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SIL-20A/20AC



Combining the smaller footprint of the SIL-10ADvp with the rack style and speed of the SIL-HT, the SIL-20A/20AC Autosampler provides excellent analysis efficiency through improvements in sample injection speed, accuracy, and processing capacity. Revolutionary cross-contamination countermeasures make it possible to perform analysis without carryover, even with high-sensitivity LC-MS/MS detection.

SIL-20A - High-Throughput Analysis

A total-volume injection type autosampler, the SIL-20A enables high-speed injection and high-throughput sample processing without wasting sample. It is designed to ensure greater stability, with improved durability attained through modifications in valves and sample loops. Multiple vial and plate types are supported, and a control vial rack isolates standards from analytical samples.

SIL-20AC - Efficient Sample Cooling

The SIL-20AC is equipped with a sample cooler with a built-in dehumidifier to minimize condensation problems. Samples can be maintained at a fixed temperature from 4°C to 40°C. Temperature equilibration is rapid and uniform, so heat or cold sensitive sample constituents remain stable.

Features

Near-Zero Carryover (As demonstrated on the Applied Biosystems/MDS Sciex API 5000™ system)

Adsorption of sample constituents has been reduced to an absolute minimum.

Enhancements include:

- Special needle treatment (patent pending) - masks active sites and minimizes ionic

interactions

- One piece injection port/needle seal at valve center - eliminates sample transfer tubing
- Redesigned needle seal to minimize surface area
- Low-adsorption valve materials

These advancements combine to eliminate cross contamination - even with difficult basic and hydrophobic compounds. For especially difficult samples, dual-solvent rinsing is available.

High Speed/Throughput - 10s for a 10 µL injection

Ultra-high-speed sample processing - 10 seconds for a 10 µL injection - is now possible with the SIL-20A/20AC. Used together with a high-speed separation column makes an analysis cycle time of less than one minute a reality.

Precise Sample Injection

Greater injection volume accuracy has been attained by incorporating a high-performance precision metering pump. Injection volumes of less than 1 µL are possible, and the direct injection method means valuable samples are never wasted.

Optional Rack Changer

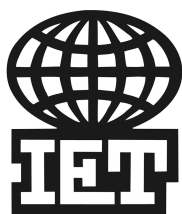
Significantly Increases Sample Capacity

With increased speed, capacity becomes a limiting factor for unattended operation. The optional rack changer automatically loads microplates into the SIL-20A/AC sample compartment. The 12-plate capacity ensures convenient processing of over 1000 samples. The "C" model changer has the same plate capacity and incorporates a 4°C to 40°C cooling function, matching that of the SIL-20AC.

Specifications

	SIL-20A	SIL-20AC
Injection method	Total-volume sample injection, variable injection volume	Total-volume sample injection, variable injection volume
Injection-volume setting range	0.1 to 100 µL (standard), 1 to 2,000 µL (option)	0.1 to 100 µL (standard), 1 to 2,000 µL (option)
Number of processed samples	175 (1mL vials), 105 (1.5mL vials), 50 (4mL vials), two 96-well MTPs, two 384-well MTPs, with ten 1.5mL vials in addition in a separate tray	175 (1mL vials), 70 (1.5mL vials), 50 (4mL vials), two 96-well MTPs, two 384-well MTPs, with ten 1.5mL vials in addition to these
Injection-volume accuracy	1% max.	1% max.
Injection-volume precision	RSD: 0.3% max. (for 10 µL injection, under specified conditions)	RSD: 0.3% max. (for 10 µL injection, under specified conditions)
Cross-contamination	0.005% max. (naphthalene, chlorhexidine)	0.005% max. (naphthalene, chlorhexidine)
Number of repeated injections	30 max. per sample	30 max. per sample

Needle rinsing	Set freely before and after sample injection.	Set freely before and after sample injection.
Sample cooler	None	Block cooling/heating, used together with dehumidifying function, 4°C to 40°C
Operating pH range	pH1 to pH14	pH1 to pH14
Operating temperature range	4°C to 35°C	4°C to 35°C
Dimensions, weight	260 (W) x 415 (H) x 500 (D) mm, 27	260 (W) x 415 (H) x 500 (D) mm, 30 kg
Power requirements	100 VAC, 100 VA, 50/60 Hz	100 VAC, 300 VA, 50/60 Hz
	Rack Changer	Rack Changer C
Compatible plates	96-well MTPs, 96-well DWPs can be accommodated simultaneously	96-well MTPs, 96-well DWP can be accommodated simultaneously
Number of processed plates	12	12
Sample cooler	None	Block cooling/heating, used together with dehumidifying function, 4°C to 40°C
Operating temperature range	4°C to 35°C	4°C to 35°C
Dimensions, weight	420 (W) x 415 (H) x 500 (D) mm, 25	420 (W) x 415 (H) x 500 (D) mm, 32 kg
Power requirements	100 VAC, 100 VA, 50/60 Hz	100 VAC, 300 VA, 50/60 Hz



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