	60 µl
Dispenser syringe	250 µl	250 µl	250 µl	2500 µl
Buffer tubing	500 µl	500 µl	1000 µl	2000 µl
Sample loop	100 µl, 0.4 mm ID	10 µl, 0.18 mm ID	100 µl, 0.4 mm ID	10 ml
Order number	AAA50AA	AAA10AA	AAA20AA	AAA40AA
Order number (cool/heat option)	AAA51AA	AAA11AA	AAA21AA	AAA41AA*

* also available as biocompatible version: AAA31AA

Ordering details:

AAA50AA	AZURA® Autosampler AS 6.1L analytical HPLC autosampler, 860 bar
AAA51AA	AZURA® Autosampler AS 6.1L analytical HPLC autosampler, 860 bar, with sample cooling/heating
AAA10AA	AZURA® Autosampler AS 6.1L analytical HPLC autosampler, 1240 bar
AAA11AA	AZURA® Autosampler AS 6.1L analytical HPLC autosampler, 1240 bar, with sample cooling/heating
AAA20AA	AZURA® Autosampler AS 6.1L analytical HPLC autosampler, 345 bar, with biocompatible flow path
AAA21AA	AZURA® Autosampler AS 6.1L analytical HPLC autosampler, 345 bar, with biocompatible flow path and sample cooling/heating
AAA40AA	AZURA® Autosampler AS 6.1L preparative HPLC autosampler, 200 bar
AAA41AA	AZURA® Autosampler AS 6.1L preparative HPLC autosampler, 200 bar, with sample cooling/heating
AAA31AA	AZURA® Autosampler AS 6.1L preparative HPLC autosampler, 200 bar, with biocompatible flow path and sample cooling/heating