



Agilent 7500/7700/7800/7900/8x00 Series ICP-MS

Cross Reference Guide




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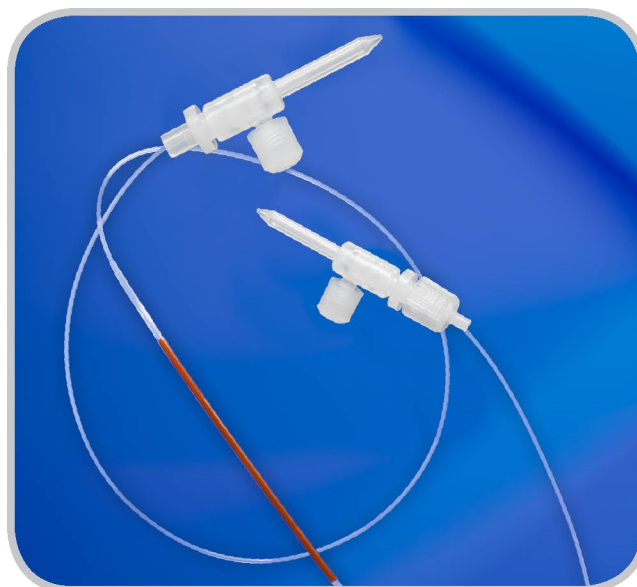
Via Guido Rossa 14
23875 Osnago (LC) - Italy
Tel. +39 039 9280061
Fax. +39 039 9289636
info@quantanalitica.com
www.quantanalitica.com

Sample introduction is a critical component of an ICP-MS instrument. The design of the sample introduction system affects all aspects of ICP-MS performance - including sensitivity, stability, washout, memory, isotope ratio precision, matrix tolerance and sample compatibility. In addition, the type and quality of materials that come into contact with the sample directly impact the level of the analytical blank. Savillex has over 30 years experience in fluoropolymer molding and unmatched expertise in the design and molding of PFA components. We design and manufacture all our ICP-OES and ICP-MS PFA sample introduction components, including our unique high performance nebulizers, which are available only from Agilent or from Savillex and our distributors. All our designs are intensively tested on ICP-MS in our own facility in Eden Prairie, MN, USA.

Savillex inert sample introduction systems are supplied by Agilent as standard equipment – with the 7x00 and 8x00 Series ICP-MS instruments. They can also be purchased direct from Savillex or our distributors. This cross reference guide gives the Savillex part number corresponding to the various Agilent part numbers used. In the case of PFA inert kits, Agilent has used multiple part numbers for the same kit. This guide lists parts for 7500, 7700, 7800, 7900 and 8x00 Series ICP-MS.

PFA Nebulizers

The challenge in designing and manufacturing PFA concentric nebulizers is to achieve consistency in performance. We used our extensive expertise in PFA molding and machining to develop a superior tip design, which gives consistent sensitivity and uptake rate from nebulizer to nebulizer. These Savillex C-Flow PFA nebulizers have a free aspiration uptake rate within 15% of the nominal value of 200 $\mu\text{L}/\text{min}$ – better than any other PFA concentric nebulizer on the market. Savillex C-Flow nebulizers can be used with any inert kit for semiconductor use, or with HF containing samples. They can also be used with the quartz spray chamber. Available with integrated probe for use with the Agilent I-AS autosampler. For difficult semiconductor applications such as high Si matrix (from VPD or from bulk Si samples, including PV Si) or H_3PO_4 analysis, choose the 50 $\mu\text{L}/\text{min}$ versions. For all general high matrix applications (e.g. environmental, geological, clinical), the Savillex C400d PFA nebulizer with demountable uptake line is a great alternative to glass concentrics (Savillex part number 800-2-040-01-00).



Savillex PFA Concentric Nebulizers

Savillex C-Flow nebulizers are supplied by Agilent for use with Agilent ICP-MS. The Agilent part number and corresponding Savillex part numbers are shown below.

Agilent Part #	Savillex Part #	Savillex Description
G3285-80002	800-1-005-01-00	C-Flow nebulizer, 50 $\mu\text{L}/\text{min}$
G3285-80003	800-1-005-02-00	C-Flow nebulizer, 50 $\mu\text{L}/\text{min}$ with I-AS autosampler probe
G3285-80000	800-1-020-01-00	C-Flow nebulizer, 200 $\mu\text{L}/\text{min}$
G3285-80001	800-1-020-02-00	C-Flow nebulizer, 200 $\mu\text{L}/\text{min}$ with I-AS autosampler probe

These Savillex C-Flow nebulizers are also a direct replacement for Agilent MicroFlow nebulizers.

Agilent Part #	Agilent Description	Savillex Part #	Savillex Description
G3139-65106	MicroFlow Nebulizer PFA, 20-50 $\mu\text{L}/\text{min}$	800-1-005-01-00	C-Flow nebulizer, 50 $\mu\text{L}/\text{min}$
G3139-65108	MicroFlow Nebulizer with I-AS probe PFA, 20-50 $\mu\text{L}/\text{min}$	800-1-005-02-00	C-Flow nebulizer, 50 $\mu\text{L}/\text{min}$ with I-AS autosampler probe
G3139-65100	MicroFlow Nebulizer PFA, 200 $\mu\text{L}/\text{min}$	800-1-020-01-00	C-Flow nebulizer, 200 $\mu\text{L}/\text{min}$
G3139-65102	MicroFlow Nebulizer with I-AS probe PFA, 200 $\mu\text{L}/\text{min}$	800-1-020-02-00	C-Flow nebulizer, 200 $\mu\text{L}/\text{min}$ with I-AS autosampler probe

Inert PFA Sample Introduction Kits

Savillex worked very closely with Agilent to design an PFA inert kit that avoids the common problem of droplet formation in the connector tube, which causes instability and can even extinguish the plasma. The connector tube is an easy push fit design and the end cap is o-ring free to minimize contamination and features a make-up gas port. The demountable torch uses an o-ring mount, which ensures a correct fit with the torch and allows it to be easily dismantled. Injectors are available in either sapphire or Pt, with 2.5 mm ID. Versions for organic sample analysis are available, featuring smaller diameter 1.5 mm injectors, and a gas port for O₂ addition. All parts that come into contact with the sample come precleaned, ready for immediate use. Savillex inert kits are supplied with a genuine Agilent quartz torch and are exactly as supplied as original equipment with the 7500, 7700, 7800, 7900 and 8x00 Series. These kits are the highest performing inert kits available for ICP-MS, and used by all leading semiconductor labs around the world. Choose one of the kits below and add one of the Savillex nebulizers to make a complete inert sample introduction system.



7700/7800/7900/8x00 PFA Inert Sample Introduction

Agilent Part #	Savillex Part #	PFA Inert Kit Description
G4912-68000, G4912A #001	850-011-100699	Agilent inert kit with 2.5 mm sapphire injector, with O ₂ /HMI gas port (7700/7800/7900/8x00 Series)
G4912-68001, G4912A #002	850-011-100701	Agilent inert kit with 2.5 mm Pt injector, with O ₂ /HMI gas port (7700/7800/7900/8x00 Series)
G4912-68002, G4912A #003	850-011-100698	Agilent inert kit with 1.5 mm sapphire injector, with O ₂ /HMI gas port (7700/7800/7900/8x00 Series)
G4912-68003, G4912A #004	850-011-100700	Agilent inert kit with 1.5 mm Pt injector, with O ₂ /HMI gas port (7700/7800/7900/8x00 Series)
G3285A #101, G3285B #101, G3285-80014	850-011-100634	Agilent inert kit with 2.5 mm sapphire injector, no O ₂ gas port (7500 Series)
G3285A #102, G3285B #102, G3285-80015	850-011-100635	Agilent inert kit with 2.5 mm Pt injector, no O ₂ gas port (7500 Series)
G3285A #103, G3285B #103, G3285-80016	850-011-100636	Agilent inert kit with 1.5 mm sapphire injector, with O ₂ gas port (7500 Series)
G3285A #104, G3285B #104, G3285-80017	850-011-100637	Agilent inert kit with 1.5 mm Pt injector, with O ₂ gas port (7500 Series)

- Where precleaned is stated, product has been precleaned by soaking in high purity HNO₃/HF for 4 hours
- Kits purchased from Agilent do NOT include an O₂/HMI gas port as standard
- For Agilent 7500ce (G3272B) with HMI upgrade, OR 7500cx (G3272B) – order a 7700/7800/7900/8x00 Series inert kit
- All kits include spray chamber, end cap, drain tube, connector tube, injector assembly and quartz torch

Spare Parts and Consumables

All the inert kit components are available separately and all parts that come into contact with the sample come precleaned, ready for immediate use.

Agilent Part #	Saville Part #	Description
5064-8078	750-SU4MN	4 mm knurled straight union
G3285-80020	851-011-100550	Agilent end cap for PFA inert kit, with make up gas port, 7500/7700/7800/7900/8x00 Series
G3285-80021	851-011-100549	Agilent spray chamber for inert kit, 7500/7700/7800/7900/8x00 Series
G3285-80022	851-011-100551	Agilent drain tube fitting, 7500 Series
G4912-80014	851-011-100674	Agilent drain tube fitting, 7700/7800/7900/8x00 Series
G3285-80023	851-011-100552	Agilent connector tube (no gas port) short, 7500 Series
G3285-80024	851-011-100622	Agilent connector tube (no gas port), long, 7700/7800/7900/8x00 Series
G4912-80016	851-011-100676	Agilent connector tube (with O2/HMI gas port), 7700/7800/7900/8x00 Series
G4912A #010	851-011-100676	Agilent connector tube (with O2/HMI gas port), 7700/7800/7900/8x00 Series
G3285-80034	851-011-100627	Agilent injector assembly with sapphire injector (2.5 mm ID) precleaned, 7500/7700/7800/7900/8x00 Series
G3285-80035	851-011-100628	Agilent injector assembly with platinum injector (2.5 mm ID), precleaned, 7500/7700/7800/7900/8x00 Series
G3285-80036	851-011-100629	Agilent injector assembly with sapphire injector (1.5 mm ID) with O2 port, precleaned, 7500 Series
G3285-80037	851-011-100630	Agilent injector assembly with platinum injector (1.5 mm ID) with O2 port, precleaned, 7500 Series
G4912-80010	851-011-100672	Agilent injector assembly with sapphire injector (1.5 mm ID) precleaned, 7700/7800/7900/8x00 Series
G4912-80011	851-011-100673	Agilent injector assembly with platinum injector (1.5 mm ID) precleaned, 7700/7800/7900/8x00 Series
G3285-80050	851-011-100581	Agilent quartz torch for PFA inert kit, 7500 Series
G4912-80012	851-011-100702	Agilent quartz torch for PFA inert kit, 7700/7800/7900/8x00 Series
G3285-80085	851-011-200112	Agilent o-ring for injector assembly (10/pack)

Where precleaned is stated, product has been precleaned by submerging in or by aspirating high purity HNO₃/HF for 4 hours.



Connector Tube



Drain Tube



End Cap



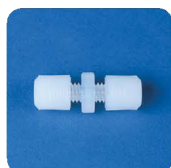
Injectors



Spray Chamber



Torch



4 mm Union
Fitting