

prepFAST SE

Benchtop System for Automated Sample Introduction of Ultrapure Chemicals



Automated Analysis of Undiluted Ultrapure Chemicals

The prepFAST SE provides automated and precise introduction of neat ultrapure chemicals featuring syringe sample delivery. The system can be configured with multiple options to tailor performance for your most challenging semiconductor-grade chemical analyses.

- Ultraclean Fluoronetic Autosampler with inert PTFE deck
- Integrated, exhausted enclosure with three-sided access for a clean sample environment
- High precision, syringe-driven sample uptake and delivery

Fluoronetic Autosampler

- Probe arm fully encapsulated in fluoropolymer for maximum chemical resistance - no exposed metal anywhere in sample area
- Magnetically coupled linear drive for long lifetime
- DXCi autocorrecting autosampler - goes to the correct position, even when temporarily obstructed
- Continuous flowing UPW rinse
- Small benchtop footprint, available in two models
 - prepFAST SE micro (2 micro racks)
 - prepFAST SE 2DX (2 large racks, 4 micro racks)

Syringe-Driven Sample Introduction

- Eliminates fluctuations in sample flow rate common with natural aspiration
- Software controlled flow rates for each chemical
 - (<50 $\mu\text{L}/\text{min}$ up to 400 $\mu\text{L}/\text{min}$)
- Precise uptake and analysis of small volume samples
- High speed washout of nebulizer & spray chamber between chemical types
- Automated external calibration, MSA calibration, & QC spiking

Fluoronetics Drive Delivers



Superior Chemical/
Corrosion Resistance



Chemically Inert
Non-contaminating



Magnetic Coupling
Eliminates Metal Components



Intelligent Autocorrection
Always Finds Sample Position

prepFAST SE

prepFAST SE 2DX Features Diagram

Air Shower

- Customer supplied gas flow provides protective air barrier across openings
- ULPA filtration optional

Ultraclean Enclosure

- Three side easy access doors
- Longitudinal exhaust manifold in sample deck
- Fumes removed at sample level

AutoAlign Arm

- Self-realigns after encountering capped sample tube
- Metal-free fluoropolymer probe aligner

UPW and Calibration Solution

PFA Sample Containers

- < 1 mL up to 500 mL

Syringe Driven

- Precise ultrapure sample uptake and delivery

Compact Inert Valves

Fluoronetic Drive

- True fluoropolymer mechanical action
- Magnetically coupled linear drive
- Chemically resistant & long-lived

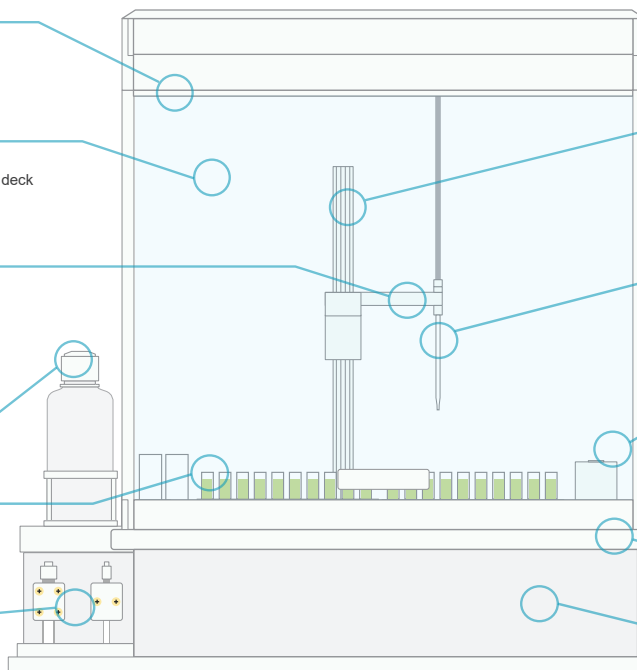
FluoroProbe

Dual Pumped Rinse Station

- Ultra-low cross-contamination
- Independently pumped for low rinse consumption

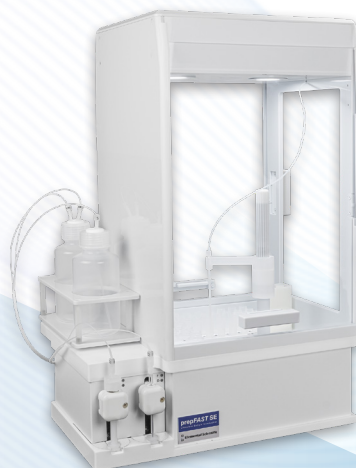
PTFE Autosampler Deck

Optional Flowing UPW

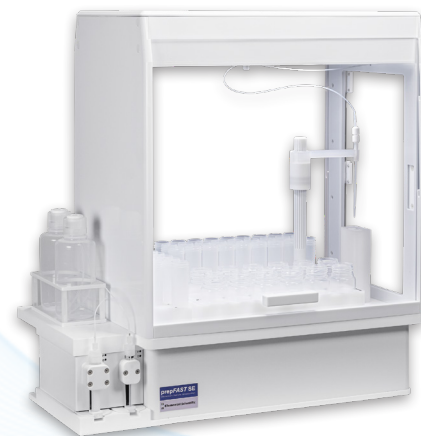


prepFAST SE Options

- Clean air shower with ULPA filtration
- Leak Sensors
- Valve for automated introduction of ICPMS tuning solutions
- UPW Intake Manifold and compact UPW valve
- Configurable with many PFA sample containers:
 - Micro sample vials (< 1 mL)
 - 15, 30, & 60 mL vials
 - 100, 250, & 500 mL bottles

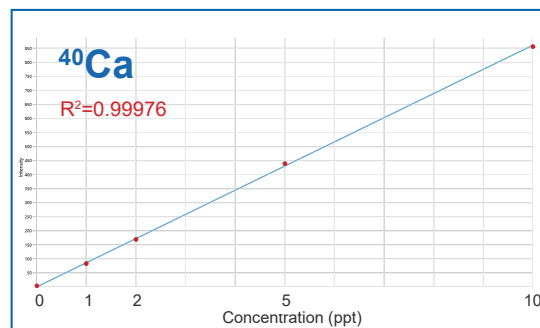
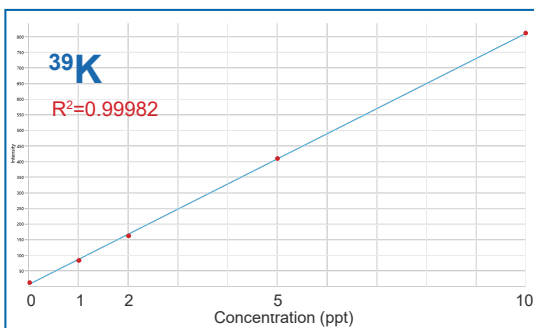
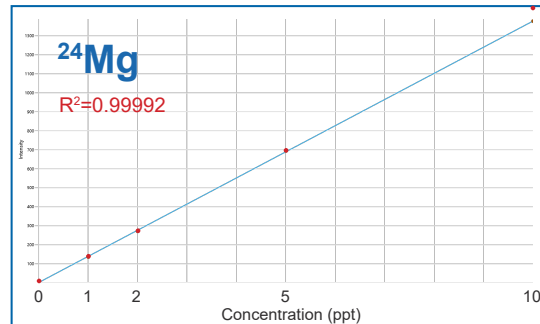
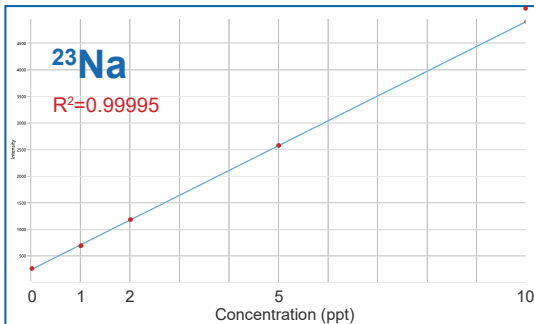


prepFAST SE micro



prepFAST SE 2DX

prepFAST SE Autocalibration – Na, K, Ca, Mg at 1, 2, 5, & 10 ppt in UPW



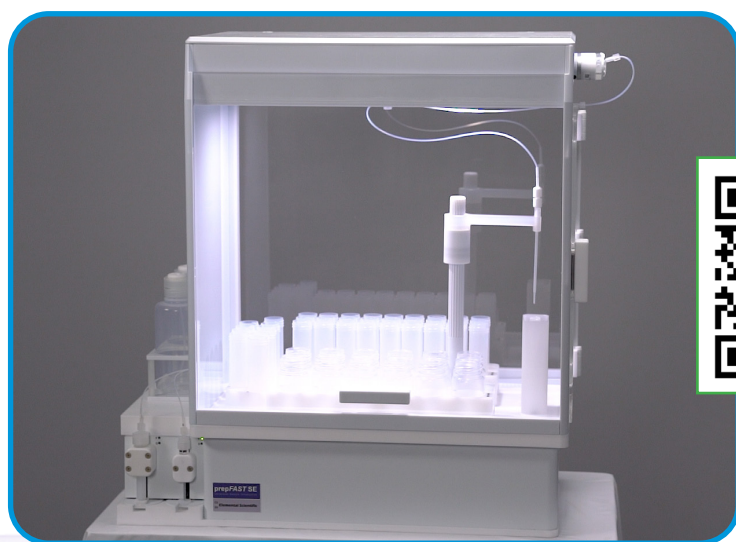
The prepFAST SE fully automates the inline preparation of calibration standards, eliminating contamination from manual dilutions. Supports both external and method of standard additions calibration techniques.



Syringe delivery of samples provides reliable and reproduceable sample introduction and eliminates issues common with natural aspiration.

prepFAST SE Models and Sample Capacities

Model	Part Number	Large Racks - Max Sample Capacity					Micro Racks - Max Sample Capacity				
		# Rack Positions	125 mL bottles (SR)	50 mL tubes	15 mL tubes	8 mL tubes	# Rack Positions	15, 25, 30 mL vials	1, 2, 4, 12 mL vials	1, 2, 4 mL vials	1 mL vials
prepFAST SE micro	PF-SE	-	-	-	-	-	2	20	42	80	120
prepFAST SE 2DX	PF-SE-2FNXS	2	24	52	120	180	4	40	84	160	240



prepFAST SE 2DX model configured for semiconductor grade ultra-pure chemical analysis.



See it in Action!

For more information on ESI automation for ultra-pure chemical analysis, click or scan:



follow us on our social networks!



© Elemental Scientific | 7277 World Communications Drive | Omaha, NE 68122
Tel: 402-991-7800 | sales@icpms.com | www.icpms.com