

# Supelco™ Chemical Standards for US EPA Method 8260A

## Product Specification

### Scope and Application

Method 8260 is based on a purge and trap/gas chromatography/mass spectroscopy (GC/MS) procedure. Direct injection may have application for the analysis of some alcohols and aldehydes in aqueous samples. In the purge and trap procedure, purged sample components are trapped in a tube containing suitable sorbent materials. When purging is complete, the sorbent tube is heated and backflushed with helium to desorb the trapped analytes to the chromatography column. The analytes can be desorbed directly to a large bore capillary column or can be cryofocused on a capillary precolumn, then flash evaporated to a narrow bore capillary column. The column is temperature programmed to separate the analytes, which are detected with a mass spectrometer interfaced to the gas chromatograph. A wide bore capillary column requires a jet separator; a narrow bore capillary column can be directly interfaced to the ion source.

This method is applicable to nearly all types of samples, regardless of water content, including groundwater, aqueous sludges, caustic liquors, acid liquors, waste solvents, oily wastes, mounds, tars, fibrous wastes, polymeric emulsions, filter cakes, spent carbons, spent catalysts, soils, and sediments.

Use Method 8260 to quantify most volatile organic compounds that have boiling points below 200°C, and that are insoluble or slightly soluble in water, in a variety of solid waste matrices. Volatile water-soluble compounds can be included in this analytical technique, but quantification limits for more soluble compounds are approximately ten times higher because of poor purging efficiency. Such compounds include low molecular weight halogenated hydrocarbons, aromatics, ketones, nitriles, acetates, acrylates, ethers, and sulfides. Refer to the method for lists of analytes for which Method 8260 is suitable.

### Supelco Chemical Standards

#### Lot Specific Data

You can obtain lot-specific information about our environmental chemical standards through our automated ChromFax document retrieval system.

For single- or multi-component standards, you can obtain a fax of the certificate of analysis and a lot-specific chromatogram containing the test conditions.

Simply dial ChromFax (see ChromFax Service in the index of our catalog for instructions), and follow the prompts to the directory for chemical standards quality control. When you are asked for the document number, enter the numeric part of the lot number of your chemical standard (ignore letters). You will receive, within minutes, a fax containing the data you requested.

#### Custom Standards

For a copy of the free Custom Standard Brochure (publication T61 3003), listing many hundreds of raw materials and complete, easy-to-use ordering information, or to order, contact our Order Processing Department or your local Supelco representative.

For assistance in determining your needs, or for a quote on a custom standard, contact our Custom Standards Group or your local Supelco representative.

### Ordering Information:

#### Calibration Standards

##### VOC Calibration Standards Kit

48804

1 mL of each of the following products.

VOC Mix 1 (4-8775)	VOC Mix 4 (4-8786)
VOC Mix 2 (4-8777)	VOC Mix 5 (4-8797)
VOC Mix 3 (4-8779)	VOC Mix 6 (4-8799)

##### Volatile Organic Compounds Mix 1

2S!

2000 µg/mL each component in methanol.

sec-Butylbenzene	1,3-Dichlorobenzene
tert-Butylbenzene	1,4-Dichlorobenzene
Chlorobenzene	Isopropylbenzene
2-Chlorotoluene	n-Propylbenzene
4-Chlorotoluene	o-Xylene
1,2-Dichlorobenzene	p-Xylene

1 mL

48775

1 mL

458775

##### Volatile Organic Compounds Mix 2

2S!

2000 µg/mL each component in methanol.

Benzene	Toluene
Bromobenzene	1,2,3-Trichlorobenzene
n-Butylbenzene	1,2,4-Trichlorobenzene
Ethylbenzene	1,2,4-Trimethylbenzene
p-Isopropyltoluene	1,3,5-Trimethylbenzene
Naphthalene	m-Xylene
Styrene	

1 mL

48777

1 mL

458777

##### Volatile Organic Compounds Mix 3

2S!

2000 µg/mL each component in methanol.

1,2-Dibromo-3-chloropropane	trans-1,3-Dichloropropene <sup>■</sup>
1,2-Dibromoethane	Hexachlorobutadiene
1,2-Dichloroethane	1,1,1,2-Tetrachloroethane
1,2-Dichloropropane	1,1,2,2-Tetrachloroethane
1,3-Dichloropropane	1,1,2-Trichloroethane
1,1-Dichloropropylene	Trichloroethylene
cis-1,3-Dichloropropene <sup>■</sup>	1,2,3-Trichloropropane

1 mL

48779-U

1 mL

458779

##### Volatile Organic Compounds Mix 4

2S!

2000 µg/mL each component in methanol.

Bromochloromethane	1,1-Dichloroethane
Bromoform	2,2-Dichloropropane
Carbon tetrachloride	Tetrachloroethylene
Chloroform	1,1,1-Trichloroethane
Dibromomethane	

1 mL

48786

1 mL

458786

Data Packets are available for these products. Please inquire.

### Volatile Organic Compounds Mix 5

2000µg/mL each component in methanol.

Bromodichloromethane	cis-1,2-Dichloroethene
Dibromochloromethane	trans-1,2-Dichloroethene
1,1-Dichloroethylene	Methylene chloride

1 mL 48797  
1 mL 4S8797

### Volatile Organic Compounds Mix 6

2000µg/mL each component in methanol.

Bromomethane	Dichlorodifluoromethane
Chloroethane	Trichlorofluoromethane
Chloromethane	Vinyl chloride

1 mL 48799  
1 mL 4S8799

### 2S! EPA 8240B/8260A GC/MS Tuning Mix

25µg/mL 4-Bromofluorobenzene in methanol.

1 mL	47077
4 x 1 mL	47414

or

### 4-Bromofluorobenzene

25,000µg/mL in methanol.

1 mL	48800
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### 8270 GC/MS Tuning Solution

50µg/mL each component in methylene chloride.

Benzidine	DFTPP
4,4'-DDT	Pentachlorophenol

1 mL 47387

## Internal Standards

### EPA 8260A Internal Standards Mix

2000µg/mL each component in methanol.

Chlorobenzene-d <sub>5</sub>	1,4-Difluorobenzene
1,4-Dichlorobenzene-d <sub>4</sub>	Pentafluorobenzene

1 mL 48958

### EPA 8260A Internal Standards Mix

25µg/mL each component in methanol.

Chlorobenzene-d <sub>5</sub>	1,4-Difluorobenzene
1,4-Dichlorobenzene-d <sub>4</sub>	Pentafluorobenzene

1 mL 47392

## Surrogate Standards

### EPA 8260A Surrogate Standards Mix

2000µg/mL each component in methanol.

4-Bromofluorobenzene
Dibromofluoromethane
Toluene-d <sub>8</sub>

1 mL 48959

### EPA 8260A Surrogate Standards Mix

250µg/mL each component in methanol.

4-Bromofluorobenzene
Dibromofluoromethane
Toluene-d <sub>8</sub>

10 x 1 mL 47393

### EPA 8240B/8260A Matrix Spike Mix

25µg/mL each component in methanol.

Benzene	Toluene
Chlorobenzene	Trichloroethene
1,1-Dichloroethene	

1 mL 47075-U  
10 x 1 mL 47412

## System Performance Check Compounds

### 8240B/8260A System Performance Check Compounds

2000µg/mL each component in methanol.

Bromoform	1,1-Dichloroethane
Chlorobenzene	1,1,2,2-Tetrachloroethane
Chloromethane	

1 mL 4-7389

### EPA 8240B/8260A Calibration Check Compounds 2S!

2000µg/mL each component in methanol.

Chloroform	Ethylbenzene
1,1-Dichloroethene	Toluene
1,2-Dichloropropane	Vinyl chloride

1 mL 47385-U  
1 mL 4S7385

## Data Packets are available for these products. Please inquire.

■ cis and trans 1,3-dichloropropene are available from only one raw material source.

2S! indicates standards of identical composition, prepared from raw materials obtained from different sources (Separate Source™ standards).

### Reference

Obtain a current copy of the SW-846 manual, which includes Method 8260 and other 8000 series methods, from:

National Technical Information Service (NTIS)

5285 Port Royal Road

Springfield, VA 22161

Phone: 703-487-4650

Order Document #: PB-89-148-076

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for expert answers to your questions.

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