



8700 SQ

MASS SPECTROMETER

The SCION 8700 Single Quadrupole (SQ) GC-MS is designed for today's fast paced analytical laboratory. Innovative design features such as a Lens-Free ion path, heated ion optics and an Extended Dynamic Range (EDR) detector enable the SCION SQ to deliver accurate quantification and identification on a routine basis, even in complex matrices.



SCION 8700 SQ-MS

THE SCION 8700 SQ-MS HAS A SMALL FOOTPRINT BUT DOES NOT COMPROMISE ON QUALITY.

The SCION 8700 SQ-MS is the chromatographer's choice for quadrupole mass detection, designed to match your most stringent needs for analytical performance and productivity.

The SCION 8700 SQ-MS offers superior sensitivity and robustness based on innovative ion optics, and fast and easy method development.

Coupled to our outstanding GC instruments, the SCION 8700 SQ-MS system defines a new standard of usability for routine analysis

Manufactured in the UK and available in three models, the SCION 8700 SQ-MS offers a flexible solution for any laboratory.

Software



SCION MS Workstation for data acquisition, data handling and reporting.



Optional Spectral Libraries: NIST, Wiley, and Pfleger/Maurer/Weber (PMW) libraries with user customisable libraries and automatically searching of multiple libraries.



Autotune in all ionisation modes, special tunes for EPA methods (DFTPP/BFB).



Primed for Sensitivity



Primed for Sensitivity

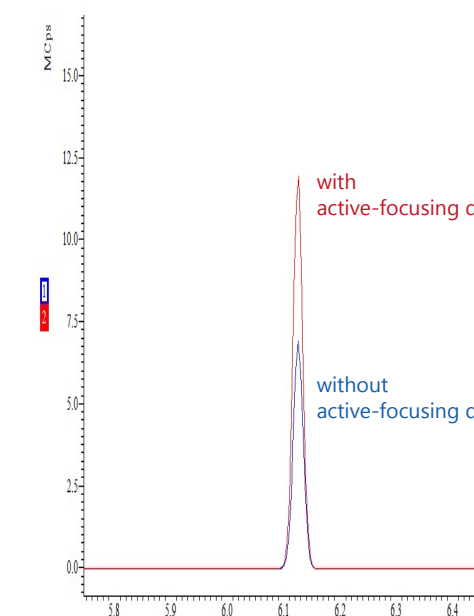
- He in q0 (active-focusing) for added sensitivity in routine applications
- Premium Focusing Curved Q0 Ion optics has a 90° angle that aids the elimination of neutrals
- Ability to handle fast GC analysis- up to 25 ml/min column flow rates
- The SCION 8700 includes the **best-in-class** high performance turbo pump for worry-free operation
- Ideal for routine environmental analysis, especially purge-and-trap applications (pumps away potential water interference)



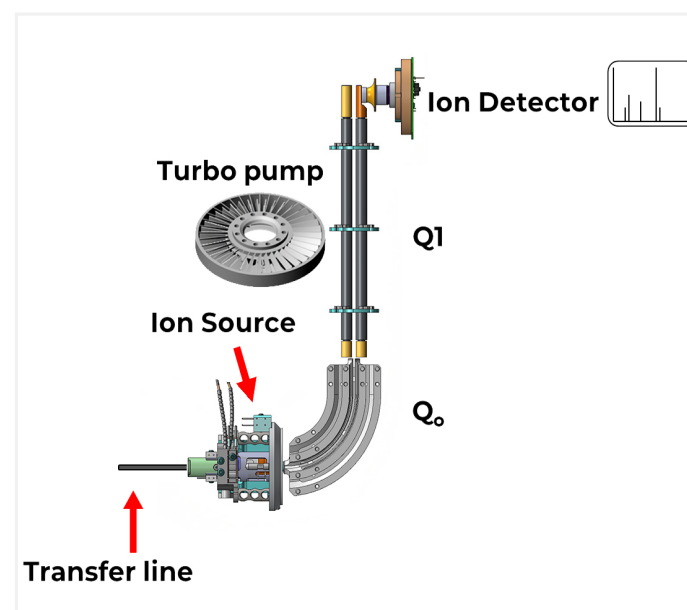
Extended linear range

- **Extended Dynamic Range** mode ensures you have **optimal** detection in **every** analysis for trace components within complex mixtures.
- When detector approaches saturation, the system **automatically lowers** the multiplier voltage, always ensuring optimal detection of components, even if they co-elute.
- Easily analyze complex mixtures that contain both **trace** residues as well as compounds **of high abundance** in the **same run**.

Active-focusing q0



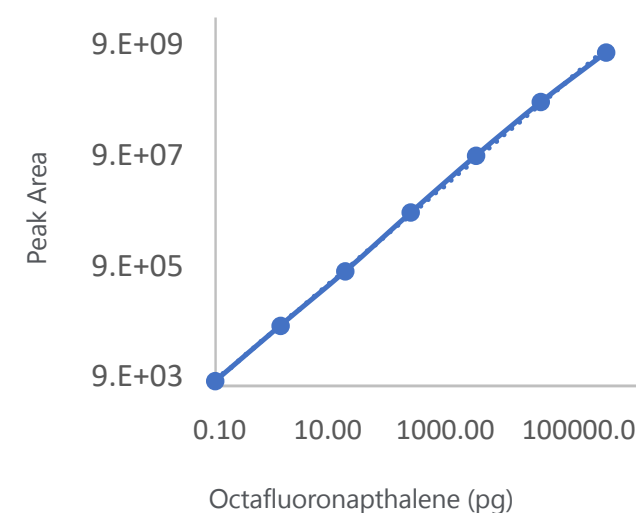
SIM of Hexachlorocyclopentadiene



An Innovative Solution

- An innovative lens-free ion path delivers simplifies tuning
- The dual filament source increases uptime
- The high capacity (400L) turbopump allows the fastest pump down speed on the market
- Suitable for hydrogen carrier gas
- Manufactured in the UK

Up to six orders of magnitude





Premium Flexibility



8700 Premium is EI and CI Ready

- Heated q0 for the ultimate in robust 24/7 operation
- Ultra-sensitive Negative Chemical Ionization (NCI) detection
- Ability to handle fast GC analysis- up to 25 ml/min column flow rates
- SCION Premium is CI ready and easily converts from the EI standard source.
- NCI applications such as pyrethroids are easily set up using Compound Based Scanning (CBS).



COMPOUND	RT	RT WINDOW	SCAN TYPE	SCAN TIME (MS)	POLARITY
Resmethrin	17.35	0.50	SIM	100	Neg
Resmethrin 2	17.58	0.50	SIM	100	Neg
Bifenthrin	18.56	0.50	SIM	100	Neg
Fenpropatrin	18.74	0.50	SIM	100	Neg



GC Compatibility

The SCION SQ-MS series interface seamlessly with SCION Gas Chromatograph (SCION **8300 GC** and **8500 GC**)

- Injectors: Split/Splitless (SSL), Programmable Temperature Vaporisation (PTV) and PTV with back-flush (PTV/BF), Cold On-Column (COC)
- Autosamplers: 8400 Pro; 8410 Pro; CTC PAL, EST Flex
- GC Oven Temperature: Ambient+4°C to 450°C, -100°C to 450°C (with Liquid N2); -60°C to 450°C (with Liquid CO2)
- Temperature Ramps/Holds: 24/25
- Pneumatic: Electronic Flow Control (EFC) or Manual



SCION 8300 GC coupled to the 8700 SQ-MS





SCION 8700 SQ-MS Series

Model Range

SQ 8700 MODELS	FEATURES	BENEFITS/APPLICATIONS
SCION SQ Select	<ul style="list-style-type: none">• EI only• Select q0• (Dual Stage 310/400 L/s) Turbo Pump	<ul style="list-style-type: none">• Routine
SCION SQ Premium EI	<ul style="list-style-type: none">• EI only• Active-Focusing q0• Ultra-High Performance Split-flow (300/400 L/s) Turbo Pump	<ul style="list-style-type: none">• High-Sensitivity• Fast pump-down
SCION SQ Premium EI/CI	<ul style="list-style-type: none">• CI ready• Active-Focusing 'premium' q0• Ultra-High Performance Split-flow (300/400 L/s) Turbo Pump	<ul style="list-style-type: none">• Ultimate flexibility• CI• Pos/Neg detector

Performance specifications

MODE	TEST* (SSL INJECTOR IN HOT SPLITLESS MODE)	SPECIFICATION†
EI Full Scan	1pg Octafluoronaphthalene (OFN) from m/z 50-300 for m/z 272	S/N ≥ 1500:1
EI Full Scan**	200 fg Octafluoronaphthalene (OFN) for m/z 272	IDL≤ 28fg
PCI Full Scan ^Δ	100pg Benzophenone (BZP) from m/z 80 to 230 for m/z 183	S/N ≥ 600:1
NCI Full Scan ^Δ	200fg OFN from m/z 200 to 300 for m/z 272	S/N ≥ 1000:1

* All tests performed with helium at carrier gas
** IDL (Instrument Detection Limit) is statistically calculated from the peak area repeatability of eight sequential injections of OFN at 99% confidence level.
† The Signal-to-Noise ratio S/N values are based on RMS
Δ CI tests use methane as reagent gas

Physical Specifications

Dimensions (H x W x D) and Weight

- 45cm (18in) x 28cm (11in) x 57cm (22.5in)
- 37kg/82lb

Additional space should be added for the data system, monitor and printer.

Manufactured in the UK

The SCION 8700 SQ-MS Series is manufactured in the UK, at SCION Instruments center of excellence for Mass Spectrometry in Livingston, Scotland.



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Parts and Consumables

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