

Submicrometer Monodisperse Aerosol Generation System

Model 3940A

A complete system for generating monodisperse, submicrometer particles.

The Submicrometer Monodisperse Aerosol Generation System gives you the ability to produce monodisperse particles from 0.01 to 1.0 μm in diameter. The system includes:

- Electrostatic Classifier 3082
- Long DMA 3081A
- Aerosol Neutralizer 3077A
- Aerosol Neutralizer 3012
- Filtered Air Supply 3074B
- Constant Output Atomizer 3076
- Diffusion Dryer 3062
- Dilution Bridge 1035575



Electrostatic Classifiers

Model 3082

Primary-standard instruments that produce highly monodisperse, submicrometer aerosols.

The 3082 Electrostatic Classifiers are primary standard aerosol instruments that give you highly monodisperse, submicrometer aerosol from a polydisperse source. Our classifiers are first-principles instruments (i.e., they are not calibrated against other particle instruments), and have been used in a variety of aerosol generation and particle sizing applications with highly repeatable results.

The Electrostatic Classifier uses a Differential Mobility Analyzer (DMA) to classify and select out a narrow, predictable size band. TSI® provides a choice of four DMA columns. You can purchase any column and interchange them on the same platform, giving you unprecedented versatility. The platform is available separately for use with your own DMA, just connect the tubing and enter the DMA dimensions on the touch screen.

Particles classified with our Electrostatic Classifiers range in size from 0.001 to 1.0 μm . For monodisperse aerosol generation, simply set the touch screen for the desired particle size.



Electrostatic Classifiers are included in our SMPS™ systems. Models 3082 and 3081A are part of the 3940A Submicrometer Monodisperse Aerosol Generation System. DMA columns are interchangeable. For restrictions, consult local authorities on the use of Aerosol Neutralizers. The Nano DMA was developed in cooperation with the University of Minnesota Particle Technology Laboratory and Gerhard Mercator University. Refer to United States Patent Number 6,230,572.

Electrostatic Classifiers and DMAs

Specify	Description
3082	Electrostatic Classifier
3081A	Long DMA (10 nm to 1 μm)
3085A	Nano DMA (2 to 150 nm)
3083	Wide-Range Vienna DMA (10 to 800 nm in a single scan)
3086	1 nm DMA (1 to 50 nm)

Accessories (available separately):

Specify	Description
3077	Aerosol Neutralizer
3077A	Aerosol Neutralizer (for High Concentrations/Charges)
3088	Advanced Aerosol Neutralizer (Soft X-Ray)
6005931	Lead Shielding Column