

HSA - 3800T

ALL-IN-ONE GC AUTOSAMPLER



EPCC / PRODUCTS / APPLICATION / SOFTWARE / ACCESSORIES / CONSUMABLES / SERVICES

Analytical Technologies Limited

An ISO 9001 Certified Company

www.analyticalgroup.net

▶▶ **EASY TO USE:**

For routine analyses, the HSA-3800T features one-touch operation. After loading the sample, you just need to enter a range of vial numbers and push the START button.

The full-color touch screen interface provides easier system accessibility and usability. The touch screen eliminates drilldown, simplifying instrument control for both novices and experienced users. All system parameters and settings are graphically displayed for a quick and easy set-up, requiring minimal user training.

▶▶ **THE IDEAL CHOICE FOR YOUR GC:**

You don't need more than one autosampler to automate your GC. The HSA-3800T combines the functions of an autosampler for liquid, static headspace and SPME in a single unit.

Because of its flexibility, the HSA-3800T can easily be installed on all the GC and GC/MS systems available on the market, serving up to two injectors in most configurations.

The rotating tower leaves the injector port free for inlet maintenance. This approach keeps the samples away from any heated source. In fact, the sample rack is mounted away from the GC oven to prevent exposure to high temperatures, which could cause degradation or condensation in the sample vial.

▶▶ **SWITCH BETWEEN MODALITIES:**

HSA-3800T allows for quick and easy switching from one application to another on the same GC workstation.

Regardless if your samples are processed in headspace, liquid, or SPME mode, or if the method requires split, splitless or on-column injection, your new instrument set-up is ready in a few minutes.

The quick switch means that there is no transfer line to disassemble, no bulky turret to store or move across the laboratory, no complex re-alignment procedures. It takes you less than 5 minutes to perform a few, quick, simple tasks: select new injection modality on the touch screen, change the syringe and load a new sample rack, if the application requires it. You are then ready to continue the analysis, without downtime.

▶▶ **PRODUCTIVITY:**

The samples can be run as fast as the GC will allow, because a sample is always ready to be injected when the previous run is completed. In fact, for maximum throughput, HSA-3800T is equipped with six-position oven that allows the optimization of preparation times for headspace and SPME applications.

▶▶ **SMART TECHNOLOGIES FOR THE BEST USER EXPERIENCE:**

HSA-3800T benefits from a unique portfolio of patented, proprietary or licensed technologies that have been put together by our R&D team to make your user experience amazing.

To provide additional robustness to your headspace analysis, HSA-3800T features system integrity and vial leakage check functionalities. The system integrity test can be automatically performed with every batch of samples: going behind preventive maintenance counters, the test checks syringe and plunger integrity by a heuristic procedure to discover early system failure. Instead, the vial leakage check can be included to monitor the pressure inside vials of the same batch – again by a heuristic procedure – in order to check against anomalous values that are indicative of a vial leakage problem.

In addition, our headspace syringes – compared to the market standard provide an excellent performance over a large temperature range for increased lifetime, lower cost of operations, and increased reproducibility of your headspace analysis.

To provide additional robustness to your liquid sample analysis, HSA-3800T features the innovative SyringeID, a proprietary technology based on RFID tags. The SyringeID is able to identify syringes in an univocal way; thereby preventing errors when mounting a syringe, preventing syringe volume.

▶▶ **SPME:**

The HSA-3800T supports the derivatisation pre- and postextraction, as the required by the different SPME applications. The extraction is carried out in the heated and shaken oven: the possibility of setting the shaking speed to very low allows for the minimisation of mechanical stress on the fiber.

The oven cover is kept closed during the extraction phase: this is very important to ensure temperature homogeneity, especially if the extraction time is very long.

The unit supports the post-extraction fiber washing in the liquid phase by immersion in an opportune solution, In addition, our headspace syringes as well as the post-desorption fiber cleaning by exposition in the injector or in an external cleaning station (optional).

▶▶ **LIQUID:**

The HSA-3800T handles the most mismatching and keeps track of the syringe consumption. The SyringeID system is able to provide you with a level of confidence never previously achieved by identification systems based on syringe carriers.

sophisticated sampling techniques, including the internal standard technique (also known as sandwich injection), multi-phase, priority injection, hot & cold needle, nano-litre injection and much more.

Parameters are easily programmable to optimise both the most convenient sampling methods for both extremely volatile or viscous samples and the best injection technique. Variable needle depths allow samples to be taken from anywhere within the vial, thus performing an extractions directly from the vial.

The HSA-3800T features a great solvent capacity and a wide solvent selection: it supports the use of six solvent vials of 10ml each, giving a total capacity of 60ml.

▶▶ **HEADSPACE:**

The robotic vial processing operation allows for sample analysis in a straightforward and systematic way. Sample vials are transported into.

▶▶ **OPTIONAL SOFTWARE CONTROL:**

The HSA-3800T can also be controlled by a PC, using the ATL Autosampler Manager (please see the dedicated brochure). ATL Autosampler Manager software can run in standard mode or with full CFR 21 Part 11 compliance.

The heated six-position incubator for preconditioning. The sample is simultaneously heated and shaken, in order to facilitate the state change and to reach equilibrium. A heated, gastight syringe is then moved over

the incubator and the headspace sample is withdrawn. After sample injection, the syringe is automatically cleaned by purging with inert gas.

The HSA-3800T syringe-only concept allows for sequential injections, even with samples characterized by highly dissimilar features. Even the most chemically active compounds can be analysed, without needing to change any of the sample pathways. Furthermore, it permits adjustable sample volumes without loop changes.

We offer the lowest cost of ownership in the market. No carrier gas is needed because gas is used only for purging between samples. No o-rings or seals to replace, saving hours of unnecessary downtime. No magnetic or special caps are required, because vial transport is positive and reliable.



**TOUCH SCREEN
POWERED**

For exceptional ease of use



**FITS ALL GC
AND GC/MS**

For investment protection



5+5

5 minutes to switch between modalities, 5 minutes to move between GCs



**SPME SUPERIOR
THERMAL
STABILITY**



**MULTIPLE POSITION
INCUBATION OVEN**

For ahead sample prep



**LOWEST
HEADSPACE
TOTAL COST OF
OWNERSHIP**

►► SPECIFICATIONS:

GENERAL FEATURES	
Maintenance:	preventive counters available System Integrity Test ¹ (optional)
Electrical control:	LAN and TTL
Target illumination:	yes
Barcode Reader:	optional
Tray capacity (Headspace/SPME):	42 vials (20ml); optional: 6 and 10ml
Tray capacity (Liquid):	121 vials (2ml)
CONDITIONING (HEADSPACE/ SPME)	
Oven positions:	6
Oven temperature:	ambient; 40-170°C
Incubation time:	0-999min
Shaking method:	orbital
Shaker speed:	from very low to very high
Shaking cycles:	on/off 0-9.9min
HEADSPACE	
Syringe volume:	2.5ml (standard); optional: 1ml
Cleaning system:	inert gas flush (inlet: 1/8"; max pressure: 1bar)
Vial Leakage Check ¹ :	yes
Sampling and injection	
Syringe temperature:	ambient; 40–150°C
Sample volume:	steps of 0.01ml
Sample homogenization:	up to 15
Sample speed:	0.1–100ml/min
Other adjustable parameters:	injection speed, dwell time between injections, equilibration time, pre/post injection dwell time, enrichments
SPME	
Extraction mode:	liquid phase/headspace vapors
Fiber type:	10mm, 20mm
Fiber cleaning station	
Temperature:	210-300°C
Cleaning system:	inert gas flush (inlet: 1/8"; max pressure: 1 bar)
LIQUID	
Syringe volume:	0.5, 1, 5, 10, 25, 50 and 100µL
SyringeID ¹ :	optional
Fiber cleaning station	
Sample volume:	as low as step of 0.1µL
Air volume:	as low as step of 0.1µL
Filling speed:	1-100µL/sec

Viscosity delay:	0-15s
Bubble elimination:	up to 15 pull up strokes
Injection	
Injection speed:	1-100 μ L/sec
Injection depth:	programmable
Pre and post inj delay:	0-99s
Washing	
Type:	pre-injection, sample, post-injection
Solvent capacity:	6x10ml vials
Mode:	single or double wash
Internal standard technique	
IS volume:	as low as step of 0.1 μ L
Air gap volume:	as low as step of 0.1 μ L
Mode:	1 or 2 air gaps
PHYSICAL FEATURES	
Dimensions (WxHxD) ² :	330x640x320mm
Weight:	10kg
Power supply:	100-240 \pm 10%Vac; 50-60Hz; 150VA

HPLC Servicing, Validation, Trainings and Preventive Maintenance :

HPLC Servicing :HPLC Servicing : We have team of service engineers who can attend to any make of HPLC promptly @the most affordable cost.

Trainings :We also take up preventive Maintenance to reduce downtime of HPLC's Trainings.

AMC's/CMC :AMC's/CMC :We offer user training both in-House and at customer sites on HPLC principles, operations, trouble-shooting.

Validations :Validations :We have protocols for carrying out periodic Validations as per GLP/GMP/USFDA norms.

Instruments :Instruments :We offer instruments/Renting Services Modules like pumps,detector etc. on Rent.



About Analytical Technologies

Analytical Technologies is synonymous for offering technologies for doing analysis and is the Fastest Growing Global Brand having presence in at least 96 countries across the global. Analytical Technologies Limited is an ISO:9001 Certified Company engaged in Designing, Manufacturing, Marketing & providing Services for the Analytical, Chromatography, Spectroscopy, Bio Technology, Bio Medical, Clinical Diagnostics, Material Science & General Laboratory Instrumentation. Analytical Technologies, India has across the Country operations with at least 4 Regional Offices, 6 Branch Offices & Service Centers. Distributors & Channel partners worldwide.

Our Products & Technologies



UV/VIS
Spectro 2080+
Double Beam



Infra FTIR



Optima Gas
Chromatograph
3007



Optima Gas
Chromatograph
2979 Plus



Flash
Chromatograph



Atomic Absorption
Spectrophotometer



Liquid Particle
Counter



Optical Emission
Spectrophotometer



DSC/TGA



Semi Auto Bio
Chemistry Analyzer



HEMA 2062
Hematology
Analyzer



Micro Plate
Reader/Washer



URINOVA 2800
Urine Analyzer



Total Organic
Carbon 3800



Fully Automated
CLIA



NOVA-2100
Chemistry Analyzer



PCR/Gradient PCR/
RTPCR



TOC
Analyzer



Laser Particle
Size Analyzer



Ion Chromatograph



Water purification
system

Regulatory compliances



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Analytical Foundation is a nonprofit organization (NGO) found for the purpose of:



Analytical Foundation

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2. Improving quality of life by offering YOGA Training courses, Work shops/Seminars etc.

3. ANALYTICAL FOUNDATION aims to DETOXYFY human minds,souls and body by means of yoga, Meditation, Ayurveda, Health Care, Awards, Media, Events, Camps etc.

Reach us @



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