

Special Applications

EPA Protocol Gases

As the largest producer of EPA Protocol gases at six locations throughout the U.S., Airgas® has the EPA Protocol gases that customers need. Airgas is:

- Airgas has six laboratories with ISO 17025 accreditation through A2LA covering all EPA Protocol gases and Traceability Standards, including three laboratories with over 6 years ongoing accreditation.
- Produces and owns more NTRMs than any other gas vendor.
- The exclusive producer of EPA Protocols via the AccuGrav and the Automated FTIR.
- The producer of up to six component mixtures of EPA Protocol gases.
- Able to provide both online certifications and online cylinder expiration notifications.
- One of only two producers of elemental mercury calibration gases.
- The leading supplier of ammonia calibration gases for both ammonia slip and health and safety monitoring with +/- 1% analytical traceability to Primary Reference Materials obtained from the NMi Van Swinden Labs and available with traceability down to 2.5ppm.
- The most accurate supplier of NO down to 0.1ppm, NO₂ down to 0.4ppm, and N₂O down to 0.1 ppm concentrations.
- The most accurate supplier in the 2006 EPA blind audit analysis with an average concentration less than 0.69% from the tag value.
- The company that has saved utilities millions of dollars by providing accurate gases so they would not waste emissions credits (allowances) for SO₂ and NO_x.

Airgas EPA Protocols are prepared and analyzed in strict accordance with the EPA's most current guideline entitled "EPA Traceability Protocol Assay and Certification of Gaseous Calibration Standards." The guideline specifies methods for traceability to National Institute of Standards and Technology (NIST) Standard Reference Materials (SRMs) or other NIST-approved reference materials, which include Airgas-produced NIST Traceable Reference Materials (NTRMs).

The majority of EPA Protocol mixtures from Airgas are certified to a +/- 1% overall uncertainty guarantee, except where limited by the higher uncertainty of the NIST SRMs or NTRMs. All analytical certifications are performed under completely interference-free conditions. Maximum allowable shelf life is guaranteed. Documentation fully conforms to the requirements of the EPA Protocol program, in compliance with the Clean Air Act.

Traceability Standards

To meet customer and regulatory requirements for analytically NIST Traceable calibration mixtures, Airgas now offers Traceability Standards, which are analytically certified directly against either NIST SRMs or NTRMs, within a comprehensive quality system. The analytical testing process is based upon EPA Protocol production processes, including triad analysis, comprehensive instrumentation characterization, and statistical data analysis. This results in a +/- 1% overall uncertainty (accuracy) with direct traceability to NIST Reference Materials. Traceability Standards are primarily used for the calibration of continuous emissions monitoring systems and engine emissions analyzers.

Combined with Airgas' Precision Blend dynamic processes, Airgas will upon request offer Traceability Standard gas mixtures with blend tolerances equal to the accuracy of the analytical system monitoring the filling operations. The analytical value of each gas mixture is validated against a NIST SRM or NTRM. Every cylinder is certified accurate within +/- 1% of NIST reference material.

Airgas' line of Traceability Standards assures ongoing compliance with the calibration requirements imposed by federal, state and local authorities. Traceability Standards offer precise concentrations, homogenous composition of all cylinders within a lot, and consistency of mixtures from order to order.

Upon request, Airgas can produce Traceability Standards at one of several Airgas specialty gas laboratories accredited to the ISO 17025 standard by the American Association of Laboratory Accreditation (A2LA). ISO 17025 is the international standard for calibration and testing laboratories and recognized in many industries, including the automotive and aerospace industries. In these cases, Airgas can include the accreditation body's logo and ISO 17025 notation on the accompanying Certificate of Analysis.

