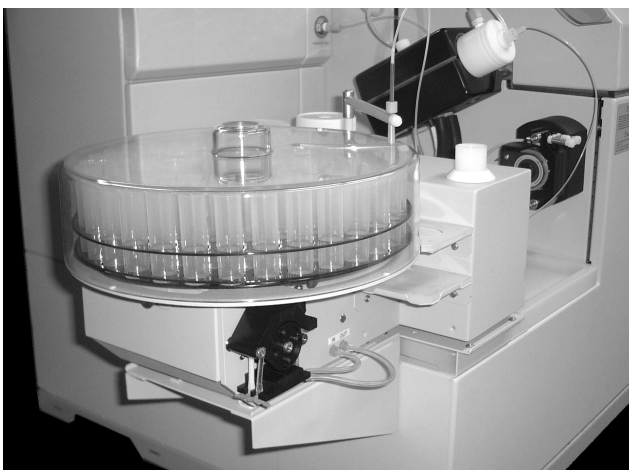


Agilent I-AS Clean Integrated Autosampler

Data Sheet

• ICP-MS



Automating Clean Sample Introduction

Agilent Technologies has produced a fast, flexible and high precision autosampler specifically for ultra-trace analysis. The Integrated Autosampler (I-AS) has been specifically designed for the Agilent 7500 Series ICP-MS, and enables the unmatched sensitivity of the 7500 Series to be fully realized.

The I-AS is ideal for semiconductor applications and any application involving the ultratrace analysis of elements where laboratory contamination may present a problem, for example, clinical applications and the measurement of seawater at ambient levels. In addition, a range of QA/QC control operations, including EPA protocols, can be fully automated when used with Agilent's optional Intelligent Sequencing Software.

Minimizing the Risks of Sample Contamination

The I-AS features a continuously flowing rinse port so that the probe is always rinsed with fresh wash solution. Efficient rinsing, which is achieved by peristaltic pump action, eliminates the risk of cross contamination during a long sample sequence.

The non-metal materials used in the manufacture of the I-AS further minimize the risk of trace metal contamination of samples from autosampler components; for example, the sample arm is made of plastic and the probe of fluororesin. In addition, a rugged clear plastic cover encloses the sample tray preventing contamination from airborne particulates.

Furthermore, the I-AS has been designed so that no moving parts pass over the sample vials. In fact,

the articulated sampling arm lifts and rotates out of position as the sample tray moves. The precision control motors ensure very fast sample-to-sample times, while maintaining superb accuracy.

Fully Integrated for Ease of Use

The easy-access, open sample introduction area of the Agilent Series ICP mass spectrometers allows the I-AS to be positioned near the nebulizer ensuring optimum use of space. The short tubing length from probe to nebulizer keeps dead volumes to a minimum and provides excellent productivity by offering minimum sample uptake and washout times. Furthermore, the close location of the autosampler allows use of self aspirating nebulizers - ideal for low flow, high precision applications.



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A further advantage of the open design of the Agilent 7500 is that the I-AS sample tray can be accessed mid-run, enabling an urgent sample to be added or the sample tray to be changed and more samples introduced, simply by pausing the sequence.

The fully integrated system is initially set up via a graphical interface within the ChemStation software suite. Sample volumes smaller than 1 mL up to 50–100 mL can be accommodated with three extra large volume positions for standards, blanks and/or quality control solutions. Alternatively, the large volume bottles can be used to contain an organic or alkali solvent as an extra wash solution. If the sample tray is removed from its usual position, a single sample position becomes available for the user to add a 100-mL sample bottle.

The I-AS can also be used with the Agilent 4500 Series ICP-MS, in this case a stand is included for stand-alone operation, enabling the I-AS to be positioned next to the sample introduction compartment of the instrument.

Features of the Agilent I-AS Clean Integrated Autosampler

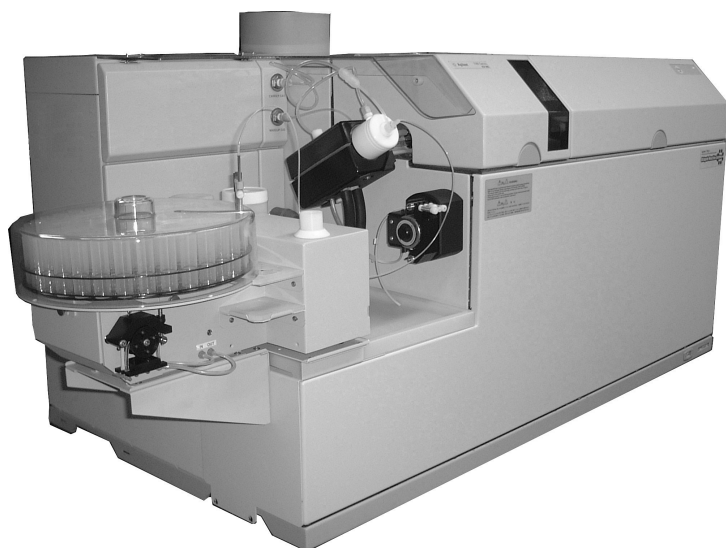
- Covered autosampler for use with the Agilent 7500 and 4500 Series ICP-MS.
- Agilent built and supported.
- Non-metal arm - no metal or drive mechanism moves over sample vials.
- Continuously flowing rinse port under peristaltic pump control for probe wash.
- Choice of sample tray arrangements. Small and large sample volumes are accommodated.
- 3 × 100 mL standard or wash bottles.
- Urgent samples can be added.
- Easy sequence set up via graphical interface.
- Fully automated QA/QC control procedures available using the optional Intelligent Sequencing Software.

- Designed for all semiconductor applications and any ultratrace analysis of commonly occurring elements.
- Auto dilution and discrete sampling are available using the optional Integrated Sample Introduction System (ISIS).
- Reset/Stop switch.
- Designed using anticorrosion and HF resistant materials.

Five different tray sizes are available:

- 89 × 6 mL vials (Type A)
- 53 × 18 mL vials (Type B)
- 18 × 50 mL vials (Type C)
- 79 × 1.5 mL vials + 10 × 18 mL vials (Type D)
- 79 × 6 mL vials + 10 × 18 mL vials (Type E)

The sample trays are encapsulated with a polyester coating, and the main body of the I-AS is finished in the same hard wearing and durable coating as the Agilent 7500 ICP-MS.



Agilent 7500 Series ICP-MS with I-AS Clean Integrated Autosampler

Ordering Information for the Agilent I-AS

Autosampler Options

Part number	G3160A
For WW use (except Japan)	#ABA
For use in Japan only	#ABJ
For Agilent 7500	#001
For Agilent 4500	#002

(Note: NT version of ChemStation is required for operation with the Agilent 4500)

Tray Options

Type A Tray	#100	89 position tray holds 89 × 6-mL vials. Pack of 200 × 6-mL polypropylene vials included.
Type B Tray	#101	53 position tray holds 53 × 18-mL vials. Pack of 55 × 18-mL polypropylene vials included.
Type C Tray	#102	18 position tray holds 18 × 50-mL vials. Pack of 20 × 50-mL polypropylene vials included.
Type D Tray	#103	89 position tray holds 79 × 1.5-mL vials and 10 × 18-mL vials. Pack of 200 × 2.0-mL polyethylene and 10 × 18-mL polypropylene vials included.
Type E Tray	#104	89 position tray holds 79 × 6 mL vials and 10 × 18-mL vials. Pack of 200 × 6-mL polypropylene and 10 × 18-mL polypropylene vials included.

Installation

Customer installable

Ordering examples

Description	Order code
e.g. Autosampler for Agilent 7500 Series operating with English software - requiring 89 position, Type A tray	G3160A #ABA #001 #100
e.g. Autosampler for Agilent 4500 Series operating with English software - requiring 18 position, Type C tray	G3160A #ABA #002 #102

Consumables

Type A tray (includes 200 × 6-mL vials)	G3160-65300
Type B tray (includes 55 × 18-mL vials)	G3160-65301
Type C tray (includes 20 × 50-mL vials)	G3160-65302
Type D tray (includes 200 × 2-mL vials and 10 × 18-mL vials)	G3160-65308
Type E tray (includes 200 × 6-mL vials and 10 × 18-mL vials)	G3160-65309
2.0-mL vial for Type D tray, 200 pieces (polyethylene)*	G3160-65315
1.5-mL vial for Type D tray, 10 pieces (PFA)	G3160-65317
6-mL vial for Type A & E trays, 200 pieces (polypropylene)	G3160-65303
18-mL vial for Type B, D & E trays, 55 pieces (polypropylene)	G3160-65304
50-mL vial for Type C tray, 20 pieces (polypropylene)	G3160-65305
Fluoresin probe, 1 piece	G3160-65306
100 mL standard bottle, 3 pieces	G3160-65307
Tube set for peristaltic pump, 5 sets with connectors	G3160-65327

*Standard Type D tray accommodates 2.0-mL polyethylene vials.

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