

## PFA Micro-Flow Nebulizer

New sample introduction technology for ICPMS and ICPAES

- All-Teflon® construction.
- Chemically resistant—ideal for strong acids, alkalis, organics.
- Resistant to clogging—reliably self-aspirated or pumped.
- Longer lifetime than glass or quartz nebulizers.
- Direct analysis of volatile and nonvolatile organic solvents.
- Low, spike free background for important elements such as Fe and Ca.
- Produces a fine aerosol for high transport efficiency and sensitivity.
- Analyze all sample types with a single introduction system.
- Directly replace any 6mm nebulizer.
- Available with integrated probes to support most autosamplers.



Model	I.D.	Self-aspiration Rate (@1L/m Ar)	
ES-2020	PFA-20	20 µL/min	■ (red)
ES-2000	PFA-50	50 µL/min	■ (purple)
ES-2002	PFA-100	100 µL/min	■ (green)
ES-2003	PFA-200	200 µL/min	■ (yellow)
ES-2005	PFA-400	400 µL/min	■ (orange)

Teflon® is a registered trademark of DuPont

## PFA Micro-Flow

### The right nebulizer technology

- Produces a fine aerosol for high transport efficiency and high sensitivity.
- Low BECs even for concentrated highpurity acids (e.g. 49% HF, 69% HNO<sub>3</sub>).
- Direct analysis of volatile and non-volatile organic solvents.
- Ideal for VPD samples, high purity peroxide, and ammonia.



### Specifications:

Self-aspiration flow rate (1L/m Ar)	PFA-20	20-35 µL/min
	PFA-50	50 µL/min
	PFA-75	75 µL/min
	PFA-100	100 µL/min
	PFA-200	200 µL/min
	PFA-400	400 µL/min
Construction Materials	Nebulizer: PFA, PTFE, FEP Gas Fitting: PVDF	
Gas pressure requirement	< 60 psi (4 bar) @ 1 SLPM Ar	
Nebulizer O.D.	6mm, may be used with any standard 6mm spray chamber	
<b>All models may be self-aspirated or used with peristaltic pump</b>		

**Table 1.** Background equivalent concentration (BEC) and detection limits (DL).

Isotope	BEC (ppt)	DL (ppt)
<sup>23</sup> Na	0.8	0.09
<sup>27</sup> Al	0.2	0.06
<sup>39</sup> K	0.3	0.05
<sup>44</sup> Ca	0.9	0.5
<sup>56</sup> Fe	0.2	0.07
<sup>63</sup> Cu	0.2	0.08
<sup>64</sup> Zn	0.6	0.1

PFA-100, Finnigan ELEMENT ICP-MS class 10 cleanroom.