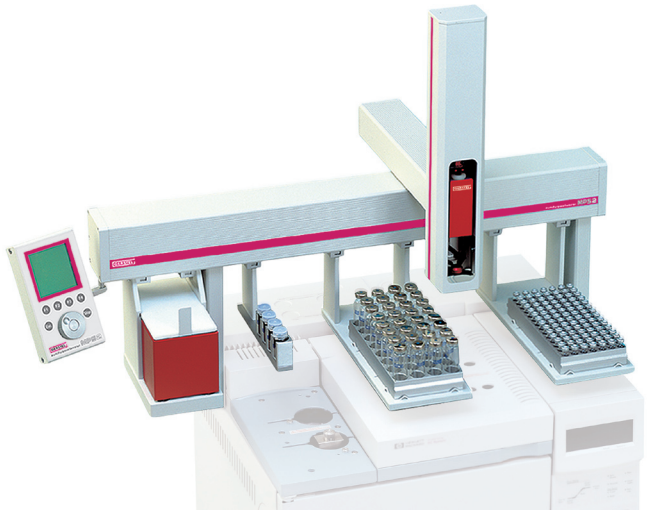

MultiPurpose Sampler

MPS 2

Specifications

Sampler type
- XYZ robot with syringe-only concept
- positioning accuracy ± 0,1 mm

System configuration
- compatible with most standard GCs
- compatible with all standard inlets
- operates with all injector positions
- for more than one injector
- numerous accessories available

System versions
- MPS Liquid
- MPS Headspace
- MPS SPME

Control
- based on GERSTEL MAESTRO software and the MPS handheld keypad
- sample prep by mouse click
- in-depth, context sensitive online help for easy operation of the software

Sample capacity
- 200 × 1 mL vials per tray
- 98 × 2 mL vials per tray
- 78 × 1 mL vials per tray
- 32 × 10 mL/20 mL vials per tray
- 8 × 100 mL vials per tray
- max. 4 trays, depending on configuration

Thermostated sample trays
- temperature range 4 … 200 °C
- for 1 mL, 2 mL, 10 mL and 20 mL vials
- with peltier or liquid cooling

Wash stations
- solvents 2 … 4
- solvent reservoirs 10 … 1000 mL

Agitators/Incubators
- 2 …15 positions
- for 2 mL, 10 mL, 20 mL and 100 mL vials
- temperature range 10 … 200 °C
- agitation speed 250 … 750 rpm (± 15 %)
- stirring speed 500 … 1500 rpm (± 15 %)

Dilutor module
- 1 mL, 2,5 mL, 5 mL and 10 mL dilutor syringe
- solvent reservoir 1000 mL

Fiber Bake-out Station
- bake-out temperature max. 350 °C
- gas flow 6 or 12 mL/min

Custom solutions for special performance requirements available upon request..

Interfaces
- 2 × AUX
- 2 × Interface
- 3 serial interfaces for PC, handheld keypad and valves

Operating conditions
- 10 … 40 °C
- relative humidity 95%

Power requirements
- 97.5 … 264 VAC
- 45 … 66 Hz
- 150 VA

Dimensions (W × D × H)
- 828 × 385 × 648 mm

Weight
- 10 kg (without accessories)

Extensions and options
- GERSTEL-SPE, for automated solid phase extraction
- Twister-Option, for automated desorption of GERSTEL Twisters inside the Thermal Desorption Unit TDU
- DHS, for automated dynamic headspace analysis
- ATEX-Option, for automated liquid injection, thermal extraction of the liquid and tube exchange in a GERSTEL Thermal Desorption Unit TDU
- ALEX-Option, automated liner exchange for the GERSTEL CIS used for samples with a high matrix-load
- MPS PrepStation, the system with 2 towers and 2 rails allows the simultaneous use of two different syringes or the combination of liquid sample prep and SPME or HS sample introduction
- special solutions on request

MPS Liquid

Vials
- 1 mL, 2 mL, 10 mL or 20 mL
- thermostated, 4 … 200 °C

Syringe
- 1.2 µL, 5 µL, 10 µL, 25 µL, 100 µL, 250 µL, 500 µL or 1000 µL
- heated 10 µL syringe, 35 … 80 °C
- one universal syringe holder for all syringe volumes

Injection volume
- 0.12 … 1000 µL, depending on syringe volume
- max. 99 injections per vial

Injection modes
- standard
- sandwich technique using air or solvent
- large volume

Speed
- injection speed 0.1 … 100 µL/s, depending on syringe volume
- fill speed 0.1 … 100 µL/s, depending on syringe volume
- separate settings for injection and rinse steps
- separate settings for sample and solvent

Precision*)
- < 0.8 % RSD

Carryover*)
- < 0.08 %

Rinse steps
- separate adjustment of pre- and post-clean steps
- using sample or solvent
- for up to 2 different solvents

Needle penetration
- in sample vial 1 … 45 mm
- in solvent vial 1 … 45 mm
- in CIS injector 20 … 45 mm

Specials with MAESTRO software only
- real sandwich technique
- standard addition
- multiple sample prep-ahead

MultiPurpose Sampler MPS 2

MPS Headspace

Vials
- 10 mL, 20 mL or 100 mL, depending on configuration

Syringe
- 1 mL or 2.5 mL
- heated syringe holder for all syringes

Syringe temperature
- 35 … 150 °C, in increments of 1 °C

Injection volume
- 100 … 2500 µL, depending on syringe volume

Speed
- injection speed 10 … 1000 µL/s, depending on syringe volume
- fill speed 10 … 1000 µL/s, depending on syringe volume

Needle penetration
- in sample vial 1 … 45 mm
- in CIS injector 20 … 45 mm

Syringe conditioning
- 0 … 99 fill strokes with sample

Syringe cleaning
- 0 … 60 min flush time with inertgas

Incubation
- incubation temperature max. 200 °C
- incubation time max. 24 h

Sampling
- from agitator/incubator
- from tray

Precision*)
- < 1.0 % RSA

Carryover*)
- < 0.05 %

Specials with MAESTRO software only
- sample pre-pressurization
- multiple headspace sample enrichment MHSE
- multiple sample prep-ahead

MPS SPME

Vials
- 2 mL, 10 mL, 20 mL or 100 mL

Fiber
- 23 gauge
- fiber sets for different analytes available
- one fiber holder for all fibers

Fiber conditioning
- inside fiber bake-out station or injector
- before or after extraction
- temperature set by user depending on fiber used

Derivatization
- pre- or post-extraction
- derivatization time max. 24 h

Extraction
- using standard Agitator
- using Agitator Stirrer, for longer fiber-life
- directly from tray

Specials with MAESTRO software only
- multiple sample prep-ahead

*) under GERSTEL standard conditions

Agitators and Incubators

Standard Agitator

- 6 positions
- 2 mL, 10 mL and 20 mL vials
- temperature range 35 … 200 °C, in increments of 1 °C
- agitation speed 250 … 750 rpm (± 15%)
- dimensions 180 × 115 × 185 mm (H × W × D)
- weight 2.2 kg

Agitator for 2 mL vials

- 15 positions
- 2 mL vials
- temperature range 35 … 200 °C, in increments of 1 °C
- agitation speed 250 … 750 rpm (± 15%)
- dimensions 180 × 115 × 185 mm (H × W × D)
- weight 2.2 kg

Agitator Stirrer

- 6 positions
- 20 mL vials
- temperature range 35 … 120 °C, in increments of 1 °C
- operation in agitation or stirring mode selectable
- agitation speed 250 … 750 rpm (± 15%)
- stirring speed 500 … 1500 rpm (± 15%)
- dimensions 180 × 115 × 185 mm (H × W × D)
- weight 2.2 kg

Cooled Agitator

- 6 positions
- 2 mL, 10 mL and 20 mL vials
- temperature range 10 … 200 °C, in increments of 1 °C
- with peltier cooling UPC
- controlled by AUX controller 163
- dimensions 180 × 115 × 185 mm (H × W × D)
- weight 2.2 kg

Incubator for 100 mL vials

- 2 positions
- 100 mL vials
- temperature range 35 … 180 °C, in increments of 1 °C
- dimensions 212 × 128 × 336 mm (H × W × D)
- weight 6.2 kg

Heated tray 32-20

- 32 × 20 mL vials
- 35 … 200 °C

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