



# SPECTRA VOC STANDARDS

## BTEX Calibration Mixtures

**Description** SPECTRA VOC standards are part of the HiQ® specialty gases program from Linde and are manufactured using exacting gravimetric techniques with all gravimetric measurements directly traceable to NIST (National Institute of Standards and Technology).

Environmental regulations require accurate, traceable low concentration organic gas calibration standards to calibrate instruments used in:

- Ambient air monitoring
- Infiltration studies
- Measurement of incinerator emissions
- Measurement of fugitive emissions from chemical processing equipment
- Measurement of industrial stationary sources
- Measurement of landfill gases

Linde offers a four (4) component, BTEX Standard -1, a six (6) component, BTEX Standard - 2, and a seven (7) component, BTEX Standard - 3, calibration standards in concentrations from 100 ppb to 10 ppm in a balance gas of VOC zero grade nitrogen (N<sub>2</sub>). All concentrations are directly traceable to NIST gravimetrically and analytically by comparison with NIST certified standards.

**HiQ® Specialty Gases** The HiQ® specialty gases program from Linde supplies high purity gases, gas mixtures, precision engineered equipment and gas distribution systems, and services and support, to a wide range of industries employing specialty gases applications.

HiQ® products represent Linde’s commitment to the highest available quality and global consistency across gases, equipment and services.

- |                          |  |                       |
|--------------------------|--|-----------------------|
| <b>BTEX Standard – 1</b> | → Benzene [71-43-2]                          | → Toluene [108-88-3]  |
|                          | → Ethyl Benzene [100-41-4]                   | → o-Xylene [95-47-6]  |
| <b>BTEX Standard – 2</b> | → Benzene [71-43-2]                          | → m-Xylene [108-38-3] |
|                          | → Ethyl Benzene [100-41-4]                   | → o-Xylene [95-47-6]  |
|                          | → Toluene [108-88-3]                         | → p-Xylene [106-42-3] |
| <b>BTEX Standard – 3</b> | → Benzene [71-43-2]                          | → m-Xylene [108-38-3] |
|                          | → Ethyl Benzene [100-41-4]                   | → o-Xylene [95-47-6]  |
|                          | → Toluene [108-88-3]                         | → p-Xylene [106-42-3] |
|                          | → Tert-butyl methyl ether (MTBE) [1634-04-4] |                       |

**NOTE:** CAS numbers are in square brackets, i.e. [00-00-0]

### Specifications

Blend Tolerance	100 ppb to 1 ppm +/- 10%
	>1 ppm to 10 ppm +/- 5%
Analytical Accuracy	100 ppb to 1 ppm +/- 5%
	>1 ppm to 10 ppm +/- 2%
Stability	12 months

To enhance your QA/QC procedures, Linde stocks at least two (2) individual batches of each VOC raw material allowing you to order two (2) independent BTEX Standards.

**Regulator Recommendation**

Various independent and Agency laboratories have indicated that to ensure repeatability with low level calibration gases it is best to utilize the same regulator for initial assay and for daily usage, thus minimizing the sources for potential variances and possible cross contamination. If a regulator is purchased along with the BTEX standard, Linde will perform the initial assay and certification analysis utilizing the regulator and cylinder as a matched set.

The Linde model 7621 regulator is ideal for use with the BTEX standards.

**Standard Available Cylinders**

Cylinder Size	Volume	Pressure	CGA
2A	4000 liters	2000 psig	350
4A	800 liters	2000 psig	350
6A	104 liters	1800 psig	180

All SPECTRA VOC Calibration Standards are guaranteed for a minimum of 12 months.

Please contact Linde for information on other concentrations, tolerances, and cylinder sizes.

**Linde Electronics and Specialty Gases**

One Greenwich Street, Suite 100, Stewartsville, NJ 08886 USA  
 Phone 908-329-9700, Fax 908-329-9740, [www.lindeus.com](http://www.lindeus.com)

Linde LLC is a member of the Linde Group. Linde is a trading name used by companies within The Linde Group. The Linde logo and the words Linde and SPECTRA, HiQ®, REDLINE®, BASELINE®, SPECTRA-SEAL®, ECOCYL® and VERISEQ® are trademarks of The Linde Group. Copyright The Linde Group 2010.