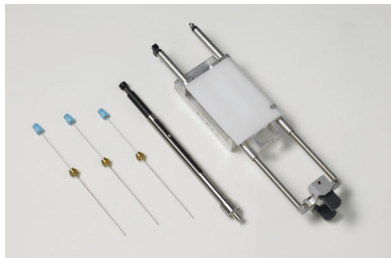


TriPlus™ Autosampler

Flexible Sampling Solutions

The Thermo Scientific TriPlus™ Autosampler represents the latest development in sampling automation. Built around a triple axis concept (X-Y-Z), the TriPlus is more than just a common platform for multiple sampling techniques. Its modularity and flexibility can easily be configured to handle both liquid, headspace and SPME* sampling techniques. With many available accessories, the TriPlus is the most powerful sampling system on the market for control capabilities, flexibility, and ease of use.



TriPlus Configurations

The TriPlus Autosampler is available in the following configurations:

- TriPlus AS for automated liquid sampling
- TriPlus HS for static headspace automation
- TriPlus Duo incorporates both techniques listed above
- TriPlus SPME for full automation of Solid Phase Micro Extraction

Additional upgrade kits are available to transform existing versions into multi-technique platforms.

* Sold under license from Supelco®.



TriPlus Autosampler

Providing innovative sampling solutions, the TriPlus Autosampler maximizes lab productivity by offering leading edge technology in automation. Merging robotic technology with advanced three-dimensional space movements (X-Y-Z), it provides unprecedented automation and the greatest possible flexibility in sample capacity.

Unique Control

For ultimate automation, two GCs installed side-by-side can uniquely be accessed by the same sampling unit. This allows differentiated control, including fine-tuning, method transfer, and status retrieval, from two independent data systems. This fully-automated operation increases productivity by limiting supervised operation.

Flexibility

For ultimate flexibility, dedicated turrets with snap-on interchangeability are used for liquid and headspace sampling. Variations in techniques are easily accommodated, whether they involve syringe requirements for gases, liquids, or SPME, On-column or Split-splitless injectors, and standard or large volume techniques.

Ease of Use

Any installed Thermo device is easily detected and recognized without requiring manual settings. The number and volume of syringes and vials are automatically detected for error-free and rapid start-up.

Accessories

Various accessories are available, including Cooled /Heated trays, the Multiple Headspace Extraction (MHE), Rotating Bar Code Reader, and LAN connections to further expand overall usability and productivity.

TriPlus Autosampler

Features and Technical Specifications

General

Communication	Two independent RS232 serial connections, LAN
Instrument control	Thermo Scientific chromatography DS integrated, Stand-alone s/w, Pocket PC (Wireless, RS232 or IR communication)
Injector compatibility	On-column, Programmable Temperature Vaporizing, Packed, Purged Packed, Split-splitless
High throughput configuration	Dual GC set-up (single TriPlus for liquid unattended serving two GCs)
Accessory for high automation	Rotating bar code reader
Autosampler Length (X axis)	Standard 870 mm, Extended 1,220 mm (can inject into 2 adjacent GC-MS units)
Autosampler Width (Y axis)	540 mm
Turret height (Z axis)	500 mm
Vial Trays	Heated and cooled trays expand the range of available applications

AS (Liquid Version)

Vial volumes	1, 2, 2.5, 10, and 20 mL
Maximum vial capacity	300 for 1, 2, and 2.5 mL; 108 for 10 or 20 mL
Cooled/Heated Trays	Temperature control from 4 to 70 °C; 96 vial positions for 1, 2, 2.5 mL vials; 33 vial positions for 10 mL vials
Syringes sizes	Self-recognized: 0.5, 5, 10, 100, 250, and 500 µL
Injection volume range	0.1 to 450 µL in 0.1 µL steps, depending on syringe
Variable needle lengths	50 mm for split, 80 mm for Splitless or On-column
Parameter setting	8 method-specific presets or custom menus
Washing station	4 x 10 mL or 2 x 100 mL; Fast Washing Station available for Large Volume techniques
Waste	1 x 10 mL or drain to external waste bottle
Combined solvent rinsing	Yes (Max. 4 solvents) for pre- and post-injection cleaning
Rapid Mode	Starts syringe washing cycle during current GC cooling phase
Typical performance	<0.5 RSD % obtained on std HC mix

HS (Headspace Version)

Vial volumes	10 and 20 mL
Maximum vial capacity	108
Syringe sizes	1, 2.5, and 5 mL
Injection volume range	0.1 to 5 mL in 0.1 mL steps depending on syringe
Syringe temperature	40 to 150 °C in 1 °C steps
Incubation oven capacity	6 vials
Incubation oven temperature range	40 to 150 °C in 1 °C steps, with agitation
Syringe flush capability	Yes, with inert gas
Solvent syringe cleaning	Optional washing station (4 x 10 mL or 2 x 100 mL vials)
Multiple Headspace Extraction	Yes (optional accessory)
Enrichment sampling	Yes with optional kit for Cold Trap
Typical performance	<1 RSD % under appropriate conditions

SPME (Solid Phase Micro Extraction Version)

Vial volumes	10 and 20 mL
Maximum vial capacity	108
Incubation oven capacity	6 vials
Incubation oven temperature range	40 to 150 °C in 1 °C steps, with agitation
Oven door	Kept closed during extraction, acting as a needle guide
Sample Agitation	Optimized through gentle rocking movements to produce low mechanical stress on the fiber
Vial penetration depth	Variable, suitable for liquid or headspace extraction
Fiber Conditioning Station	Optional, 2-ports, 40-350 °C, inert gas purged



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