

Gas Standards



Simulated-Gas Standards

Analytics' custom-made, simulated-gas standards provide calibration for gamma-ray spectrometers over a wide energy range. The standards are prepared using Analytics' mixed gamma-ray standard mixtures deposited on a low-density polystyrene matrix in your actual counting containers. The matrix has a density of 0.015 to 0.020 g/cc. These standards require no attenuation corrections over the energy range 59.5 to 1836 keV. The simulated-gas standards have several advantages over gas standards. The simulated standards provide a wider energy range, have longer useful life, require no transfers and are leak proof.

All custom-made, simulated-gas standards are prepared gravimetrically from NIST traceable solutions and are thoroughly QC tested against actual gas standards in the same geometry.



Unpressurized Gas Standards

Analytics supplies unpressurized transferable gas standards allowing customers to perform calibrations on virtually any counting container using an actual gas. These standards are supplied in a 33-mL glass sphere with two stopcocks and a septum port for transfer. A transfer kit, including a calibrated gas syringe and instructions, can be purchased to perform multiple accurate transfers and calibrations from the standard.

Radionuclides available as unpressurized gas standards are ^{133}Xe , ^{127}Xe , ^{85}Kr , and a mixed standard including all three radionuclides. The mixed standard provides the widest energy range calibration practical with real radioactive gasses. The mixed gas standard has gamma-ray emissions at 81, 145, 172, 202, 375, and 514 keV.



Pressurized Gas Standards

Analytics supplies pressurized gas standards for the calibration of effluent monitors. These standards are prepared volumetrically from calibrated NIST traceable gas standards. These standards are pressurized with nitrogen and are available as either approximately 20 liters of gas in a 500-mL steel cylinder (lecture bottle) or as approximately 130 liters of gas in a 2.3-L steel cylinder. Regulators are available for an additional charge. Radionuclides available as pressurized gas standards are ^{133}Xe and ^{85}Kr .

