Radioactive Aerosol Neutralizers*

Models 3012, 3054, 3077
Minimize particle losses and coagulation by electrostatic charges, or charge particles properly for size analysis or air-filter measurements.

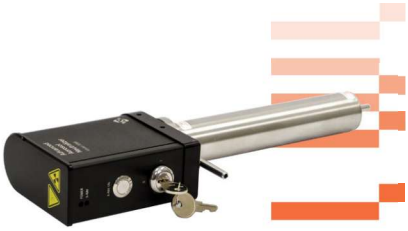
Aerosol particles dispersed by nebulization, combustion, or powder dispersion are usually electrostatically charged and are subject to high losses during transport. To reduce transport losses and ensure that instruments operating on the electrostatic principle work properly, particles must be neutralized. These Aerosol Neutralizers use a radioactive source (^{85}Kr) to perform this function. The radioactive source ionizes the surrounding gas creating positive and negative ions. Particles carrying a high charge can discharge by interacting with ions of opposite polarity. After a short time, the particles reach charge equilibrium. TSI® recommends models 3012A, 3054A, or 3077A for aerosols with higher charge levels or when operating at higher flow rates or high concentration.

Radioactive Aerosol Neutralizers

Specify	Description
3012	For general-purpose applications with high flow rates (up to 50 L/min). 2 mCi, 74 MBq
3012A	Same as above, but with five times the activity (10 mCi, 370 MBq)
3054	Suitable for high flow rate applications (up to 150 L/min). 10 mCi, 370 MBq
3054A	Same as above, but with twice the activity (20 mCi, 740 MBq)
3077	For general-purpose applications with low flow rates (up to 5 L/min); standard with 3938 Scanning Mobility Particle Sizer™ spectrometers. 2 mCi, 74 MBq
3077A	Same as above, but with five times the activity (10 mCi, 370 MBq)

Non-Radioactive Aerosol Neutralizers

Model 3088
The TSI® Advanced Aerosol Neutralizer 3088 offers an alternative to traditional radioactive neutralizers frequently required for aerosol measurement applications. Due to increasingly stringent local, state and national regulations, obtaining licensing to acquire and use radioactive sources is often difficult and in some cases prohibited. Fully compliant with US FDA, CDRH* standards, the patented model 3088 provides an attractive alternative, with sizing performance virtually identical to TSI's Aerosol Neutralizer 3077A.



The 3088 is compatible with TSI's SMPS spectrometers models 3938, 3936 and 3034, and Electrostatic Classifiers 3082 and 3080. Like a radioactive neutralizer, it uses bipolar ions to neutralize particles up to 10^7 particles/cm^3, and does not generate particles. Its maximum design flow rate is 5 L/min.

*Provide end-user name and address when ordering Aerosol Neutralizers. TSI has been issued license number 1154-200-62 by the Minnesota Department of Health to sell and distribute these Aerosol Neutralizers. Users in the United States need not apply for additional U.S. Government licenses to handle these products. However, some state and local governments may require special licenses, and some organizations may have special handling procedures. Check all local requirements.