

Aerosol Generators and Dispersers

Collectively, our generators and dispersers produce particles in the range of 0.001 to 200 μm from liquids, suspensions or powders.

Visit: www.tsi.com/aerosol-generators-and-dispersers/ for the full overview.

Monodisperse Generators

This type of generators is useful anywhere a precise, monodisperse aerosol is needed. Specific applications include calibrating particle counters, testing various filters, and studying size-dependent particle properties.

Model	3480	3482	3940A and 3082	3475	1520/1530
Particle Size Range (μm)	<0.002 to >0.15		0.001 to 1.0	0.1 to 8.0	0.8 to 12 (dry particles) / 15 to 90 (droplets)
Particle Concentration (particles/ cm^3)	$\sim 10^7$	Up to 10^7	$< 10^5$	$> 10^6$	$\sim 10^3$ (at 1 μm) to $\sim 10^2$ (at 10 μm)
Nominal Flow Rate (L/min)	0.2 to 2.5		0.2 to 3.5	3.5 to 4	5 to 25

Electrospray Aerosol Generator

Models 3480, 3482

Produces monodisperse particles as small as 2 nm.

The Electrospray Aerosol Generator (EAG) uses a patented technique to produce high concentrations of monodisperse, submicrometer particles in the range from 2 to >150 nm in diameter. The EAG produces such small, uniform particles by pushing a charged liquid solution or suspension through a capillary tube and exerting an electrical field on the liquid at the capillary tip. The electrical field pulls the liquid from the capillary, forming individual droplets. Air and CO_2 mixed with the droplets evaporate the liquid, and the remaining particles are neutralized by an ionizer. The result is a neutralized, monodisperse aerosol. Applications for the EAG include instrument calibration, analysis of nanomaterial suspensions, macromolecular analysis, and nano-aerosol studies.

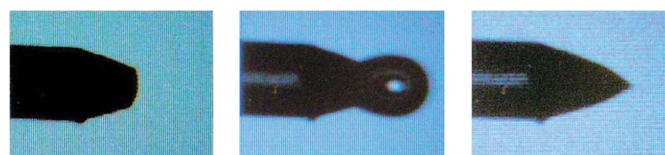
The classic model 3480 uses a pressure capsule fluid delivery system and radioactive Po-210 neutralizer.

The next generation model 3482 features a built-in touch screen, soft x-ray neutralizer, and syringe pump liquid delivery system.



Accessories (available separately)

Specify	Description
3482-SPUMP	Syringe Pump
3482-SPUMP-ACC	1 mL Syringe with Connectors
3482-SPUMP-ACC KIT	Syringe Pump and Accessory Kit
3482050	Model 3482 Accessory Kit
348002	Replacement Po-210 Aerosol Neutralizer for Model 3480
1031535	3480 Maintenance Kit
1036008	3480 Accessory Kit



The 3482 produces particles down to 2 nm. The camera (3482) or viewing window (3480) allows you to easily see the capillary tip during operation: (1) no liquid flow; (2) with liquid flow but no electric field; (3) with liquid flow and electric field (showing the formation of the Taylor cone).