

Eksigent NanoLC-AS1 Autosampler

The Eksigent NanoLC-AS1 autosampler is designed to provide precision injections for a range of proteomics applications. In standard configuration, the autosampler can accommodate sample ranges from 200 nL to full loop volume. The standard sample loop is 10 μ L, and optional sample loops can extend the sample range to even larger volumes. The system includes automatic needle washing, vial head space pressurization, automatic cooling, and bio-compatible (non-metallic) sample fluid passages.

Flexible Configurations

The Eksigent NanoLC-AS1 can accommodate both well plates and vial trays. The system includes a non-metallic sample flow path and Peltier cooling. Sample loading options include full loop, partial loop, and zero sample loss. The injection valve is located centrally on the right side of the instrument, reducing the amount of capillary volume necessary to reach the mass spectrometer ionization source.

Simple Operation

The NanoLC-AS1 autosampler is fully programmed and controlled through the NanoLC system control software. The software allows simple setup and control of all injection methods, and includes rapid injection capability to load large samples quickly. Automated injection sequences switch the injection valve to the "load" position immediately after rapid sample injection and prior to the start of the gradient. This eliminates the long delay time experienced in LC/MS proteomics experiments, which typically utilize large sample volumes (~5-10 μ L) and extremely low gradient flow rates (100-200 nL/min).



The NanoLC-AS1 autosampler accommodates 96-well trays or a 48-vial holder. The autosampler includes Peltier cooling, bio-compatible flow paths, and a variety of sample methods to handle any proteomics application.

NanoLC-AS1 Autosampler Features

- A wide range of sample volumes is software selectable.
- Flexible sample sequences: full loop, partial loop, and zero sample loss
- High performance— superior precision and low carryover
- Compact system mounts on top of NanoLC, requiring no extra bench space
- Non-metallic sample flow path for bio-compatibility, Peltier sample cooling is standard

NanoLC-AS1 Specifications

Feature	Specification
Sample capacity	1 96 well standard or deep well plate or 48 vial holder (1.5 mL capacity per
Injection volumes	200 nL to full sample loop volume. Standard loop volume 10 μ L. Larger loops available
Injection methods	Full loop, partial loop, and zero sample loss
Injection type	Syringe aspiration of sample through fused silica needle and valve sample loop. No contact of sample with syringe
Needle type	Fused silica capillary with extendible metallic sheath for septum piercing and headspace pressure delivery
Injection valve	6-port automatic injection valve with PEEK flow path and low port-to-port volume
NanoLC integrated functions	Metered and rapid inject methods for rapid sample loading. Inject sequences can set valve to "Load" position during gradient to eliminate gradient delay time
Pressure assisted aspiration	0.05 Mpa headspace pressure, on-board compressor
Aspirate syringe volume	25 μ L , variable speed
Wash solvent	Integrated 250 mL wash solvent bottle
Precision	Full loop <0.3% RSD, partial loop <0.5% RSD at 5 μ L, zero sample loss <1%
Carryover	<0.01% with programmable needle wash
System control	Full control of all system parameters using NanoLC software
Serial interface	RS-232
Control outputs	Inject marker, well marker, 4 auxiliaries, 2 programmable outputs
Control inputs	Next injection, next well, 4 programmable inputs
Sample flow path materials	Non-metallic: fused silica needle, PEEK sample valve
Sample cooling	Peltier type cooling. Temperature range 4-40 C (cooling capacity limited to 20 C below ambient)
Sample viscosity	0.1-5 cP
Power requirements	115 Vac or 230 Vac +/- 10%, 50-60 Hz
Dimensions	11 in (280 mm) wide, 16 in (400 mm) deep, 17 in (440 mm) high. Autosampler weighs 48 lbs (22 kg) and can mount directly on top of NanoLC Proteomics system

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