

SPECTRA VOC STANDARDS

EPA Methods 25, 25A, 25B, 25C, 25D and 25E

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).

US EPA Method 25, Determination of Total Gaseous Nonmethane Organic Emissions as Carbon; Method 25A, Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer; Method 25B, Determination of Total Gaseous Organic Concentration Using a Nondispersive Infrared Analyzer; Method 25C, Determination of Nonmethane Organic Concentration (NMOC) in Landfill Gases; Method 25D, Determination of the Volatile Organic Concentration of Waste Samples; and Method 25E, Determination of Vapor Phase Organic Concentration in Waste Samples all have specific requirements for gaseous calibration standards and support gases.

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. In addition to the line of SPECTRA high purity gases the HiQ® program includes the REDLINE® and BASELINE® trademarked equipment product ranges and the SPECTRA-SEAL®, ECOCYL® and VERISEQ® specialty gas ranges.

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

Linde provides all of the following as required by the various methods:

	25	25A	25B	25C	25D	25E
1% CH ₄ in Air	X			X		
20 ppm C ₃ H ₈ in Air	X			X		
200 ppm C ₃ H ₈ in Air	X			X		
3000 ppm C ₃ H ₈ in Air	X			X		
50 ppm CO ₂ in Air	X					
500 ppm CO ₂ in Air	X					
1% CO ₂ in Air	X					
50 ppm CO / 50 ppm CH ₄ / 20 ppm C ₃ H ₈ / 1% CO ₂ in Air	X			X		
50 ppm Hexane in Air	X					
20 ppm Toluene in Air	X					
100 ppm Methanol in Air	X					
VOC free He	X					
VOC free O ₂	X				X	X
VOC free H ₂	X				X	X
VOC free Air	X	X	X	X	X	X
VOC free N ₂					X	
FID fuel 40% H ₂ / 60% He or 40% H ₂ / 60% N ₂		X		X		
Low level calibration gas (25-35% of span value)		X	X	X		
Mid level calibration gas (45-55% of span value)		X	X	X		
High level calibration gas (80-90% of span value)		X	X	X		
10% C ₃ H ₈ / 1% 1,1-Dichloroethylene balance N ₂ *					X	
100% C ₃ H ₈						X

* VP restricted

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

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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 Method 25 Calibration Standards.

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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 an EPA Method 25 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 EPA Method 25 Standards.

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Standard Available Cylinders

Cylinder Size	Volume	Pressure	CGA
2A	4000 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

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