

# 2020 Liberty Mutual Insurance Industrial Hygiene Lab sampling guide

AIHA-LAP, LLC Laboratory ID # LAP-100045

### Contact us for assistance:

lmihlaboratory@libertymutual.com
or
1-800-230-6263



Liberty Mutual Insurance Industrial Hygiene Laboratory (LMIHL) provides analytical services to assist customers with safety issues related to occupational disease exposure in their workplace.

# **Comprehensive service includes:**

- · Method development or validation
- Technical consultation
- Training
- · Sample Analyses:
  - Aldehydes
  - Organic and Inorganic acids
  - Amines
  - Pharmaceuticals
  - Asbestos fiber counting and bulk identification
  - Silica
  - Medical gas analysis

- Common and specialty metals
- Grade D breathing air analysis
- Common and specialty organic solvents
- Scans metals, solvent, acids, aldehydes, isocyanates, etc.
- Gravimetrics for total, respirable or inhalable dust

Liberty Mutual SafetyNet $^{TM}$  is your source for chain of custody and media order forms as well as the Fee Schedule. You may also contact the lab.

Telephone assistance: 1-800-230-6263

Telephone assistance is available to all our customers from 7:30AM – 6PM, Eastern Time. We encourage our customers to call us with their technical questions relating to proper sampling and media selection. Listed below is our support team.

- Ethel T. Patricio, MS, Laboratory Director, ext. 27352 or 508-544-5352
- Eva Longo, MS, Prod/QC Chemist Consultant, ext 27338 or 508-544-5338
- · Laura Melton, MS, Prod/QC Chemist Consultant, ext 27348 or 508-544-5348
- Srima Gulavita, MS, Prod/QC Chemist Consultant, ext. 27380 or 508-544-5380

# **Analysis turnaround time**

The Laboratory's standard turnaround time is 5 business days or better from the receipt of samples. Samples received after 3PM are considered next day's samples. Results are provided by email only. Rush analysis for routine samples can be arranged with prior notification. Verbal results are also available after data has been approved for release by the QC coordinator.

#### The following surcharges apply for RUSH requests:

One business day 200% surcharge
Two business days 150% surcharge
Three business days 75% surcharge

**Note:** Certain Specialty Analysis cannot be done on a rush basis. Contact the laboratory at least 24 hours before shipping your samples for RUSH analysis.

# Discounts for multiple analytes on the same media

The price listed for each individual analyte is the price for a single analyte per sample. Analysis for multiple compatible analytes collected on the same media is available at a discounted fee. The higher priced analyte is billed at the published fee with additional analytes discounted as follows:

Organics on OVM/sorbent tubes \$32

Metals by ICP \$26

IC \$44

HPLC/Specialty see Fee Schedule

#### **Payment terms**

The total cost of the services provided by the LMIH Laboratory will be based on the quoted rate. Prices are subject to change without notice. Payment term is net 30 days if you are paying by check.

#### **Blanks**

Blanks are required by all analytical methods and are good insurance for dealing with contamination. Contamination can occur during handling, storing or shipping samples. Therefore, as standard good IH practice, field blanks are recommended. The recommended number of field blanks per sample set is 10% of the total number of samples, or a minimum of 1 blank per set of 10 samples. Since blanks are analyzed as any other sample, they are priced according to the analysis requested.

#### Media

Common media such as charcoal tubes, pre-weighed filters, etc. are provided at no extra cost as long as the samples and unused media are returned to the laboratory for analysis within 30 days. Unreturned media after 30 days will be charged at cost. Specialty media that cannot be reused, such as isocyanate filters, aldehyde badges and tubes, ozone filters, etc. will be invoiced at cost. Media are shipped UPS ground at no charge to the client. Rush and international shipments will be billed to the client at cost.

- · Request by email using the media order form.
- Return shipping is the responsibility of the customer.

Please note that there will be media charge for specialty filters (e.g. hydrogen peroxide) and sampling devices such as PPI.

# Sample collection and sample submission

#### Sampling collection supplies

We provide free collection supplies (wipes, templates, gloves, plastic bags, coolers, etc.) and ship them to you via UPS ground. Clients requesting Rush delivery either within or outside the U.S. will be billed at cost. It is the client's responsibility to ensure proper sampling, handling, packing (returning the cooler with frozen packs) and return shipping to the laboratory.

Chain-of-custody forms will be provided with every media and equipment order; please complete the form and submit with your samples. The chain-of-custody forms are also available on Liberty Mutual SafetyNet<sup>TM</sup>.

#### Sample minimum

When Preparing samples for analysis, please note that some analyses require a three (3) sample minimum fee to cover the cost of method set-up for non-routine analysis.

# Special handling and shipping

Most NIOSH and OSHA methods indicate that solvent samples are stable at room temperature. LM IH Laboratory recommends shipping samples cold overnight especially during the summer months. Please refer to the list of Analytes for additional instructions. These guidelines must be followed in order to ensure the integrity and validity of the samples.

#### **Bulk sample submissions**

Certain analysis requires the submission of bulks. Bulks should always be packaged and shipped separately from the samples. Safety Data Sheets (SDS) must accompany the bulk samples.

# **Analytical results**

LMIHL reserves the right to determine appropriate format in which the analytical results are reported. All results are provided for the exclusive use of our client. LMIHL accepts no responsibility or liability for the client's use of the analytical results.

LMIHL may release verbal or email results in ahead of the written report. These results are tentative and subject to subsequent confirmation or modification during LMIHL peer review process.

LMIHL requires precise and complete instruction before it releases any reports. Any later request will require written permission from submitter.

# Free pump loan program

We loan pre-calibrated sampling pumps and accessories to customers for a period of two (2) weeks at no cost if the samples are returned to the lab for analysis. All equipment is loaned on a first-come, first-serve basis. As a result, there may be instances when the equipment is not available at the time of your request. We suggest submitting your request for equipment at least one week prior to your scheduled sampling activity.

At the end of the two week period, all equipment must be returned and collected samples sent for analysis to the LMIH Lab. Equipment not returned after the two week period will incur an equipment rental charge. Contact your local Loss Control Representative or the LMIH lab for information/questions (<a href="mailto:lmihlaboratory@libertymutual.com">lmihlaboratory@libertymutual.com</a> or 800-230-6263 ext. 27371) regarding your sampling needs.

#### **Scans**

# The scans performed by the laboratory are listed below. We can also customize scans.

Aldehyde scan (Glutaral	dehyde is	collected and an	alyzed separate	ly)		
Acetaldehyde	Benzald	ehyde	Formaldehyde	Formaldehyde Valeraldehyd		
Acrolein	n-Butyra	aldehyde	Propionaldehy	⁄de		
Aliphatic amine scan (NI	OSH 2010	)				
(Please call Lab for other	aliphatic a	amines)				
Ethylamine		Diethylamine		Trieth	ylamine	
Aromatic amine scan						
(Please call Lab for other	aromatic	amines)				
Aniline		Methyl aniline		o-Tolu	idine	
Anesthetic gases scan (	Nitrous ox	ide is collected a	and analyzed sep	parately)		
Desflurane (Suprane)		Halothane (Fluothane)		Sevof	evoflurane (Sevofrane)	
Enflurane (Ethrane)		Isoflurane (Forane)				
Inorganic acid scan						
Bromide		Fluoride	Phos		phate	
Chloride		Nitrate	Sulfate		е	
Isocyanate scan						
Hexamethylene diisocya	nate (HDI)		Isophorone di	ne diisocyanate (IPDI)		
4,4-Methylene bisphenyl	isocyanat	e (MDI)	2,4-Toluene diisocyanate (2,4-TDI)		e (2,4-TDI)	
2,6-Toluene diisocyanate	(2,6-TDI)					
Metals — Liberty's 20-M	etal scan					
Aluminum	Cadmiur	n	Lead		Tin	
Antimony	Chromium		Magnesium		Titanium	
Arsenic	Cobalt		Manganese		Thallium	
Beryllium	Copper		Nickel Vanadium pentoxic		Vanadium pentoxide as V	
Calcium	Iron		Selenium Zinc		Zinc	

Metals — 13-Metal scan (welding fume scan)					
Antimony	Cobalt	Manganese	Vanadium pentoxide as V		
Beryllium	Copper	Molybdenum	Zinc		
Cadmium	Iron	Nickel			
Chromium	Lead				

Organic acid scan			
Acetic acid	Butyric acid	Formic acid	Propionic acid

Organic solvents (GC/MS) scan						
(Qualitative analysis. For quantitative analysis please call lab.)						
Acetone	Dimethyl formamide (DMF)	Methyl amyl ketone (MAK)				
Acetonitrile	1,4-Dioxane	Methyl cyclopentane				
Acrylonitrile	Epichlorohydrin	Methyl ethyl ketone (MEK)				
n-Amyl acetate	Ethanol	Methyl isoamyl ketone (MIAK)				
Benzene	Ethyl acetate	Methyl isobutyl ketone (MIBK)				
Sec-Butanol	Propylene glycol methyl	Methyl propyl ketone (MPK)				
n-Butyl acetate	ether acetate (PGMEA)	Methyl t-butyl ether (MTBE)				
s-Butyl acetate	Propylene glycol monomethyl	a-Methyl styrene				
n-Butyl acrylate	ether (PGME)	Methylene chloride				
n-Butyl alcohol	Styrene	Methyl methacrylate				
Butyl cellosolve (2-Butoxyethanol)	utyl cellosolve (2-Butoxyethanol) Tetrahydrofuran					
Butyl cellosove acetate	tyl cellosove acetate Toluene					
Carbon tetrachloride	1,1,1-Trichlorethane	Perchloroethylene				
Cellosolve (2-Ethoxyethanol)	Propylene glycol butyl ether (PGBE)	a-Pinene				
Cellosolve acetate	Ethyl lactate	n-Propanol				
Chlorobenzene	Ethyl benzene	2-Propoxyethanol				
Chloroform	1-Ethoxy-2-propyl acetate	n-Propyl acetate				
o-Chlorotoluene	Heptane	Ethyl acrylate				
Cumene	Hexane	1,1,2-Trichloroethane				
Cyclohexanone	Isobutanol	Trichloroethylene				
Diacetone alcohol	Isobutyl acetate	1,2,4-Trimethylbenzene				
1,1-Dichloroethane	Isopropanol	1,3,5-Trimethylbenzene				
1,2-Dichloroethane	Isopropyl acetate	Vinyl acetate				
1,2-Dichloroethylene	d-Limonene	Xylene				
Diisobutyl ketone	Methyl acetate					

PNAs (NIOSH 5506)						
Acenaphthene	Benzo[b]fluoranthene	Chrysene	Indeno[1,2,3-cd]pyrene			
Acenaphthylene	Benzo[k]fluoranthene	Dibenz[a,h]anthracene	Naphthalene			
Anthracene	Benzo[ghi]perylene	Fluoranthene	Phenanthrene			
Benz[a]anthracene	Benzo[a]pyrene	Fluorene	Pyrene			

PNAs (OSHA 58)				
Anthracene	Chrysene	Pyrene		
Benzo[a]pyrene	Phenanthrene			

# Sampling guide analyte descriptions and abbreviations

The following information is included in the Sample Guide's alphabetical listing of analytes:

Analyte Analytes are listed by their common name in alphabetical order in this sampling guide. The synonyms are listed within parenthesis.

TVOC stands for Total Volatile Organic Compounds. VM&P Naphtha stands for Varnish Makers and Painters Naphtha.

CAS# Chemical Abstract Service number for

the compound to be sampled.

# **Analytical method**

This specifies the preferred analytical method used by Liberty Mutual for the analysis of the compound.

**ASTM** American Society for Testing and Materials

Ciba-Geigy Ciba-Geigy In-House Method for 1,3,5-triglycidyl isocyanurate

**DuPont** DuPont In-House Method for Perfluorooctanoic Acid

HSE MDHS UK Health & Safety Executive Methods for the

Determination of Hazardous Substances

LMI Liberty Mutual Insurance "in-house" analytical methods

NIOSH Manual of Analytical Methods

OSHA Manual of Analytical Methods

YAMATE LEVEL II Airborne Asbestos by Transmission Electron Microscopy

# **Analytical technique**

**FTIR** 

AA Atomic absorption spectrophotometry

**AA-CV** Cold vapor atomic absorption spectrophotometry

**EGA-TDA** Evolved gas analysis-thermo dilatometric analyzer

**GC-DID** Gas chromatography with pulsed discharge ionization detector

GC-ECD Gas chromatography with electron capture detector

Fourier Transform Infrared spectrophotometry

GC-FID Gas chromatography with flame ionization detector

GC-MS Gas chromatography-mass spectrometry

GC-NPD Gas chromatography with nitrogen phosphorus detector

GC-TCD Gas chromatography with thermal conductivity detector

GC-XSD Gas chromatography with halogen specific detector

**GFAA** Graphite furnace atomic absorption spectrophotometry

**GRAV** Gravimetric analysis

**HPLC** High performance liquid chromatography

IC Ion chromatography

ICP Inductively coupled plasma spectroscopy

ICP-MS Inductively coupled plasma spectroscopy - mass spectrometry

ISE Ion selective electrode

LC-MS High performance liquid chromatography - mass spectrometry

Phase contrast microscopy **PCM** 

PLM Polarized light microscopy

**TEM** Transmission Electron Microscopy; Energy

dispersive X-ray (EDX) analyzer

UV/VIS UV/VIS spectrophotometry

XRD X-ray diffractometry

#### Sampling media

The recommended sampling media for each of the methods in this sampling guide are:

25mm 0.45um Silver membrane filter (SKC 225-1802) **AgMF** 

Anasorb708 SKC Anasorb 708 sorbent tube (SKC 226-30-08) Anasorb747 SKC Anasorb 747 sorbent tube (SKC 226-81A)

Anasorb747/Anasorb747 SKC Anasorb 747 sorbent tube in series (SKC 226-82)

Anasorb747, Treated SKC Anasorb 747 treated with tert-Butyl catechol (SKC 575-006)

> **AT Monitor** Assay Technology monitor for aldehydes (N517AT)

Assay Technology monitor for nitrous oxide (X575AT) **AT N20 Monitor** 

> **Bulk** Bulk sample tube

Cellulose Nitrate, Na2CO3 Cellulose nitrate filter treated with sodium carbonate (SKC 225-9031)

> **Carulite** Sorbent tube for mercury, replaces Hopcalite (SKC 226-17-1A/3A)

CS106 Chromosorb 106 sorbent tube (SKC 226-111A)

Charcoal tube (SKC 226-01, 226-09) CT

2 Charcoal tubes in series CT-CT

CT, KOH Potassium hydroxide treated Anasorb CSC

coconut charcoal tube (SKC 226-67)

Cylinder 300cc Aluminum cylinder

di H20 Deionized water

> **GFF** Glass fiber filter

**GFF, 1-2PP** 1-(2-Pyridyl)piperazine treated glass fiber filter

GFF, Acid Sulfuric acid treated glass fiber filter

GFF, HBr Hydrogen bromide treated glass fiber filter

**GFF-Florisil** Millipore Swinnex 13 with glass fiber filter (SX0001300/-01/

AP2001300) -Florisil tube (SKC 226-39) in series

IOM sampler with glass fiber filter **GFF, IOM** 

Millipore Swinnex 13 with glass fiber filter (SX0001300/-01 / **GFF-SGT** 

AP2001300) -silica gel tube (SKC 226-10) in series

GFF, NaNO2 Sodium nitrite treated glass fiber filter

Glass fiber filter coated with 10 mg of veratrylamine **GFF,Vamine** 

GFF- PE,HgCl2 Glass fiber filter -polyester filter treated with

mercuric chloride in series (SKC 225-9018)

**Ghost wipe** SKC wipe for surface lead or other metals (SKC 225-2414)

**IABC** Impregnated activated beaded carbon (SKC 226-80)

Impinger 4 IOM MCE	Midget fritted glass bubbler containing 0.02% potassium iodide in sodium carbonate/sodium bicarbonate buffer Personal inhalable sampler developed at the Institute of Occupational Medicine (IOM) in Scotland Mixed cellulose ester filter membrane ((Zefon 728 MCE))
MCE2	Mixed cellulose ester filter membrane, 0.8µm, 25mm (Zefon 528 MCE) Mixed cellulose nitrate (SKC 225-9032)
MCE, 25mm 0.8um	Zefon PCM air sampling cassettes with conductive cowl (ZEFON Z008BA)
MCE, 25mm 0.45um	Zefon TEM air sampling cassettes with conductive cowl (ZEFON Z045BA)
MCE,carbonate	Mixed cellulose ester filter treated with 20:1 sodium carbonate: glycerol solution
MCE-CS102	Mixed cellulose ester filter-Chromosorb 102 tube (SKC 226-104)
MCE, SGT**	Mixed cellulose ester filter — SKC specially cleaned silica gel tube (226-10-03)
ORBO 34	Supelco specially treated charcoal tube for H2S (20211)
ORBO 77	Supelco carbon beads treated with sulfuric acid for ammonia(20036)
ORBO 78	Supelco Carboxen-564 carbon molecular sieve treated with hydrogen bromide (20355)
ORBO 92	Supelco Carboxen-564 carbon molecular sieve (20362)
OVM 3530	3M 3500 organic vapor monitor
OVM 3520 OVM 3551	3M 3520 organic vapor monitor with backup section
OVS-2/GFF	3M 3551 organic vapor monitor for ethylene oxide
0VS-2/QF	SKC XAD-2/glass fiber filter sorbent tube (226-30-16 OVS)
0VS-2/QF 0VS-7	SKC XAD-2/quartz filter sorbent tube (226-58 OVS) SKC XAD-7/glass fiber filter sorbent tube (226-57 OVS)
OVS-Tenax	SKC tenax/glass fiber filter sorbent tube (226-56 OVS)
Oxidizer	SKC oxidizer with TEA-IMS for nitric oxide sampling
PS	SKC 520 inorganic mercury passive sampler (520-02A/03)
Paint chips	Paint chips sample in polyethylene bag
Porapak-P	SKC Porapak-P tube (226-114)
Porapak-Q	SKC Porapak-V tube (226-115)
PTFE	25mm 0.5um Polytetrafluoroethylene (PTFE) filter (SKC 225-1708)
PTFE1	37mm 1.0um Polytetrafluoroethylene (PTFE) filter (Zefon FPTFE137)
PTFE3	37mm 5.0um Polytetrafluoroethylene (PTFE) filter (SKC 225-17A)
PTFE4	PALL Life Sciences 47mm, 0.45um polytetrafluoroethylene (Teflon) filter (TF-450, P/N 66149)
PTFE5	25mm 1.0um Polytetrafluoroethylene (PTFE) filter (SKC 225-2714)
PTFE-SGT	Teflon filter-silica gel tube in series
PTFE/XAD2	Teflon filter-XAD-2 tube in series
PTFE-AgMF	SKC polytetrafluoroethylene (Teflon) filter-silver membrane filter in series (225-1708) (225-1802)
PVC	37mm 5.0um pre-weighed polyvinyl chloride filter (SKC 225-5-37-P)
PVC-KOH	Polyvinyl chloride filter- Midget fritted glass bubbler containing 0.1 N potassium hydroxide in series
QFF	Quartz fiber filter (Millipore AQFA03700)

Quartz fiber filter (SKC 225-9030) QFF, titanium oxysulfate QFF, Na2CO3 Quartz fiber filter (Millipore AQFA03700) treated with sodium carbonate (SKC 225-9032) Sep-Pak Waters dinitrophenylhydrazine (DNPH) treated cartridge for aldehydes (WAT047205) Silica gel tube (SKC 226-10) with sorbent 75/150 mg SGT Silica gel tube (SKC 226-51) with sorbent 50/100 mg SGT SGT\*\* SKC specially cleaned silica gel tube (226-10-03) SGT,Acid SKC sulfuric acid treated silica gel tube (226-10-06) SGT, DNPH SKC dinitrophenylhydrazine impregnated silica gel tube (226-119) SGT/GFF-SGT/GFF 2 specially washed and dried silica gel tubes in series (SKC 226-183) SGT, HqCl2 SKC mercuric chloride coated silica gel tube (226-10-02) Soda Lime SKC soda lime tube (226-210) **TEA-IMS** Triethanolamine-impregnated molecular sieve tube (SKC 226-40-02 / 226-40A with oxidizer) Tenax SKC tenax tube (226-35/226-35-01) Whatman 42 Whatman 1442-070 XAD-2 SKC sorbent tube (226-30/226-30-04/226-30-06) XAD-2,NITC SKC sorbent tube coated with 10% 1-naphthylisothiocyanate (NITC) (226-30-18) SKC sorbent tube (50/100) coated with 0.5mg of p-Anisidine (226-30-07) XAD-2,p-An SKC sorbent tube (226-95) XAD-7 SKC XAD-7 sorbent (1,2-Dichloroethane) t tube XAD-7, Acid treated with 10% phosphoric acid (226-98)

# Sampling rate (flow rate)

For passive monitors (OVM and AT monitor): cc/min. For all other compounds listed in the guide: liters per minute (lpm).

The sampling time in minutes for passive monitors and the sampling volume range indicates the minimum and maximum volume in liters. For bulk samples, the amount needed is listed in grams in this column. Minimum volumes are typically calculated to allow quantification at 10% of the occupational exposure limits unless otherwise stated.

# LOQ (Limit of Quantitation)/LOD (Limit of Detection)

Limit of Quantification and Limit of Detection are reported to two significant digits: %-Percent for bulk sample, fib/fld- Fibers per field, and µg- Micrograms/sample.

# Compatibility code

This code indicates analytes that can be collected and analyzed simultaneously on a single sample. The absence of a code means that the analyte is not compatible with other analytes and would need to be collected on separate samples. The codes are as follows:

1%DMF/CS <sub>2</sub>	Desorption in 1% dimethylformamide in carbon disulfide
1%IPA/CS <sub>2</sub>	Desorption in 1% isopropanol in carbon disulfide
1%PRO/CS <sub>2</sub>	Desorption in 1% n-propanol in carbon disulfide
5%IPA	Desorption in 5% isopropanol in deionized water
5% IPA/ CS <sub>2</sub>	Desorption in 5% isopropanol in carbon disulfide
5%PRO/CS <sub>2</sub>	Desorption in 5% n-propanol in carbon disulfide
95%EtOH	Desorption in 95% ethanol in deionized water

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AC/CS<sub>2</sub>
                 Desorption in 2% acetone in carbon disulfide
    AC/MeOH
                 Desorption in 1% methanol in acetone
        Acid1
                 Inorganic acids group 1 (see List of Scans for Inorganic Acids)
        Acid2
                 Organic acids group 2 (formic acid, acetic acid, butyric acid, and propionic acid)
         ACN
                 Desorption in acetonitrile
     ACN/TOL
                 Desorption in 50% acetonitrile/toluene
  ACN/DMSO
                 Desorption in 90% acetonitrile/dimethylsulfoxide
      Acetone
                 Desorption in acetone
     Aldehyde
                Aldehyde group
                Aliphatic amine group by GC-FID
      Amine1
      Amine2
                Aliphatic amine group by HPLC
      Amine3
                Aromatic amine group
     Benzene
                Desorption in benzene
     BUT/CS<sub>2</sub>
                Desorption in 1% 2-butanol in carbon disulfide
          CCI<sub>4</sub>
                Desorption in carbon tetrachloride
                Chlorine and bromine
      Cl<sub>2</sub>&Br<sub>2</sub>
          CS_2
                Desorption in carbon disulfide
       dil acid
                Diluted sulfuric acid
     DMF/CS<sub>2</sub>
                 Desorption in 50% dimethylformamide in carbon disulfide
           EA
                Ethanolamine/diethanolamine/triethanolamine
 Ethyl Acetate
                 Desorption in ethyl acetate
   Ethyl Ether
                 Desorption in ethyl ether
           FA
                Desorption in formic acid
   Isocyanate
                Isocyanate and diisocyanate group
          MC
                Desorption in methylene chloride
        MeOH
                Desorption in methanol
                Desorption in 1% methanol in carbon disulfide
   MeOH/CS<sub>2</sub>
  %MeOH/MC
                Desorption in mixture of methanol and methylene chloride
       Metals
                Metal group by either NIOSH 7301 or OSHA ID-125G
       Metal1
                Compatible metal group by modified NIOSH 7300 method
       Metal2
                Compatible metal group by modified OSHA ID-121 method
                Nitric oxide and nitrogen dioxide
     NO&NO<sub>2</sub>
Phenol&cresol Phenol and cresol group
        PNAs Polynuclear aromatic hydrocarbons
        Silica by XRD
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#### **Interferences**

Tol

This column lists the possible interferences as stated in the analytical method.

Desorption in toluene

#### **Comments**

This column contains special instructions for sample collection and handling.

# Notes for gas analysis in comments

#### Note 1, Breathing air: Grade D and Grade E, Collected in Cylinders

Use when sampling a compressed gas line at 50 psig (i.e., before it goes into the regulator of the SCBA). If the pressure is lower than 50 psig, be sure to record the line pressure. This method reports CO,  $CO_2$ ,  $%O_2$ , total hydrocarbons as  $CH_4$  (TH), total halogenated hydrocarbons as  $CCI_4$  (HH) and dew point (DP) in ppm and degrees F at 0 psig. See Procedure for Removing the Cylinder and LOQ at end of notes. Gravimetric analysis for condensed oil (total particulate) requires a 47mm Teflon filter.

#### Note 2, Medical gases - Contamination (NFPA 99)

Use when sampling a compressed medical gas line at 50 psig. When testing medical air, this method reports CO, CO $_2$ , %O $_2$ , total hydrocarbons as CH $_4$  (TH), total halogenated hydrocarbons as CCI $_4$  (HH) and dew point (DP) in ppm and degrees C at 50 psig. When testing nitrogen, this method reports CO, CO $_2$ , total hydrocarbons as CH $_4$  (TH), total halogenated hydrocarbons as CCI $_4$  (HH) and dew point (DP) in ppm and degrees C at 50 psig. For oxygen, this method reports the same as medical air, except dew point. For nitrous oxide, this method reports CO, % Air and total halogenated hydrocarbons as CCI $_4$ . See Procedure for Removing the Cylinder and LOQ at end of notes. Gravimetric analysis for condensed oil (total particulate) requires a 47-mm Teflon filter. The minimum sampling time for the gravimetric sample is 10 minutes in order to sample at least 1000 liters of gas, at 50 psig.

# Procedure for removing the cylinder

A common mistake is removing the cylinder and the "A" fixture together. The correct steps are: Remove fixture "B." The pop-off valve will activate. Remove the cylinder from fixture "A", then remove fixture "A" from the gas line. Please refer to sampling instructions. Failure to follow the sampling instructions will result in the cylinder not being pressurized. **Samples that are not pressurized cannot be analyzed.** 

# Limits of quantification

GAS
Grade D&E
Medical Air
Nitrogen
Oxygen
Nitrous Oxide

Grav.	Air	СО	CO <sub>2</sub>	Dew Pt	<b>0</b> <sub>2</sub>	TH	нн
μg/s	%	ppm	ppm	see notes	%	ppm	ppm
50	NA	0.50	25	200ppm, -32.6°F	0.30	0.50	0.50
50	NA	0.50	25	200ppm, -21.5°C	0.30	0.50	0.50
50	NA	0.50	25	200ppm, -21.5°C	NA	0.50	0.50
50	NA	0.50	25	NA	0.30	0.50	0.50
50	0.15	0.50	NA	NA	NA	NA	0.50

# Fee schedule for common analyses

This fee schedule gives a listing of prices for the most frequently requested analyses, effective April 1, 2019 through March 31, 2021. If the analysis you require is not listed, please contact us for a price estimate.

Metals	First	Additiona
Common metals by ICP <sup>1,4</sup>	\$36	\$26
Beryllium oxide	\$55	
Chromium VI (paint) <sup>1</sup>	\$100	
Chromium VI ( soluble) <sup>1</sup>	\$75	
13 metal scan (welding fume scan) 1,2,4	\$150	
20 metal scan <sup>1,2,4</sup>	\$190	
Microscopy		
Asbestos fiber count (PCM)	\$35	
Asbestos fiber identification (PLM)	\$40	
Gravimetric analysis		
Dust (carbon black (NIOSH 5000), oil mist, respirable, welding fume)	\$27	
Inhalable dust <sup>3</sup>	\$35	
Condensed oil/particulate	\$50	
High performance liquid chromatography (HPLC)		
Common HPLC (aldehydes & isocyanates)	\$95	\$45
Anhydrides (maleic & trimellitic) <sup>3</sup>	\$100	\$50
Amines (if collected on NITC tubes) <sup>3</sup>	\$85	\$45
Aldehyde scan	\$230	
Isocyanate scan	\$190	
Pharmaceuticals <sup>3</sup>	\$110	\$50
Ion chromatography (IC)		
Common IC (inorganic acids, anion & cation) <sup>4</sup>	\$65	\$44
Chlorine dioxide <sup>3</sup>	\$70	
Chlorine & bromine <sup>3</sup>	\$75	
Fluorides (gaseous and particulate) 3,4	\$115	
Organic acids (such as formic, acetic, butyric, lactic, propionic)	\$70	\$44
Inorganic and organic acid scan	\$165	
Silica (by XRD)	Air	Bull
Quartz	\$70	\$100
Quartz and cristobalite	\$85	\$130
Quartz, Cristobalite and tridymite	\$105	\$140

#### **Solvents**

Common solvents	First	Additional
Solid sorbent tubes (CT, SGT, etc.)	\$55	\$32
Organic vapor monitors (3M 3500/ 3520)	\$72	\$32
GC/MS Scan (15 analytes quantified)	\$250	

#### Other solvents

\$85	\$50
\$95	\$45
\$105	
\$75	\$40
\$105	\$55
\$70	\$32
\$90	\$45
\$95	
	\$95 \$105 \$75 \$105 \$70 \$90

# Special methods analyses

<u> </u>		
Aminoethanols	\$88	\$45
Asphalt fume (NIOSH 5042)	\$75	
Carbon black (OSHA 196)	\$80	
Coal tar pitch volatile, BSF	\$90	
Cyanide (NIOSH 7904)	\$75	
Gas analysis (medical and Grade D Air)	\$165	
Hydrogen peroxide (OSHA VI-6)/filter <sup>4</sup>	\$85	
Metal working fluids (NIOSH 5524)	\$80	
Oil mist mineral by FTIR (NIOSH 5026) <sup>3</sup>	\$75	
PNA scan (NIOSH 5506)	\$280	
PNA scan (OSHA 58)	\$190	
Specialty metals by ICP	\$55	\$32
Specialty metals by AA (includes mercury)	\$65	\$32
Metals by ICP/MS <sup>3</sup>	\$50	\$32
Organic tin <sup>3</sup>	\$80	

# Prices are subject to change without notice.

# **Special charges**

- 1. Preparation charge applies to bulk and wipes: \$10 per sample.
- 2. Customized reporting: \$40 per report.
- 3. Three sample minimum required.
- 4. Media charge applies to some specialty media such as PPI and treated filters.

# Method development/validation

We partner with our customers to develop new methods for analytical testing, as well as validate existing methods. Please contact the lab for quote on method development or validation costs.

#### Sample blanks

Sample blanks are recommended for all sampling activities and are charged at the same rate as the sample.

#### Sampling guide

Sampling Guide provides further information about air sampling and our lab services. The Sampling Guide may be accessed by contacting the lab (lmihlaboratory@libertymutual.com) or for our policy holders via Liberty Mutual SafetyNet $^{\mathbb{T}}$ .

#### Terms and conditions

The following statements describes the terms and conditions under which the Liberty Mutual Industrial Hygiene Laboratory (LMIHL) operates.

The client is responsible for the condition and custody of all samples prior to receipt, inspection and acceptance by LMIHL.

Methods used by LMIHL to analyze your samples are compliant with NIOSH, OSHA and other regulatory agencies. LMIHL reserves the right to interpret these methodologies when applying them to the analysis of client's samples based on reasonable, professional judgment of LMIHL personnel and recognized industry standards.

LMIHL reserves the right to use our standard template in reporting analytical results. Where reasonable, we will make every effort to honor requests for special hardcopy or electronic formats if requested in advance. LMIHL requires authorization in writing when requesting additional distribution of lab reports to other than

LMIHL may release reports upon the request of the client either verbally or by email. Such reports are considered tentative and may be subject to modification after completion of QA/QC review.

Report will only contain analytical data. LMIHL is not in the position to interpret data as they pertain to regulations, calculation of time-weighted average exposures from analytical results, etc.

#### **Equipment rental**

the client

Inhalable Samplers: \$20 each per week (two week maximum); Calibrator adaptor: \$10 per week additional.

#### Sampling devices and media

Sampling pumps and compressed gas analysis media

Pre-calibrated air sampling pumps and gas analysis (Grade D, E or Medical Gas) air sampling equipment are loaned at no charge for two weeks. At least one week notice prior to your "need by date" is required by the lab. After two weeks, charges of \$15 per day, per pump, or per gas cylinder or filter will apply.

#### **Return policy**

Media is provided at no cost when returned to laboratory for analysis within 30 days. After 30 days, unreturned media will be invoiced at cost plus shipping. Returned unused specialty media that cannot be reused (isocyanates filters, aldehyde badges, sorbent tubes, ozone filters, etc.) will be charged at cost plus shipping.

#### **Shipping**

UPS ground shipping within the 48 states is provided for sampling media at no extra charge. Return shipping is the client's responsibility. Rush and international shipping charges will be added to analysis fees. Media orders for same day shipping must be submitted by 2 p.m. Eastern Time, Monday through Friday. Media requiring cold shipping cannot be delivered over the weekend. Order the media by contacting the lab.

#### **Common analytes**

Common aldehydes: Acetaldehyde, acrolein, formaldehyde, benzaldehyde, butyraldehyde, valeraldehyde, and propionaldehyde.

Common Isocyanates: Hexamethylene diisocyanate (HDI), Isophorone diisocyanate (IPDI), Methylene bisphenyl isocyanate (MDI), Toluene-2,4-diisocyanate (2,4-TDI), Toluene-2,6-diisocyanate (2,6-TDI).

Common metals: Aluminum, Antimony, Arsenic, Barium, Beryllium, Calcium, Cadmium, Chromium, Cobalt, Copper, Iron, Lanthanum, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Platinum, Potassium, Selenium, Sodium, Silver, Strontium, Tellurium, Tin, Titanium, Thallium, Vanadium, Zinc, Zirconium

**Specialty metals:** Arsenic Trioxide, Arsine, Beryllium Oxide, Bismuth, Boron, Gallium, Germanium, Germane, Gold, Indium, Palladium, Phosphine, Rhodium, Silane, Titanium dioxide, Tungsten, Yttrium

**Welding fume:** Includes antimony, beryllium, cadmium, chromium, cobalt, copper, iron, lead, manganese, molybdenum, nickel, vanadium, zinc.

20 metal scan: Aluminum, Antimony, Arsenic, Beryllium, Calcium, Cadmium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Nickel, Selenium, Tin, Titanium, Thallium, Vanadium, Zinc. Can be customized. Please contact lab.

**Inorganic acid scan:** hydrogen bromide, hydrogen chloride, hydrogen fluoride, nitric acid, phosphoric acid, sulfuric acid.

Organic acid scan: acetic acid, butyric acid, formic acid, propionic acid.

Organo sulfur compounds: carbon disulfide, dimethyl sulfide, etc.

Solvent mixtures: mineral spirits, naphthas, Stoddard solvents, TVOC, kerosene, etc.

# Alphabetical list of analytes

- 24 Acenaphthene (see PNA scan)
- 24 Acenaphthylene (see PNA scan)
- 24 Acetaldehyde
- 24 Acetaldehyde
- 25 Acetic Acid
- 25 Acetic Acid
- 25 Acetic Anhydride
- 25 Acetone
- 26 Acetone
- 26 Acetonitrile
- 26 Acetonitrile
- 26 Acrolein
- 27 Acrolein
- 27 Acrolein
- 27 Acrylamide
- 27 Acrylic Acid
- 28 Acrylonitrile (Vinyl Cyanide)
- 28 Acrylonitrile (Vinyl Cyanide)
- 28 Aldehyde scan
- 28 Aliphatic Amine scan
- 29 Allyl Alcohol
- 29 Allyl Alcohol
- 29 Allyl Bromide
- 29 Allyl Bromide
- 29 Allyl Chloride
- 30 Allyl Chloride
- 30 Aluminum Metal and insoluble compounds
- 30 Aluminum Oxide
- 30 Amines, Aliphatic (see scan for aliphatic amines)

- 31 Amines, Aromatic (see scan for aromatic amines)
- 31 Ammonia
- 31 Ammonium Chloride Fume
- 31 Amyl Acetate
- 32 Amyl Acetate
- 32 Anesthetic Gases scan
- 32 Aniline
- 32 Anthracene (see PNA scan)
- 33 Anthracene (see PNA scan)
- 33 Antimony and compounds as Sb
- 33 Antimony and compounds as Sb
- 33 Aromatic 100
- 34 Aromatic Amine scan
- 34 Arsenic and inorganic compounds, as As
- 34 Arsenic and inorganic compounds, as As
- 35 Arsenic and inorganic compounds, as As
- 35 Arsenic Trioxide as As
- 35 Arsine
- 36 Arsine
- 36 Asbestos (bulk), all forms
- 36 Asbestos (Fibers)
- 36 Asbestos, all forms
- 37 Asbestos, all forms
- 37 Asphalt Fume
- 37 Asphalt Fume as Benzene-Soluble Aerosol
- 38 Barium and soluble compounds as Ba
- 38 Benz[a]anthracene (see PNA scan)
- 38 Benzaldehyde
- 38 Benzaldehyde

- 39 Benzaldehyde
- 39 Benzene
- 39 Benzene
- 39 Benzo[a]pyrene (see PNA scan)
- 40 Benzo[a]pyrene (see PNA scan)
- 40 Benzo[b]fluoranthene (see PNA scan)
- 40 Benzo[e]pyrene
- 40 Benzo[ghi]perylene (see PNA scan)
- 41 Benzo[k]fluoranthene (see PNA scan)
- 41 Benzyl Alcohol
- 41 Benzyl Alcohol
- 41 Benzyl Chloride
- 41 Benzyl Chloride
- 42 Beryllium and compounds as Be
- 42 Beryllium and Compounds as Be
- 42 Beryllium and Compounds as Be
- 43 Biphenyl (Diphenyl)
- 43 Bismuth
- 43 Bisphenol A
- 43 Borate compounds, inorganic
- 44 Breathing Air Grade D, Grade E
- 44 Bromine
- 44 Bromo(1-)-2-Chloroethane
- 44 Bromoform
- 45 Bromoform
- 45 Bromopropane(1-)
- 45 Bromopropane(1-)
- **45** Butadiene(1,3-)
- **46** Butadiene(1,3-)
- 46 Butanedione(2,3-); (Butadione(2,3-), Diacetyl, Diketobutane, Dimethyl Diketone, Dimethylglyoxal)
- 46 Butanone(2-); (Methyl Ethyl Ketone)
- 46 Butanone(2-); (Methyl Ethyl Ketone)
- 47 Butoxyethanol(2-); (Butyl Cellosolve); (EGBE)
- 47 Butoxyethanol(2-); (Butyl Cellosolve); (EGBE)
- 47 Butoxyethoxy(2-(2-)) Ethanol
- 47 Butoxyethoxy(2-(2-)) Ethyl Acetate
- 47 Butoxyethyl(2-) Acetate; (Butyl Cellosolve Acetate); (EGBEA)

- 48 Butoxyethyl(2-) Acetate; (Butyl Cellosolve Acetate); (EGBEA)
- 48 Butyl Acrylate
- 48 Butyl Acrylate
- 48 Butyl Cellosolve Acetate; (2-Butoxyethyl acetate); (EGBEA)
- 48 Butyl Cellosolve Acetate; (2-Butoxyethyl acetate); (EGBEA)
- 49 Butyl Cellosolve; (2-Butoxyethanol); (EGBE)
- 49 Butyl Cellosolve; (2-Butoxyethanol); (EGBE)
- 49 Butyl(n-) Acetate
- 49 Butyl(n-) Acetate
- 49 Butyl(n-) Alcohol
- 50 Butyl(n-) Alcohol
- 50 Butyl(n-) Glycidyl Ether
- 50 Butyl(n-) Glycidyl Ether
- 50 Butyl(sec-) Acetate
- 50 Butyl(sec-) Acetate
- 51 Butyl(sec-) Alcohol
- 51 Butyl(sec-) Alcohol
- 51 Butyl(tert-) Acetate
- 51 Butyl(tert-) Acetate
- 51 Butyl(tert-) Alcohol
- 52 Butyl(tert-) Alcohol
- 52 Butyraldehyde(n-)
- 52 Butyraldehyde(n-)
- 52 Butyraldehyde(n-)
- 53 Butyric Acid
- 53 Cadmium and compounds as Cd
- 53 Cadmium and compounds as Cd
- 54 Cadmium and compounds as Cd
- 54 Calcium
- 54 Calcium Carbonate
- 55 Calcium Carbonate
- 55 Calcium Hydroxide
- 55 Calcium Oxide
- 56 Calcium Oxide
- 56 Calcium Silicate Synthetic Nonfibrous
- 56 Calcium Sulfate (Gypsum)
- 56 Camphor

- 57 Camphor
- 57 Caprolactam
- 57 Carbaryl (SEVIN)
- 57 Carbon Black
- 58 Carbon Black
- 58 Carbon Disulfide
- 58 Carbon Disulfide
- 58 Carbon Tetrachloride (tetrachloromethane)
- 59 Carbon Tetrachloride (tetrachloromethane)
- 59 Cellosolve (2-Ethoxyethanol)
- 59 Cellosolve (2-Ethoxyethanol)
- 59 Ceramic Fibers
- 60 Chlorine
- 60 Chlorine Dioxide
- 60 Chloro(2-)naphthalene
- 60 Chlorobenzene
- 61 Chlorobenzene
- 61 Chlorodiphenyl (Polychlorobiphenyl, 42% Chlorine)
- 61 Chlorodiphenyl (Polychlorobiphenyl, 54% Chlorine)
- 61 Chloroform (Trichloromethane)
- 62 Chloroform (Trichloromethane)
- 62 Chlorophenol(p-)
- 62 Chloroprene(beta-); (2-Chloro-1,3-butadiene)
- 62 Chloroprene(beta-); (2-Chloro-1,3-butadiene)
- 62 Chlorotoluene(o-)
- 63 Chlorotoluene(o-)
- 63 Chlorpyrifos (Dursban)
- 63 Chromium and Inorganic Compounds as Cr
- 64 Chromium and Inorganic compounds as Cr
- 64 Chromium and Inorganic compounds as Cr
- 64 Chromium, Hexavalent compounds as Cr
- 65 Chromium, Hexavalent Compounds as Cr
- 65 Chrysene (see PNA scan)
- 65 Chrysene (see PNA scan)
- 65 Coal Dust Anthracite
- 66 Coal Dust Bituminous
- 66 Coal Tar Pitch Volatiles, as Benzene Soluble Aerosol

- 66 Cobalt and Inorganic compounds as Co
- 67 Cobalt and Inorganic compounds as Co
- 67 Cobalt and Inorganic compounds as Co
- 67 Copper (Fume, Dusts and Mists) as Cu
- 68 Copper (Fume, Dusts and Mists) as Cu
- 68 Copper (Fume, Dusts and Mists) as Cu
- 68 Cotton Dust, Raw
- 69 Cresol, all Isomers
- 69 Cumene
- 69 Cumene
- 69 Cyclohexane
- 70 Cyclohexane
- 70 Cyclohexanol
- 70 Cyclohexanol
- 70 Cyclohexanone
- 70 Cyclohexanone
- 71 Cyclohexylamine
- 71 Cyclopentane
- 71 Cyclopentane
- 71 Desflurane (Suprane)
- 72 Desflurane (Suprane)
- 72 Diacetone Alcohol (4-Hydroxy-4-methyl-2-pentanone)
- 72 Diacetone Alcohol (4-Hydroxy-4-methyl-2-pentanone)
- 72 Diacetyl (Biacetyl, 2,3-Butadione, 2,3-Butanedione, Diketobutane, Dimethyl Diketone, Dimethylglyoxal)
- 73 Dibenzo[a,h]anthracene (see PNA scan)
- 73 Dibromochloropropane (DBCP)
- 73 Dibutyl Ether
- 73 Dibutyl Phthalate
- 74 Dichlorobenzene(o-)
- 74 Dichlorobenzene(o-)
- 74 Dichlorobenzene(p-)
- 74 Dichlorobenzene(p-)
- 74 Dichloroethane(1,1)
- 75 Dichloroethane(1,1)
- 75 Dichloroethylene(1,2-)(trans); (Acetylene dichloride)

- 75 Dichloroethylene(1,2-)(cis); (Acetylene dichloride)
- 75 Dichloroethylene(1,2-)(cis); (Acetylene dichloride)
- 75 Dichloroethylene(1,2-)(trans); (Acetylene dichloride)
- 76 Dichloromethane (Methylene chloride)
- 76 Dichloromethane (Methylene chloride)
- 76 Diesel Exhaust
- 76 Diethanolamine
- 77 Diethyl Ketone (3- Pentanone)
- 77 Diethyl Ketone
- 77 Diethyl Phthalate
- 77 Diethyl Sulfate
- 77 Diethylamine
- 78 Diethylenetriamine
- 78 Diglycidyl Ether of Bisphenol A
- 78 Dimethyl Acetamide
- 78 Dimethyl Acetamide
- 78 Dimethyl Disulfide
- 79 Dimethyl Sulfide
- 79 Dimethyl(2,6-)-4-heptanone (Diisobutyl ketone)
- 79 Dimethyl(2,6-)-4-heptanone (Diisobutyl ketone)
- 79 Dimethylformamide
- 79 Dimethylformamide
- 80 Dioctyl Phthalate
- 80 Dioxane(p-)
- 80 Dioxane(p-)
- 80 Diphenyl (Biphenyl)
- 80 Dipropylene Glycol Methyl Ether (DPGME)
- 81 Dipropylene Glycol Methyl Ether (DPGME)
- 81 Dipropylene Glycol Methyl Ether Acetate (DPGMEA)
- 81 Divinyl Benzene
- 81 Divinyl Benzene
- 81 Enflurane (Ethrane)
- 82 Enflurane (Ethrane)
- 82 Epichlorohydrin (1-Chloro-2,3-epoxy propane)

- 82 Epichlorohydrin (1-Chloro-2,3-epoxy propane)
- 82 Ethanolamine (2-Aminoethanol)
- 82 Ethoxyethanol(2-) (Cellosolve)
- 83 Ethoxyethanol(2-) (Cellosolve)
- 83 Ethoxyethyl(2-) Acetate (Cellosolve acetate)
- 83 Ethoxyethyl(2-) Acetate (Cellosolve acetate)
- 83 Ethyl 2-cyanoacrylate
- 83 Ethyl 3-ethoxypropionate
- 84 Ethyl 3-ethoxypropionate
- 84 Ethyl Acetate
- 84 Ethyl Acetate
- 84 Ethyl Acrylate
- 84 Ethyl Acrylate
- 85 Ethyl Alcohol (Ethanol)
- 85 Ethyl Alcohol (Ethanol)
- 85 Ethyl Benzene
- 85 Ethyl Benzene
- 86 Ethyl Ether
- 86 Ethyl Ether
- 86 Ethyl Lactate
- 86 Ethyl Methacrylate
- 87 Ethylamine
- 87 Ethylene Chlorohydrin (2-Chloroethanol)
- 87 Ethylene Chlorohydrin (2-Chloroethanol)
- 87 Ethylene Dichloride (1,2-Dichloroethane)
- 88 Ethylene Dichloride (1,2-Dichloroethane)
- 88 Ethylene Glycol
- 88 Ethylene Oxide
- 88 Ethylene Oxide
- 89 Ethylenediamine
- 89 Flour Dust
- 89 Fluoranthene (see PNA scan)
- 89 Fluorene (see PNA scan)
- 90 Fluorides, Particulate/Hydrogen Fluoride
- 90 Forane (Isoflurane)
- 90 Forane (Isoflurane)
- 90 Formaldehyde
- 91 Formaldehyde

91	Formaldehyde	101	Hydroquinone (Dihydroxybenzene)
91	Formamide	101	Hydroquinone (Dihydroxybenzene)
91	Formic Acid	101	Indium and Compounds as In
92	Furfural	101	Inorganic Acid Scan
92	Furfuryl Alcohol	102	Iodine and Iodides as I
92	Gasoline	102	Iron Oxide
92	Gasoline	102	Iron Oxide
93	Germanium	102	Iron
93	Glutaraldehyde	103	Isobutyl Acetate
93	Glutaraldehyde	103	Isobutyl Acetate
93	Glutaraldehyde	103	Isobutyl Alcohol
94	Gold	103	Isobutyl Alcohol
94	Grain Dust	104	Isocyanate Scan
94	Graphite	104	Isoflurane (Forane)
94	Halothane (Fluothane)	104	Isoflurane (Forane)
95	Halothane (Fluothane)	104	Isooctane
95	Heptane	105	Isooctane
95	Heptane	105	Isophorone
95	Heptanone(2-) (Methyl Amyl Ketone)	105	Isophorone
95	Heptanone(2-) (Methyl Amyl Ketone)	105	Isophorone Diisocyanate (IPDI)
96	Hexamethylene Diisocyanate (1,6-	106	Isophorone Diisocyanate (IPDI)
96	) Homopolymer (HDI Homo)	106	Isopropyl Acetate
90	Hexamethylene Diisocyanate (1,6- ) Homopolymer (HDI Homo)	106	Isopropyl Acetate
96	Hexamethylene Diisocyanate (1,6-) (HDI)	106	Isopropyl Alcohol (Isopropanol)
97	Hexamethylene Diisocyanate (1,6-) (HDI)	107	Isopropyl Alcohol (Isopropanol)
97	Hexane(n-)	107	Kaolin
97	Hexane(n-)	107	Kerosene
97	Hexyl Acrylate	107	Kerosene
98	Hexylene Glycol (2-Methyl-2,4-pentanediol)	108	Lactic Acid
98	Hydrazine	108	Lanthanum
98	Hydrogen Bromide	108	Lead and Inorganic Compounds as Pb
98	Hydrogen Bromide	108	Lead and Inorganic Compounds as Pb
99	Hydrogen Chloride	109	Lead and Inorganic Compounds as Pb
99	Hydrogen Chloride	109	Lead and Inorganic Compounds as Pb
99	Hydrogen Cyanide	109	Lead Chromate as Cr(VI)
100	Cyanide Salts as CN	110	Limonene(d-)
100	Hydrogen Fluoride, as F	110	Limonene(d-)
100	Hydrogen Peroxide	110	Lithium Salts
100	Hydrogen Sulfide	110	Magnesium

- 111 Magnesium Oxide
- 111 Magnesium Oxide
- 111 Magnesium Oxide
- 111 Maleic Anhydride
- 112 Maleic Anhydride
- 112 Manganese, Elemental and Inorganic compounds as Mn
- 112 Manganese, Elemental and Inorganic compounds as Mn
- 113 Manganese, elemental and Inorganic compounds as Mn
- 113 Medical Gases
- 113 Mercury as Hg (Elemental and inorganic forms)
- 114 Mercury as Hg (Elemental and inorganic forms)
- 114 Mercury as Hg Particulate
- 114 Mesityl Oxide
- 114 Metalworking Fluids
- 115 Methanol (Methyl alcohol)
- 115 Methanol (Methyl alcohol)
- 115 Methoxy(1-)-2-propanol (Propylene glycol monomethyl ether, PGME)
- 115 Methoxy(1-)-2-propanol (Propylene glycol monomethyl ether, PGME)
- 116 Methoxyethanol(2-) (Methyl cellosolve, EGME)
- 116 Methoxyethanol(2-) (Methyl cellosolve, EGME)
- 116 Methoxyethoxy(2-(2-)) Ethanol (Diethylene glycol methyl ether)
- 116 Methoxyethoxy(2-(2-)) Ethanol (Diethylene glycol methyl ether)
- 116 Methoxyethyl(2-) Acetate (Methyl cellosolve acetate, EGMEA)
- 117 Methoxyethyl(2-) Acetate (Methyl cellosolve acetate, EGMEA)
- 117 Methoxyethyl(2-) Ether (Diethylene glycol dimethyl ether)
- 117 Methoxyethyl(2-) Ether (Diethylene glycol dimethyl ether)
- 117 Methyl Acetate
- 117 Methyl Acetate
- 118 Methyl Acrylate
- 118 Methyl Acrylate

- 118 Methyl Alcohol (Methanol)
- 118 Methyl Alcohol (Methanol)
- 119 Methyl Amyl Ketone (2-Heptanone)
- 119 Methyl Amyl Ketone (2-Heptanone)
- 119 Methyl Aniline
- 119 Methyl Chloroform (1,1,1-Trichloroethane)
- 119 Methyl Chloroform (1,1,1-Trichloroethane)
- 120 Methyl Cyclopentane
- 120 Methyl Cyclopentane
- 120 Methyl Ethyl Ketone (2-Butanone, MEK)
- 120 Methyl Ethyl Ketone (2-Butanone, MEK)
- 120 Methyl Isoamyl Ketone
- 121 Methyl Isoamyl Ketone
- 121 Methyl Isobutyl Ketone (MIBK)
- 121 Methyl Isobutyl Ketone (MIBK)
- 121 Methyl Isopropyl Ketone
- 121 Methyl Isopropyl Ketone
- 122 Methyl Methacrylate
- **122** Methyl Propyl Ketone (2-Pentanone)
- 122 Methyl Propyl Ketone (2-Pentanone)
- 122 Methyl Styrene(a-)
- 122 Methyl Styrene(a-)
- 123 Methyl Tert-butyl Ether (MTBE)
- 123 Methyl Tert-butyl ether (MTBE)
- 123 Methyl Vinyl Ketone
- 123 Methyl(1-)-2-pyrrolidinone
- 124 Methyl(1-)-2-pyrrolidinone
- 124 Methylacrylonitrile
- 124 Methylcyclohexane
- 124 Methylcyclohexane
- 125 Methylene Bis(4cyclohexylisocyanate) (HMDI)
- 125 Methylene Bisphenyl Isocyanate (MDI)
- 125 Methylene Bisphenyl Isocyanate (MDI)
- 125 Methylene Chloride (Dichloromethane)
- 126 Methylene Chloride (Dichloromethane)
- 126 Methylene(4,4'-) Dianiline (MDA)
- 126 Methylene(4,4'-)-bis(2 chloroaniline) (MOCA)
- **126** Methylnaphthalene(2-)
- **127** Mica

127	Mineral Oil (Oil mist)	136	Pentanedione(2,3-)
127	Mineral Oil, excluding Metal Working Fluids,	136	Pentanedione(2,4-)
	Pure, highly		Pentanone(2-) (Methyl propyl ketone)
107	and severely refined.	137 137	Pentanone(2-) (Methyl propyl ketone)
127	Mineral Oil, used in metal working	137	Peracetic Acid
128	Mineral Spirits (Stoddard Solvent)	137	Perchloroethylene (Tetrachloroethylene)
128	Mineral Spirits (Stoddard Solvent)	138	Perchloroethylene (Tetrachloroethylene)
128	Mineral Wool Fiber	138	Perfluorooctanoic Acid
128	Molybdenum as Mo	138	Petroleum Ether
129	Molybdenum as Mo	138	Petroleum Ether
129	Molybdenum as Mo	139	Phenanthrene (see PNA scan)
129	Morpholine	139	, ,
129	Naphthalene	139	Phenanthrene (see PNA scan) Phenol
130	Naphthalene	139	
130	Naphthalene (see PNA scan)	140	Phenylcyclohexene(4-)
130	Naproxen Sodium		Phenylcyclohexene (4-)
130	Naproxen Sodium	140	Phenylene(1,3-) diamine
131	Nickel and inorganic compounds as Ni	140	Phosphine
131	Nickel and inorganic compounds as Ni	140	Phosphoric Acid
131	Nickel and inorganic compounds as Ni	141	Phosphoric Acid
131	Nicotine	141	Phosphorus (elements)
132	Nitric Acid	141	Phthalic Anhydride
132	Nitric acid	141	Piperazine
132	Nitric Oxide and Nitrogen Dioxide	142	Platinum Metal and Soluble Salts as Pt
132	Nitroethane	142	PNA Scan (NIOSH 5506)
133	Nitrogen Dioxide	142	PNA Scan (OSHA 58)
133	Nitromethane	142	Polychlorobiphenyl (Chlorodiphenyl, 54% Chlorine) (PCB)
133	Nitrous Oxide	143	Polychlorobiphenyl (Chlorodiphenyl,
133	Organic Solvent Scan		42% Chlorine) (PCB)
134	Oxalic Acid	143	Polyvinyl Chloride (PVC)
134	Ozone	143	Portland Cement
134	Palladium	143	Potassium Hydroxide
135	Paraffin Wax Fume	144	Propanol(n-)
135	Particles (insoluble or poorly soluble)	144	Propanol(n-)
125	Not otherwise specified; inhalable	144	Propionaldehyde
135	Particles (insoluble or poorly soluble) Not otherwise specified; respirable	144	Propionaldehyde
135			Propionaldehyde
	Not otherwise specified; total	145	Propionic Acid
136	Pentane(n-)	145	Propoxyethanol(2-) (Ethylene
136	Pentane(n-)		glycol monopropyl ether)

145	Propoxyethanol(2-) (Ethylene glycol monopropyl ether)	154 154	Silver Metal and Soluble Compounds as Ag
146	Propyl Bromide	154	Soapstone
146	Propyl Bromide	155	Soapstone Sodium
146	Propyl(n-) Acetate	155	Sodium Hydroxide
146	Propyl(n-) Acetate	155	Starch
146	Propyl(n-) Alcohol	155	Stoddard Solvent
147	Propyl(n-) Alcohol	156	Stoddard Solvent
147	Propylene Glycol Monomethyl Ether	156	Strontium
4.47	(PGME, 1-Methoxy-2-propanol)	156	Strontium Chromate as Cr
147	Propylene Glycol Monomethyl Ether (PGME, 1-Methoxy-2-propanol)	156	Styrene (Vinyl benzene)
147	Propylene Glycol Monomethyl	157	Styrene (Vinyl benzene)
	Ether Acetate (PGMEA)	157	Sulfur Dioxide
147	Propylene Glycol Monomethyl	157	Sulfuric Acid
140	Ether Acetate (PGMEA)	157	Sulfuric Acid
148	Propylene Glycol (1,2-Propanediol)	158	Sulfuric Acid
148	Propylene Oxide (1,2-Epoxypropane)	158	Synthetic Vitreous Fibers
148	Propylene Oxide (1,2-Epoxypropane)	158	Talc
148	Pyrene (see PNA scan)	158	Tantalum and Tantalum Oxide Dust as Ta
149	Pyrene (see PNA scan)	159	Tellurium and Compounds as Te
149	Pyrethrum	159	Tetrachloroethylene (Perchloroethylene)
149	Pyridine	159	Tetrachloroethylene (Perchloroethylene)
149	Resin Acids	159	Tetrahydrofuran [THF]
150	Resorcinol	160	Tetrahydrofuran
150	Rhodium as Rh	160	Thallium and Compounds, as TI
150	Scan for Aldehydes	160	Thallium and Compounds, as TI
150	Scan for Aliphatic Amines		Thiram
	Scan for Anesthetic Gases	161	Tin and Compounds as Sn
151	Scan for Aromatic Amines	161	Tin and Compounds as Sn
151	Scan for Inorganic Acids	161	·
151	Scan for Isocyanates	162	Tin Organic Compounds as Sn Titanium
152	Scan for Organic Solvents	162	Titanium
152	Scan for PNAs (NIOSH 5506)	162	Titanium Dioxide
152	Scan for PNAs (OSHA 58)	163	Toluene
152	Selenium and Compounds as Se	163	
153	Selenium and Compounds as Se	163	Toluene
153	Sevoflurane (Sevofrane)		Toluene-2,4-diioscyanate (2,4-TDI)
153	Sevoflurane (Sevofrane)	163	Toluene-2,4- diisocyanate (2,4-TDI)
153	Silica Cristobalite	164	Toluene-2,6-diisocyanate (2,6-TDI)
154	Silica Quartz	164	Toluene-2,6- diisocyanate (2,6-TDI)

164	Toluidine(o-)	170	Valeraldehyde
164	Tributyl Phosphate	170	Valeraldehyde
165	Trichloro(1,1,2-)-1,2,2-trifluoroethane	171	Vanadium Pentoxide as V
165	Trichloro(1,1,2-)-1,2,2-trifluoroethane	171	Vanadium Pentoxide as V
165	Trichlorobenzene(1,2,4-)	171	Vanadium
165	Trichlorobenzene(1,2,4-)	171	Vegetable Oil Mist
165	Trichloroethane(1,1,1-) (Methyl Chloroform)	172	Vinyl Acetate
166	Trichloroethane(1,1,1-) (Methyl Chloroform)	172	Vinyl Acetate
166	Trichloroethane(1,1,2-)	172	Vinyl Chloride (Chloroethylene)
166	Trichloroethane(1,1,2-)	172	Vinyl Chloride (Chloroethylene)
166	Trichloroethylene	173	Vinyl(1-)-2-pyrrolidinone
166	Trichloroethylene	173	Vinyl(1-)-2-pyrrolidinone
167	Triethanolamine	173	Vinylidene Chloride (1,1-Dichloroethylene)
167	Triethylamine	173	VM & P Naphtha
167	Triethylamine	174	VM & P Naphtha
167	Triethylenetetramine	174	Welding Fume Scan
168	Triglycidyl Isocyanurate(1,3,5)	174	Welding Fumes, Total
168	Trimellitic Anhydride	174	Wood Dust
168	Trimethylbenzene(1,2,4-)	175	Wood Dust
168	Trimethylbenzene(1,2,4-)	175	Xylene (Dimethyl benzene)
168	Trimethylbenzene(1,3,5-)	175	Xylene (Dimethyl benzene)
169	Trimethylbenzene(1,3,5-)	175	Yttrium and compounds, as Y
169	Tungsten and Compounds as W	176	Zinc
	(in the absence of Cobalt)	176	Zinc
169	Tungsten, as W Soluble Compounds	176	Zinc
169	TVOC as n-Hexane	177	Zinc Chloride Fume
170	TVOC as n-Hexane	177	Zinc Oxide
170	Valeraldehyde	177	Zinc Oxide

Acenaphthene (see PNA scan)								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media			
83-32-9	NIOS	PTFE2/XAD-2 PALL P5PJ037, SKC 226		HPLC PTFE2/XAD-2 (PALL P5PJ037, SKC 226-30		•		
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code			
2		200-10	000	0.33 µg	0.17 μg	PNAs		
Į,	Interferences				Comments			
Asphalt fumes will interfere.				After sampling, separate filter from sorbent tube. Cap and wrap individually in aluminum foil. Ship and store cold.				

Acenaphthylene (see PNA scan)								
CAS#	Analytic	Analytical Method A		l Technique	Sampling Media			
208-96-8	NIOS	SH 5506	HPLC		PTFE2/XAD-2 (PALL P5PJ037, SKC 226-30-04)			
Sampling	Sampling Ratet Sampling Vol		olumett	LOQ	LOD	Compatibility Code		
2		200-10	000	0.45 µg	0.23 μg	PNAs		
Interferences				Comments				
Asphalt fumes will interfere.				After sampling, separate filter from sorbent tube. Cap and wrap individually in aluminum foil. Ship and store cold.				

Acetaldehyde								
CAS#	Analytic	cal Method	Analytica	l Technique	Sampling Media			
75-07-0	NIOS	SH 2016	HPLC		AT Monitor (N571AT)			
Sampling Rate† Sampling Volu		olumett	LOQ	LOD	Compatibility Code			
11.7		15-48	80	0.029 μg 0.015 μg Aldehyde		Aldehyde		
Interferences				Comments				
Other aldehydes and ketones will react with the 2,4-DNPH but can be chromatographically resolved.				Refrigerate media before and after sampling. Ship samples cold overnight.				

Acetaldehyde								
CAS#	Analytic	Analytical Method		l Technique	Sampling Media			
75-07-0	NIOS	SH 2016	HPLC		SGT, DNPH (SKC 226-119)			
Sampling Rate† Sampling \		/olumett	LOQ	LOD	Compatibility Code			
0.1-1.	-1.5 1-15		5	0.058 µg	0.029 μg	Aldehyde		
Interferences					Comments			
Other aldehydes and ketones will react with the 2,4-DNPH but can be chromatographically resolved.			<b>Refrigerate</b> media before and after sampling. Ship samples cold overnight. <b>Preferred for STEL sampling</b> . Sample at 1 lpm for STEL.					

Acetic Acid								
CAS # Analytical Method A		Analytical Technique		Sampling Media				
64-19-7	NIOS	SH 2011	IC		PTFE3-SGT** (SKC 225-17A, SKC 226-10-03)			
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code			
0.05-0	).5	5-10	0	2.3 µg	1.2 µg	Acid2		
Interferences				Comments				
Particulate salts of the acid will give a positive interference.				Preferred method for STEL and also Lab-preferred method. Use 0.2 lpm for flow rate. Do not sample with inorganic acids.				

Acetic Acid								
CAS#	CAS # Analytical Method A		Analytical Technique		Sampling Media			
64-19-7	OSHA I	D-PV2119	IC		CT (S	SKC 226-01)		
Sampling	Sampling Rate† Sampling Vol		/olumett	LOQ	LOD	<b>Compatibility Code</b>		
0.2		5-10	00	2.3 µg	1.2 µg			
Interferences					Comments			

Acetic Anhydride								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media			
108-24-7	OSH	OSHA 102		PLC	GF	F, vamine		
Sampling Rate† Sampling Vol			olumett/	LOQ	LOD	Compatibility Code		
0.05-0	).5	20		14 µg 7.0 µg		ACN/DMS0		
I	nterferenc	es		Comments				
			the lab a	at least 5 day	short shelf-life. Plos prior to survey da pared as requeste	ate to order		

Acetone							
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media		
67-64-1	NIOS	SH 1300	GC-FID		CT (SK	C 226-01, -09)	
Sampling	Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code	
0.01-0	).2	0.5-	3	0.91 µg	0.46 µg	CS <sub>2</sub>	
I	nterferenc	es		Comments			
Store and ship cold overnight.							

Acetone							
CAS#	CAS # Analytical Method A		Analytica	l Technique	Sampling Media		
67-64-1	3M Method		GC	C-FID	OVM	I (3M 3520)	
Sampling	Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code	
40.1		15-12	20	1.4 µg	0.70 μg	CS <sub>2</sub>	
Interferences				Comments			
			Store ar	nd ship cold o	vernight.		

Acetonitrile								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media			
75-05-8	NIOSH 1606		GC	:-FID	CT (S	SKC 226-09)		
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	<b>Compatibility Code</b>			
0.01-0	0.01-0.2 3-25		5	1.0 µg	0.50 µg	15%MeOH/MC		
I	nterferenc	es		Comments				
Samples containing greater than 15% methanol or other alcohols			breakth tubes. If	Large charcoal tubes are required for analyte collection since breakthrough volume is lower compared with smaller charcoal tubes. If also sampling for aldehydes, use AT monitors or Sep-Paks. Do not use DNPH tubes as they may off-gas acetonitrile.				

Acetonitrile								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media			
75-05-8	3M I	Method	GC	:-FID	OVM	1 (3M 3520)		
Sampling	Sampling Rate† Sampling Volu		olumett	LOQ	LOD	<b>Compatibility Code</b>		
48.2	48.2 15-120		20	1.5 µg	0.75 μg	DMF/CS <sub>2;</sub> CS <sub>2</sub>		
ļ	nterferenc	es		Comments				
			section cap imn aldehyd	Preferred method. Use 3M 3520. Separate front section of the monitor from the back section and cap immediately after sampling. If also sampling for aldehydes, use AT monitors or Sep-Paks. Do not use DNPH tubes as they may off-gas acetonitrile.				

Acrolein							
CAS#	Analytical Method A		Analytica	Technique	Sampling Media		
107-02-8	NIOSH 2016		HI	PLC	AT Mon	nitor (N571AT)	
Sampling Rate† Sampling Vol			/olumett	LOQ	LOD	<b>Compatibility Code</b>	
10.3		15-4	80	0.027 μg		Aldehyde	
I	nterferenc	es		Comments			
Other aldehydes and ketones will react with the 2,4-DNPH but can be chromatographically resolved				Refrigerate media before and after sampling. Ship samples cold overnight.			

††(L) (Minutes)

Acrolein							
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media		
107-02-8	NIOSH 2016		Н	PLC	SGT, DNP	H (SKC 226-119)	
Sampling Rate† Sampling Vol			olumett/	LOQ	LOD	Compatibility Code	
0.1-1.	5	1-1	5	0.054 μg	0.027 μg	Aldehyde	
I	nterferenc	es		Comments			
Other aldehydes and ketones will react with the 2,4-DNPH but can be chromatographically resolved.				Refrigerate media before and after sampling. Ship samples cold overnight. <b>Preferred for STEL sampling</b> . Use flow rate of 1 lpm.			

Acrolein							
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media		
107-02-8	NIOSH 2016		HI	PLC	Sep-Pak	(WAT047205)	
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code	
0.1-1.	5	10-1	00	0.14 μg 0.070 μg Aldehyde		Aldehyde	
ı	nterferenc	es		Comments			
Other aldehydes and ketones will react with the 2,4-DNPH but can be chromatographically resolved.				Refrigerate media before and after sampling. Ship samples cold overnight. Preferred for STEL sampling. Use flow rate of 1 lpm.			

Acrylamid	Acrylamide									
CAS#	Analytical Method A		Analytica	Technique	Sampling Media					
79-06-1	5-1 OSHA 21		GC	-FID	GFF-SGT (SKC	225-16; SKC226-10)				
Sampling	Sampling Rate† Sampling Vol		olumett/	LOQ	LOD	Compatibility Code				
1		120	)	0.62 µg		MeOH				
I	nterferenc	es		Comments						
				Sample separately from CS <sub>2</sub> compatible solvents. 2019 NIC, TWA = 0.03ppm(IFV), Skin;DSEN;A2 adopted in 2020.						

Acrylic Acid								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media			
79-10-7	OSHA	OSHA PV2005		PLC	Anasorb708/ Anasorb708 (SKC 226-30- 08)			
Sampling	Sampling Rate† Sampling Vol			LOQ	LOD	Compatibility Code		
0.1		24		0.33 µg	0.17 μg			
li	nterferenc	es		Comments				
Propanoic acid will interfere.				Sample with 2 Anasorb 708 tubes in series. Separate and cap tubes after sampling.				

Acrylonitrile (Vinyl Cyanide)									
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media				
107-13-1	OS	HA 37	GC	:-FID	CT (SK	C 226-01, -09)			
Sampling	Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code			
0.05-0	).2	3.5-2	20	0.68 µg		CS <sub>2</sub>			
Interferences				Comments					
Preferred for STEL sampling. Sample at 0.2 lpm.									

Acrylonitrile (Vinyl Cyanide)								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media			
107-13-1	-13-1 3M Method		GC	:-FID	OVM	(3M 3500)		
Sampling	Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code		
43.8	43.8 15-480		80	1.0 µg	0.51 µg	DMF/CS <sub>2</sub> CS <sub>2</sub>		
Interferences				Comments				

dehyde	scan					
CAS#	CAS # Analytical Method			l Technique	Sampling Media	
	NIOS	SH 2016	Н	PLC		
Sampling Rate† Sampling V		/olumett	LOQ	LOD	Compatibility Code	
	Interferenc	es			Comments	
					individual aldehyde pling. Ship sample:	es. Refrigerate media s cold overnight.

Aliphatic A	Amine s	can					
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media		
	NIOSH 2010		GC	:-FID	SGT (SKC 226-10)		
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code	
0.01-	1	5-3	0			Amine1	
I	nterferenc	es		Comments			
Nitrogen compounds that co-elute will interfere.			by this r	Ethylamine, diethylamine and triethylamine are analyzed by this method. Please call Lab for other amines. High moisture will limit collection efficiency.			

Allyl Alcoh	nol						
CAS#	Analytic	cal Method	Analytica	l Technique	Sampling Media		
107-18-6	NIOS	SH 1402	GC	:-FID	CT (SKC 226-01, -09)		
Sampling	Ratet	Sampling V	olumett	LOQ	LOD	Compatibility Code	
0.01-0	.2	5-10	)	0.72 μg	0.36 µg	5% IPA/CS <sub>2</sub>	
I	nterferenc	es			Comments		
			Sample	separately fro	om CS <sub>2</sub> compatible	solvents.	

Allyl Alcoh	nol						
CAS#	CAS # Analytical Method A		Analytica	l Technique	Sampling Media		
107-18-6	3M I	3M Method		:-FID	OVM	(3M 3500)	
Sampling	Sampling Rate† Sampling Vo		olumett/	LOQ	LOD	Compatibility Code	
40.4		15-4	80	1.1 µg	0.55 μg	MC or CS <sub>2</sub>	
ı	nterferenc	es		Comments			

<b>Allyl Brom</b>	ide						
CAS # Analytical Method			Analytica	l Technique	Sampling Media		
106-95-6	06-95-6 OSHA 1000		GC	:-FID	CT (SKC 226-01, -09)		
Sampling Rate† Sampling V		/olumett	LOQ	LOD	Compatibility Code		
0.01-1	.0	16-1	00	1.6 µg	0.80 µg	CS <sub>2</sub>	
I	nterferenc	es			Comments		

CAS # Analytical Method		Analytica	l Technique	Sampling Media		
106-95-6	3M I	Method	GC-FID OVM (3M 350		1 (3M 3500)	
Sampling Rate† Sampling V		/olumett	LOQ	LOD	Compatibility Code	
32.5	5	180-4	480	2.4 µg	1.2 µg	CS <sub>2</sub>
ı	nterferenc	es			Comments	

Allyl Chlor	ide						
CAS#	CAS # Analytical Method A		Analytica	l Technique	Sampling Media		
107-05-1	NIOS	SH 1000	GC-FID		CT (SK	C 226-01, -09)	
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code	
0.01-1	.0	16-10	00	0.96 µg	0.48 μg	CS <sub>2</sub>	
ı	nterferenc	es		Comments			
			Preferre	ed for STEL sa	ampling. Sample at	t a flow rate of 1 lpm.	

tt(L) (Minutes)

Allyl Chlor	iue					
CAS # Analytical Method		Analytica	l Technique	Sampling Media		
107-05-1	3M I	Method	GC	:-FID	OVM (3M 3500)	
Sampling Rate† Sampling V		/olumett	LOQ	LOD	Compatibility Code	
35.1		15-4	.80	1.4 µg	0.72 μg	CS <sub>2</sub>
ı	nterferenc	es			Comments	

Aluminum	Metal a	nd insolub	le comp	ounds			
CAS#	Analytical Method A		Analytical Technique		Sampling Media		
7429-90-5	NIOS	SH 7301 SH 7303 ID-125G	ICP		MCE or PVC (SKC 225-5 or SKC 225-5-37-P)		
Sampling	Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code	
1-4		200-10	00	5.0 µg	2.5 µg	Metals	
li	nterferenc	es		Comments			
Spectral interferences are the primary interferences encountered in ICP-AES analysis.			internal in your	As part of the Lab's QC protocol, yttrium is used as internal standard in metal analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples.			

Aluminum	Oxide						
CAS#	# Analytical Method		Analytical Technique		Sampling Media		
1344-28-1	NIOSH 0500		GRAV		Pre-weighed P	VC (SKC 225-5-37-P)	
Sampling	Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code	
1-15		40-72	200	50 μg	10 µg		
li	nterferenc	es		Comments			
All other dust	All other dusts will interfere.			For personal sampling use a flow rate of 1-2 LPM, for area sampling up to 15 LPM.			

Amines, A	liphatic	(see scan	for aliph	atic amine	s)		
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media		
	NIOS	NIOSH 2010		GC-FID		SKC 226-10)	
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code	
0.01-	1	5-3	0	Varies	Varies	Amine1	
ı	nterferenc	es		Comments			
Nitrogen compounds that co-elute will interfere.			by this r	Ethylamine, diethylamine and triethylamine are analyzed by this method. Please call Lab for other types of amines. High moisture will limit collection efficiency.			

CAS#	Analytical Method A		Analytica	l Technique	Sampling Media		
	NIOS	NIOSH 2002		:-FID	SGT (SKC 226-10)		
Sampling Rate† Sampling Vol		/olumett	LOQ	LOD	Compatibility Code		
0.02-	0.5	5-3	0	Varies	Varies	Amine3	
	Interferenc	es		Comments			
Nitrogen compounds that co-elute will interfere			this met	Aniline, methylaniline and o-toluidine are analyzed by this method. Please call Lab for other types of amines. High moisture will limit collection efficiency.			

CAS # Analytical Method A		Analytica	l Technique	Sam	Sampling Media		
7664-41-7	<b>664-41-7</b> OSHA ID-188			IC	ORBO 77 (SUPELCO 20036) SKC 226-29		
Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code		
0.1-0.	5	8-10	0	4.7 µg	2.4 μg		
I	nterferenc	es		Comments			
Particulate ammonium salts will interfere.			Sample	Sample at a flow rate of 0.5 lpm for STEL.			

Ammoniur	Ammonium Chloride Fume								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media				
12125-02-9	25-02-9 NIOSH 0500		GRAV		Pre-weighed P	VC (SKC 225-5-37-P)			
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code				
1-15		40-72	00	50 μg	10 µg				
lı	nterferenc	es		Comments					
All other dusts will interfere.				For personal sampling use a flow rate of 1-2 lpm; for area sampling up to 15 lpm.					

CAS # Analytical Method		Analytical	Technique	Sampling Media			
<b>628-63-7</b> NIOSH 1450		GC-FID		CT (SKC 226-01, -09)			
Sampling Rate† Sampling V		/olumett	LOQ	LOD	Compatibility Code		
0.01-0	).2	1-1	0	2.3 μg	1.2 µg	CS <sub>2</sub>	
Interferences				Comments			

CAS#	Analytical Method		Analytical	l Technique	Sampling Media		
628-63-7	3M Method		GC-FID		OVM (3M 3500)		
Sampling Rate† Sampling V		/olumett	LOQ	LOD	Compatibility Code		
26.0		15-4	80	3.5 µg	1.8 µg	CS <sub>2</sub>	
Interferences				Comments			

Anesthetic	Gases	scan					
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media		
	OSHA 103		GC	:-FID	Anasorb 74	17 (SKC 226-81A)	
Sampling	Sampling Rate† Sampling Vo		/olumett	LOQ	LOD	Compatibility Code	
0.05	j	12	<u>)</u>	Varies	Varies		
I	nterferenc	es		Comments			
				Analyzes enflurane, halothane and isoflurane. See List of Scans for anesthetic gases. Please call lab for other anesthetic gases. Store and ship cold.			

Aniline							
CAS#	S # Analytical Method A		Analytical Technique		Sampling Media		
62-53-3	2-53-3 NIOSH 2002		GC-FID		SGT	(SKC 226-10)	
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	<b>Compatibility Code</b>		
0.02-0	).5	5-3	0	1.0 µg	0.50 μg	Amine3	
I	nterferenc	es		Comments			
Nitrogen compounds that co-elute will interfere.							

Anthracen	e (see F	NA scan)					
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media		
120-12-7	OSHA 58		HPLC		GFF (SKC 225-7)		
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code		
2		960	)	0.25 μg 0.13 μg PNA:		PNAs	
I	nterferenc	es		Comments			
Asphalt fumes will interfere.				After sampling, cap and wrap in aluminum foil. Ship and store cold.			

Anthracen	e (see F	NA scan)					
CAS#	Analytical Method A		Analytical Technique		Sampling Media		
120-12-7	NIOSH 5506		HPLC			E2/XAD-2 37, SKC 226-30-04)	
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code		
2		200-10	00	0.25 μg	0.13 μg	PNAs	
li	nterferenc	es		Comments			
Asphalt fumes will interfere.				After sampling, separate filter from sorbent tube. Cap and wrap individually in aluminum foil. Ship and store cold.			

Antimony	Antimony and compounds as Sb								
CAS#	Analytical Method A		Analytica	l Technique	Samı	oling Media			
7440-36-0	NIOS	NIOSH 7301 NIOSH 7303 OSHA ID-125G		СР	MCE or PVC (SKC 225-5 or SKC225-5-37-P)				
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code				
1-4		50-10	00	0.51 μg 0.26 μg Met		Metals			
li	nterferenc	es		Comments					
Spectral interferences are the primary interferences encountered in ICP-AES analysis.			internal in your	As part of the Lab's QC protocol, yttrium is used as internal standard in metal analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples.					

Antimony	Antimony and compounds as Sb								
CAS#	Analytic	nalytical Method A		l Technique	Sampling Media				
7440-36-0		SH 7301 SH 7303	ICP-MS		MCE or PVC (SKC 225-5 or SKC225-5-37-P)				
Sampling	Sampling Ratet Sampling Vol		olumett	LOQ	LOD	Compatibility Code			
1-4		40-2	40	0.75 μg	0.38 μg	Metals			
I	nterferenc	es		Comments					
			and lute analysis form if	As part of the Lab's QC protocol, yttrium, rhodium, and lutetium are used as internal standards in ICP-MS analysis. Please indicate in your sample submission form if yttrium, rhodium, and/or lutetium are present in the area where you collected your samples.					

Aromatic 1	100						
CAS#	CAS # Analytical Method A		Analytica	Technique	Sampling Media		
<b>64742-95-6</b> NIOSH 1550		GC	-FID	CT (SKC 226-01, -09)			
Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code		
0.05-0	.2	1.3-2	20	0.55 μg	0.28 µg	CS <sub>2</sub>	
li	nterferenc	es		Comments			
Other aromatic compounds.				Please send bulk sample. Ship bulk samples separately from air samples.			

tt(L) (Minutes)

romatic	Amine s	can					
CAS#	Analytic	Analytical Method A		l Technique	Sampling Media		
	NIOSH 2002		GC	:-FID	SGT (SKC 226-10)		
Sampling Rate† Sampling Vo		olumett/	LOQ	LOD	Compatibility Code		
0.02-0	).5	5-3	0	Varies	Varies	Amine3	
	nterferenc	es		Comments			
					and o-toluidine ard ab for other types		

Arsenic an	d inorg	anic compo	unds, a	s As		
CAS#	Analytical Method A		Analytical Technique		Sampling Media	
7440-38-2	NIOSH 7301 NIOSH 7303 OSHA ID-125G		ICP		MCE or PVC (SKC 225-5 or SKC 225-5-37-P)	
Sampling Rate† Sampling Vol		lumett	LOQ	LOD	<b>Compatibility Code</b>	
1-4		560-10	00	0.56 µg	0.28 μg	Metals
li	nterferenc	es	Comments			
Spectral interferences are the primary interferences encountered in ICP-AES analysis.			Use ICP-MS analysis for lower detection limit at an additional cost. As part of the Lab's QC protocol, yttrium is used as internal standard in metal analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples.			

Arsenic and inorganic compounds, as As								
CAS#	Analytical Method A		Analytical Technique		Sampling Media			
7440-38-2	NIOSH 7301 NIOSH 7303		ICP-MS		MCE or PVC (SKC 225-5 or SKC 225-5-37-P)			
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code		
1-4		180-4	180	0.025 μg 0.012 μg		Metals		
li	nterferenc	es		Comments				
			and lute analysis form if y	As part of the Lab's QC protocol, yttrium, rhodium, and lutetium are used as internal standards in ICP-MS analysis. Please indicate in your sample submission form if yttrium, rhodium, and/or lutetium are present in the area where you collected your samples.				

Arsenic and inorganic compounds, as As							
CAS#	Analytical Method A		Analytical Technique		Samp	oling Media	
7440-38-2	OSHA ID-121 OSHA ID-125G		ICP		ghost wipe (SKC 225-2414)		
Sampling	Sampling Rate† Sampling Vol		olumett	ımett LOQ LOD Com		Compatibility Code	
NA		NA		6.5 µg	3.2 µg	Metals2	
lı	nterferenc	es		Comments			
Spectral interferences are the primary interferences encountered in ICP-AES analysis.			internal in your	As part of the Lab's QC protocol, yttrium is used as internal standard in metal analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples.			

Arsenic Trioxide as As								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media			
1327-53-3	NIOSH 7901		ICF	P-MS	MCE	, carbonate		
Sampling	Sampling Rate† Sampling Vo		/olumett	LOQ	LOD	Compatibility Code		
1-3	1-3 180-10		000	0.033 µg	0.016 μg			
I	nterferenc	es		Comments				
All forms of Arsenic are quantified.			request date. As and lute analysis form if y	Media has one week shelf-life. Media are prepared as requested. Please contact Lab in advance of survey date. As part of the Lab's QC protocol, yttrium, rhodium, and lutetium are used as internal standards in ICP-MS analysis. Please indicate in your sample submission form if yttrium, rhodium, and/or lutetium are present in the area where you collected your samples.				

Arsine							
CAS#	Analytical Method A		Analytical Technique		Sampling Media		
7784-42-1	NIOSH 6001		ICP		CT (226-01,-09)		
Sampling Rate† Sampling Volu			olumett	LOQ	LOD	Compatibility Code	
0.05-0	0.05-0.2 10			0.052 μg	0.026 µg		
I	nterferenc	es		Comments			
Other forms of Arsenic compounds (aerosol and gases) are quantified as Arsine.			of the Lastandar sample	High moisture may limit collection efficiency. As part of the Lab's QC protocol, yttrium is used as internal standard in metal analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples.			

CAS#	Analytical Method A		Analytica	l Technique	Sampling Media		
7784-42-1	NIOSH 6001		ICF	P-MS	CT (SKC 226-01, -09)		
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code	
0.05-0.2 10			0.026 µg	0.013 μg			
ı	nterferenc	es		Comments			
Other forms of Arsenic compounds (aerosol and gases) are quantified as Arsine.			Lab's Qo internal sample	High moisture may limit collection efficiency. As part of the Lab's QC protocol, yttrium, rhodium, and lutetium are used as internal standards in ICP-MS analysis. Please indicate in your sample submission form if yttrium, rhodium, and/or lutetium are present in the area where you collected your samples.			

Asbestos	(bulk), a	II forms					
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media		
1332-21-4	NIOS	NIOSH 9002		LM	Bulk		
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code		
N.A.	N.A. 1-10 gra		ams	1.0%	1.0%		
ı	nterferenc	es		Comments			
Other fibers with optical properties similar to the asbestos minerals may give positive interferences.			double l	Send bulk samples for asbestos analysis in double bagged ziplock bags with labels and chain of custody form outside the bag.			

Asbestos (Fibers)								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media			
Various	NIOSH 7400		Р	CM	MCE, 25 mm	n (ZEFON Z008BA)		
Sampling Rate† Sampling Volu			olumett	LOQ	LOQ	Compatibility Code		
0.5-1	0.5-16 50-72		20	0.050 asb/field	0.01 asb/field			
lı	nterferenc	es		Comments				
Chain-like particles may appear fibrous leading to high count and high levels of non-fibrous dust particles may obscure fibers leading to low count.			obtain o	Sample open faced. Adjust sampling flow rate and time to obtain optimum fiber loading on the filter. Do not overload filter. When shipping your samples, do not pack with untreated polystyrene as it can lead to fiber loss from electrostatic effect.				

Asbestos,	all form	IS					
CAS#	Analytical Method A		Analytical Technique		Sampling Media		
1332-21-4	YAMATE LEVEL II		TEM		MCE 25-mm, 0.45-um (ZEFON Z045BA)		
Sampling Rate† Sampling V		/olumett	LOQ	LOD	<b>Compatibility Code</b>		
2.48-17.62 74-5		29	0.050 asb/field	0.01 asb/field			
Interferences				Comments			
Other amphiboles similar to the asbestos minerals may give positive interferences. High dust background interferes with fiber identification.			obtain o	Sample open faced. Adjust sampling flow rate and time to obtain optimum fiber loading on the filter. Do not overload filter. This analysis is sub-contracted to an AIHA-LAP, LLC accredited lab. Standard turnaround time is 10 business days.			

tt(L) (Minutes)

Asbestos,	all form	ıs					
CAS#	Analytic	cal Method	Analytica	l Technique	Sampling Media		
1332-21-4	NIOS	SH 7402	Т	EM	MCE, 25 mm	n (ZEFON Z008BA)	
Sampling	Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code	
0.5-1	0.5-16 50-720		20	0.050 asb/field	0.01 asb/field		
Į,	nterferenc	es		Comments			
Other amphiboles similar to the asbestos minerals may give positive interferences. High dust background interferes with fiber identification.			to obtai overload Method is sub-c	n optimum fib d filter. This m 7400 (phase contracted to a	djust sampling flo er loading on the f ethod is designed contrast microsco in AIHA-LAP, LLC a time is 10 busines	ilter. Do not for use with py). This analysis accredited lab.	

Asphalt Fume								
CAS#	Analytical Method A		Analytica	l Technique	Samp	oling Media		
8052-42-4	4 NIOSH 0500		GI	RAV	Pre-weighed P	VC (SKC 225-5-37-P)		
Sampling	Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code		
1-15		40-72	200	50 μg	10 µg			
I	nterferenc	es		Comments				
All types of dusts will interfere.				For personal sampling use a flow rate of 1-2 lpm; for area sampling up to 15 lpm.				

Asphalt Fu	Asphalt Fume as Benzene-Soluble Aerosol								
CAS#	Analytic	Analytical Method A		l Technique	Sampling Media				
8052-42-4	NIOS	NIOSH 5042		RAV	Pre-weighed P	TFE1 (Zefon FPTFE137)			
Sampling	Sampling Rate† Sampling Volu		olumett	LOQ	LOD	Compatibility Code			
2	176-960		960	130 µg	63 µg				
I	nterferenc	es		Comments					
All substances soluble in benzene will interfere. Changes in humidity pre- and post weighing can affect accuracy.			if BSF re samplin before i	Benzene extraction is done first. Scan is only done if BSF results are at or above the TLV. For inhalable sampling, please contact Lab for IOM sampler 1 week before intended use. The availability of IOM samplers is limited. Rental charges for use of IOM sampler apply.					

Barium and soluble compounds as Ba								
CAS#	Analytical Method A		Analytica	l Technique	Samp	oling Media		
7440-39-3	NIOSH 7301 NIOSH 7303		ICP			CE or PVC or SKC 225-5-37-P)		
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code		
1-4		25-10	00	0 0.50 µg 0.25 µg Metal		Metals		
lı	nterferenc	es		Comments				
Spectral interferences are the primary interferences encountered in ICP-AES analysis.			internal in your	As part of the Lab's QC protocol, yttrium is used as internal standard in metal analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples.				

Benz[a]an	Benz[a]anthracene (see PNA scan)								
CAS#	Analytical Method A		Analytica	l Technique	Samı	oling Media			
56-55-3	55-3 NIOSH 5506		Н	HPLC (PALI		PTFE2/XAD-2 P5PJ037, SKC 226-30-04)			
Sampling	Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code			
2		200-1	0.082 μg		0.041 µg	PNAs			
I	nterferenc	es		Comments					
Asphalt fumes will interfere.				After sampling, separate filter from sorbent tube. Cap and wrap individually in aluminum foil. Ship and store cold.					

Benzaldehyde									
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media				
100-52-7	NIOSH 2016		HI	PLC	AT Mon	itor (N571AT)			
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code				
6.97	,	15-4	80	0.047 μg	0.024 µg	Aldehyde			
ı	nterferenc	es		Comments					
Other aldehydes and ketones will react with the 2,4-DNPH but can be chromatographically resolved.			Refrigerate media before and after sampling. Ship samples cold overnight.						

Benzaldeh	yde						
CAS#	Analytical Method A		Analytica	l Technique	Samp	oling Media	
100-52-7	NIOSH 2016		HI	PLC	Sep-Pak	(WAT047205)	
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	<b>Compatibility Code</b>	
0.1-1.	5	10-1	00	0.24 μg 0.12 μg Al		Aldehyde	
I	nterferenc	es		Comments			
Other aldehydes and ketones will react with the 2,4-DNPH but can be chromatographically resolved.			Ship sar	Refrigerate media before and after sampling. Ship samples cold overnight. <b>Preferred for STEL</b> <b>sampling</b> . Use flow rate of 1 lpm for STEL			

Benzaldeh	yde						
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media		
100-52-7	NIOSH 2016		Н	PLC	SGT, DNP	H (SKC 226-119)	
Sampling Ratet Sampling Vol			olumett/	LOQ	LOD	Compatibility Code	
0.1-1.	5	1-1	5	0.094 μg 0.048 μg Aldehy		Aldehyde	
I	nterferenc	es		Comments			
Other aldehydes and ketones will react with the 2,4-DNPH but can be chromatographically resolved.			Ship sar	Refrigerate media before and after sampling. Ship samples cold overnight. <b>Preferred for STEL</b> <b>sampling</b> . Use flow rate of 1 lpm for STEL			

Benzene							
CAS # Analytical Method A			Analytical Technique		Sampling Media		
71-43-2	NIOS	NIOSH 1501		-FID	CT (SK	C 226-01, -09)	
Sampling	Sampling Rate† Sampling Vo		olumett	LOQ	LOD	<b>Compatibility Code</b>	
0.01-0	).2	5-3	0 0.40 μg		0.20 μg	CS <sub>2</sub>	
	nterferenc	es		Comments			
Sample at flow rate of 0.2 lpm for STEL.						om for STEL.	

Benzene							
CAS # Analytical Method		Analytica	l Technique	Sampling Media			
71-43-2	<b>43-2</b> 3M Method		GC	:-FID	OVM	(3M 3500)	
Sampling Rate† Sampling V		/olumett	LOQ	LOD	Compatibility Code		
35.5	)	15-4	80 0.60 μg		0.30 μg	CS <sub>2</sub>	
Interferences				Comments			

Benzo[a]pyrene (see PNA scan)								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media			
50-32-8	OSHA 58		HPLC		GFF (	(SKC 225-7)		
Sampling	Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code		
2		960	)	0.20 μg 0.10 μg PNAs		PNAs		
I	nterferenc	es		Comments				
Asphalt fumes will interfere.				After sampling, separate filter from sorbent tube. Cap and wrap individually in aluminum foil. Ship and store cold.				

Benzo[a]pyrene (see PNA scan)								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media			
50-32-8	NIOS	NIOSH 5506		PLC		E2/XAD-2 37, SKC 226-30-04)		
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code			
2		200-10	000	0.20 μg 0.10 μg PN		PNAs		
Interferences				Comments				
Asphalt fumes will interfere.				After sampling, separate filter from sorbent tube. Cap and wrap individually in aluminum foil. Ship and store cold.				

Benzo[b]fl	Benzo[b]fluoranthene (see PNA scan)								
CAS#	Analytical Method A		Analytica	l Technique	Samp	oling Media			
205-99-2	NIOSH 5506		HPLC			E2/XAD-2 37, SKC 226-30-04)			
Sampling	Sampling Rate† Sampling Vol		lumett	LOQ	LOD	Compatibility Code			
2		200-10	00	0.19 µg	0.095 µg	PNAs			
Į.	nterferenc	es		Comments					
Asphalt fumes will interfere.				After sampling, separate filter from sorbent tube. Cap and wrap individually in aluminum foil. Ship and store cold.					

Benzo[e]py	Benzo[e]pyrene								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media				
192-97-2	NIOSH 5515		GC	S-MS		E2/XAD-2 37, SKC 226-30-04)			
Sampling	Sampling Rate† Sampling Vol		/olumett	LOQ	LOD	Compatibility Code			
2		200-1	000	0.57 μg	0.29 μg	PNAs			
I	nterferenc	es		Comments					
Asphalt fumes will interfere.				After sampling, separate filter from sorbent tube. Cap and wrap individually in aluminum foil. Ship and store cold.					

Benzo[ghi]	Benzo[ghi]perylene (see PNA scan)							
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media			
191-24-2	NIOSH 5506		HPLC			E2/XAD-2 37, SKC 226-30-04)		
Sampling	Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code		
2		200-10	000	0.27 µg	0.14 μg	PNAs		
I	nterferenc	es		Comments				
Asphalt fumes will interfere				After sampling, separate filter from sorbent tube. Cap and wrap individually in aluminum foil. Ship and store cold.				

Benzo[k]fl	Benzo[k]fluoranthene (see PNA scan)								
CAS#	Analytical Method A		Analytica	l Technique	Samı	oling Media			
207-08-9	NIOSH 5506		HPLC			E2/XAD-2 37, SKC 226-30-04)			
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code				
2		200-10	000	0.25 μg	0.13 μg	PNAs			
I	Interferences			Comments					
Asphalt fumes will interfere.				After sampling, separate filter from sorbent tube. Cap and wrap individually in aluminum foil. Ship and store cold.					

Benzyl Alcohol								
CAS#	S # Analytical Method		Analytical Technique		Sampling Media			
100-51-6	NIOSH 1402		GC-FID		CT (SK	C 226-01, -09)		
Sampling	Sampling Rate† Sampling Vo		olumett/	LOQ	LOD	Compatibility Code		
0.05-0	).2	1-1	0 0.72 μg		0.36 µg	5%IPA/CS <sub>2</sub>		
I	Interferences			Comments				

Benzyl Alcohol								
CAS#	Analytical Method A		Analytica	l Technique	Samı	oling Media		
100-51-6	3M Method		GC-FID		OVM (3M 3500)			
Sampling Rate† Sampling Vo		olumett/	LOQ	LOD	Compatibility Code			
27.1		15-4	80	1.1 µg	0.55 μg	CS <sub>2</sub>		
Interferences				Comments				

CAS#	Analytic	Analytical Method		Technique	Sampling Media		
100-44-7 NIOSH 1003		GC-FID		CT (SKC 226-01, -09)			
Sampling Rate† Sampling V		olumett	LOQ	LOD	Compatibility Code		
0.01-0	).2	1-1	0 0.73 μg		0.37 μg	CS <sub>2</sub>	
ı	nterferenc	es			Comments		

Benzyl Ch	Benzyl Chloride								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media				
100-44-7	7 3M Method		GC-FID		OVM	I (3M 3500)			
Sampling	Sampling Rate† Sampling Vo		olumett/	LOQ	LOD	<b>Compatibility Code</b>			
27.2		15-4	80	1.1 µg	0.55 μg	CS <sub>2</sub>			
I	Interferences			Comments					

Beryllium and compounds as Be							
CAS#	Analytic	cal Method	Analytica	l Technique	Sampling Media		
7440-41-7	NIOS	SH 7301 SH 7303 (ID-125G	[	СР	MCE or PVC (SKC 225-5 or SKC 225-5-37-P)		
Sampling	ampling Ratet Sampling Vol		olumett/	LOQ	LOD	<b>Compatibility Code</b>	
1-4	400-100		000	0.010 µg	0.0050 μg	Metals	
I	nterferenc	es		Comments			
Spectral interferences are the primary interferences encountered in ICP-AES analysis.			part of t standar submiss you coll submiss	Minimum air volume required at 1/2 of TLV is 400 L. As part of the Lab's QC protocol, yttrium is used as internal standard in metal analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples. Also indicate in your sample submission form if beryllium oxide is suspected to be present. Beryllium oxide requires analysis by OSHA ID-125G.			

Beryllium	and Cor	npounds a	is Be				
CAS#	Analytic	cal Method	Analytica	l Technique	Sampling Media		
7440-41-7		SH 7301 SH 7303		P-MS	MCE or PVC (SKC 225-5 or SKC 225-5-37-P)		
Sampling	Sampling Rate† Sampling Vo		/olumett	LOQ	LOD	Compatibility Code	
2		240		0.0012 μg	0.00059 µg	Metals	
li	nterferenc	es		Comments			
			lutetium Please i rhodiun you coll submiss	n are used as in indicate in you n, and/or lutetio ected your san sion form if ber	r sample submiss um are present in uples. Also indica	in ICP-MS analysis. sion form if yttrium, the area where ite in your sample spected to be present.	

Beryllium	and Cor	npounds a	s Be				
CAS#	Analytical Method A		Analytica	l Technique	Samı	oling Media	
7440-41-7	OSHA ID-121 OSHA ID-125G		ICP		ghost wipe (SKC 225-2414)		
Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code		
NA	NA NA			0.082 μg	0.041 µg	Metals2	
ı	nterferenc	es		Comments			
Spectral interferences are the primary interferences encountered in ICP-AES analysis.			standar submiss you coll submiss	As part of the Lab's QC protocol, yttrium is used as internal standard in metal analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples. Also indicate in your sample submission form if beryllium oxide is suspected to be present. Beryllium oxide requires analysis by OSHA ID-125G.			

Biphenyl (	Dipheny	1)					
CAS # Analytical Method A			Analytical	Technique	Sampling Media		
92-52-4	OSHA PV2022		GC	-FID	XAD-7 (SKC-226-95)		
Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code		
0.20	)	20		0.46 µg 0.23 µg CS <sub>2</sub>		CS <sub>2</sub>	
Interferences				Comments			
			<u> </u>				

Bismuth							
CAS#	Analytic	Analytical Method A		l Technique	Sampling Media		
7440-69-9	NIOS	SH 7301 SH 7303 A ID-125G	ļ	СР	MCE or PVC (SKC 225-5 or SKC 225-5-37-P)		
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code	
1-4		25-10	00	0.50 μg 0.25 μg Metal		Metals	
li	nterferenc	es		Comments			
Spectral interferences are the primary interferences encountered in ICP-AES analysis.			internal in your	As part of the Lab's QC protocol, yttrium is used as internal standard in metal analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples.			

<b>Bisphenol</b>	Α						
CAS#	Analytical Method A		Analytical Technique		Sampling Media		
80-05-7	OSH	OSHA 1018		PLC		GFF	
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code		
1.0		240	)	0.32 μg	0.16 µg		
ı	nterferenc	es		Comments			
Samples must be stored and shipped cold.						old.	

Borate compounds, inorganic							
CAS#	Analytic	nalytical Method A		l Technique	Sampling Media		
varies	NIOS	SH 7303	'303 ICP		MCE or PVC (SKC 225-5 or SKC 225-5-37-P)		
Sampling Rate† Sampling Vol		/olumett	LOQ	LOD	Compatibility Code		
1-4	1-4 25		5	varies	varies	Metals	
I	nterferenc	es		Comments			
Spectral interferences are the primary interferences encountered in ICP-AES analysis.			protoco analysis if yttriui samples	LOQ for boron is 1.1 µg/sample. As part of the Lab's QC protocol, yttrium is used as internal standard in metal analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples. OEL is as inhalable. Order IOM samplers a week before survey date. Rental charges for IOM samplers apply.			

Breathing Air Grade D, Grade E								
CAS#	Analytic	Analytical Method A		l Technique	Samı	oling Media		
		SH 0500 //I-A5	GC GC	RAV :-FID -ECD -TCD -XSD	PTFE4 (PALL TF-450) Cylinder			
Sampling	Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code		
NA		40-1000 (gra 300cc/2 (Cylind	5 psig ´	Note 1	-	ВА		
li	nterferenc	es		Comments				
At high levels argon interferes with oxygen and nitrous oxide interferes with carbon dioxide.		A partic	A particulate blank is required.					

Bromine							
CAS#	CAS # Analytical Method A		Analytica	l Technique	Sampling Media		
7726-95-6	NIOSH 6011		IC		PTFE-AgMF (SKC 225-1708, SKC 225-1802)		
Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code		
0.3-1.	0	70-36	50	4.5 µg	3.0 µg	Cl <sub>2</sub> &Br <sub>2</sub>	
li	nterferenc	es		Comments			
Hydrobromic acid will interfere.							

Bromo(1-)-2-Chloroethane								
CAS#	S # Analytical Method		Analytical Technique		Sampling Media			
107-04-0	NIOSH 1003		GC-FID		CT (SKC 226-01, -09)			
Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code			
0.01-0	).2	1-10	1.0 μg		0.50 μg	CS <sub>2</sub>		
I	Interferences			Comments				

CAS#	Analytical Method		Analytica	l Technique	Sampling Media		
75-25-2	5-2 NIOSH 1003		GC-FID		CT (SKC 226-01, -09)		
Sampling Rate† Sampling V		/olumett	LOQ	LOD	Compatibility Code		
0.01-0	).2	1-5	0	1.1 µg (		CS <sub>2</sub>	
Interferences				Comments			

Bromofori	n						
CAS#	Analytical Method		Analytical Technique		Sampling Media		
75-25-2	<b>25-2</b> 3M Method		GC-FID		OVM (3M 3500)		
Sampling Rate† Sampling V		/olumett	LOQ	LOD	Compatibility Code		
29.3	3	15-4	80	1.7 µg	0.85 μg	CS <sub>2</sub>	
Interferences				Comments			

Bromopropane(1-)								
CAS#	Analytical Method		Analytical Technique		Sampling Media			
106-94-5	OSHA	PV2061	GC-FID		CT (SKC 226-01, -09)			
Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code			
0.1		12		1.3 µg	0.65 μg	CS <sub>2</sub>		
	nterferenc	es		Comments				

Bromopropane(1-)								
CAS#	Analytical Method		Analytical Technique		Sampling Media			
106-94-5	3M Method		GC-FID		OVM (3M 3500)			
Sampling Rate† Sampling Vo		/olumett	LOQ	LOD	Compatibility Code			
31.7	,	15-4	80 2.0 μg		1.0 µg	CS <sub>2</sub>		
I	Interferences			Comments				
<u> </u>		<u> </u>		<u> </u>	<u> </u>	<u> </u>		

Butadiene	Butadiene(1,3-)								
CAS#	Analytic	cal Method	Analytica	l Technique	Sampling Media				
106-99-0	NIOS	SH 1024	GC	C-MS	CT-CT	(SKC 226-01)			
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code			
0.05-0	0.05-0.2 10-25		25	1.1 µg 0.55 µg MC		MC			
I	nterferenc	es		Comments					
High humidity (>80%) or other hydrocarbons present at permissible levels decrease sampler's capacity.			tubes at	Use two large charcoal tubes in series. Separate and cap tubes after sampling. Ship cold overnight. If unable to ship overnight, store cold and then ship cold the following day.					

Butadiene	(1,3-)						
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media		
106-99-0	3M I	Method GC		GC-MS OVM (3M 3520)		I (3M 3520)	
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code	
42.8	42.8 15-480		80	1.7 µg 0.85 µg		MC CS <sub>2</sub>	
I	nterferenc	es		Comments			
			the back Ship col	Use 3M 3520. Separate front section of the monitor from the back section and cap immediately after sampling. Ship cold overnight. If unable to ship cold overnight, refrigerate, and then ship cold the following day.			

## Butanedione(2,3-); (Butadione(2,3-), Diacetyl, Diketobutane, Dimethyl Diketone, Dimethylglyoxal) CAS # Applytical Method Applytical Technique Sampling Media

CAS #	Analytic	cal Method	Analytica	I lechnique	Sampling Media			
431-03-8	OSF	IA 1013	GC	C-MS	SGT/GFF-SGT/GFF (SKC 226-183)			
Sampling	Ratet	Sampling V	olumett/	LOQ	LOD	<b>Compatibility Code</b>		
0.05-0	.2	9 (TV 3 (15-min sl	,	0.16 μg	0.080 µg	95% EtOH		
Interferences				Comments				
			tubes in during a samplin Order al	series. Samp and after samp g. Sample sep luminum foil fo	oling. Separate and parately from CS <sub>2</sub> or or wrapping the sa	ected from the light I cap tubes after compatible solvents.		

Butanone	(2-); (Me	thyl Ethyl	Ketone)				
CAS#	Analytical Method A		Analytica	l Technique	Samp	oling Media	
78-93-3	78-93-3 3M Method		GC	-FID	OVM	(3M 3500)	
Sampling	Sampling Rate† Sampling Vo		olumett/	LOQ	LOD	Compatibility Code	
36.3	3	15-4	80	1.2 µg	0.59 μg	CS <sub>2</sub>	
ı	Interferences			Comments			
Isopropyl acetate may co- elute with MEK.		Ship and	Ship and store cold.				

Butanone(2-); (Methyl Ethyl Ketone)								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media			
78-93-3	-3 NIOSH 2500		GC	-FID	CT (SK	C 226-01, -09)		
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code			
0.01-0	.2	0.25-	12	0.79 µg	0.40 μg	CS <sub>2</sub>		
ļ	Interferences			Comments				
Isopropyl acetate may co- elute with MEK.			Preferre	Preferred for STEL sampling. Sample at a flow rate of 0.2 lpm.				

t(LPM) (CC/Min)

tt(L) (Minutes)

a minimum of 9.0L is required. Store and ship cold overnight.

Butoxyethanol(2-); (Butyl Cellosolve); (EGBE)								
CAS#	# Analytical Method			l Technique	Samı	oling Media		
111-76-2	NIOS	NIOSH 1403		:-FID	CT (SK	C 226-01, -09)		
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code			
0.01-0	.05	2-1	0	1.2 µg 0.60 µg 5%M		5%MeOH/MC		
ı	nterferenc	es		Comments				
			Sample	separately fro	om other solvents.			

Butoxyethanol(2-); (Butyl Cellosolve); (EGBE)								
CAS#	Analytic	cal Method	Analytica	l Technique	Samı	oling Media		
111-76-2	1-76-2 3M Method		GC	:-FID	OVM	(3M 3500)		
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code			
28.2	28.2 15-480		30	1.8 µg	0.90 μg	MC CS <sub>2</sub>		
li	Interferences Comments							
	Sample separately from other solvents.							

Butoxyethoxy(2-(2-)) Ethanol								
CAS#	Analytical Method A		Analytica	l Technique	Samı	oling Media		
112-34-5	<b>34-5</b> OSHA PV2095		GC	-FID	CT (SK	C 226-01, -09)		
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code			
0.05-0	).2	2-10	0.58 μg		0.29 μg	5%MeOH/MC		
Interferences Comments								
Sample separately from other solvents.								

Butoxyethoxy(2-(2-)) Ethyl Acetate								
CAS#	CAS # Analytical Method A		Analytica	l Technique	Sampling Media			
124-17-4	4 NIOSH 1450		GC-FID		CT (SK	C 226-01, -09)		
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code			
0.01-0	).2	1-10	0.87 μg		0.44 μg	CS <sub>2</sub>		
Interferences				Comments				

Butoxyethyl(2-) Acetate; (Butyl Cellosolve Acetate); (EGBEA)								
CAS#	Analytical Method A		Analytica	l Technique	Sam	oling Media		
112-07-2	NIOSH 1450		GC-FID		CT (SK	C 226-01, -09)		
Sampling Rate† Sampling Volu		olumett	LOQ	LOD	Compatibility Code			
0.01-0	.2	1-10	0	0.94 μg	0.47 μg	CS <sub>2</sub>		
Interferences				Comments				

Butoxyethyl(2-) Acetate; (Butyl Cellosolve Acetate); (EGBEA)								
CAS#	Analytical Method A		Analytical Technique		Samı	oling Media		
112-07-2	3M l	3M Method		-FID	OVM	(3M 3500)		
Sampling Rate† Sampling Vol		olumett/	LOQ	LOD	Compatibility Code			
24.3	3	15-4	80	1.4 µg	0.70 μg	CS <sub>2</sub>		
Interferences				Comments				

<b>Butyl Acry</b>	late						
CAS#	CAS # Analytical Method A		Analytica	l Technique	Samı	oling Media	
141-32-3	141-32-3 NIOSH 1450		GC	:-FID	CT (SK	C 226-01, -09)	
Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code		
0.01-0	.2	1-1	0	0.69 µg	0.35 μg	CS <sub>2</sub>	
I	nterferenc	es		Comments			

Butyl Acrylate								
CAS#	CAS # Analytical Method		Analytica	l Technique	Samı	oling Media		
141-32-3	3M Method		GC-FID		OVM	(3M 3500)		
Sampling Rate† Sampling V		olumett/	LOQ	LOD	Compatibility Code			
27.3		15-4	80 1.0 μg		0.50 μg	CS <sub>2</sub>		
Interferences				Comments				

Butyl Cellosolve Acetate; (2-Butoxyethyl acetate); (EGBEA)								
CAS#	S # Analytical Method A		Analytica	l Technique	Sampling Media			
112-07-2 NIOSH 1450		GC	:-FID	CT (SK	C 226-01, -09)			
Sampling Rate† Sampling Vo		olumett/	LOQ	LOD	<b>Compatibility Code</b>			
0.01-0	).2	1-1	0	0.94 µg	0.47 µg	CS <sub>2</sub>		
Interferences				Comments				

Butyl Cellosolve Acetate; (2-Butoxyethyl acetate); (EGBEA)								
CAS#	Analytic	Analytical Method A		l Technique	Sampling Media			
112-07-2	3M l	3M Method		-FID	OVM	(3M 3500)		
Sampling	Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code		
24.3	3	15-4	80	1.4 µg	0.70 μg	CS <sub>2</sub>		
Interferences				Comments				

Butyl Cellosolve; (2-Butoxyethanol); (EGBE)								
CAS#	Analytical Method		Analytical Technique		Samı	oling Media		
111-76-2	NIOSH 1403		GC-FID		CT (SK	C 226-01, -09)		
Sampling	Sampling Rate† Sampling Vo		olumett LOQ		LOD	Compatibility Code		
0.01-0	.05	2-1	0 1.2 μg		0.60 μg	5%MeOH/MC		
Interferences				Comments				

Butyl Cellosolve; (2-Butoxyethanol); (EGBE)								
CAS#	Analytic	Analytical Method A		Technique	Sampling Media			
111-76-2	3M	3M Method		-FID	OVM	(3M 3500)		
Sampling	Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code		
28.2	2	15-48	80	1.8 μg		MC		
Interferences				Comments				
Sample separately from other solvents.								

Butyl(n-) Acetate								
CAS#	Analytical Method		Analytical Technique		Sampling Media			
123-86-4	NIOS	NIOSH 1450		-FID	CT (SKC 226-01, -09)			
Sampling Rate† Sampling V		olumett/	LOQ	LOD	Compatibility Code			
0.01-0	).2	1-1	0 0.84 μg		0.42 μg	CS <sub>2</sub>		
Interferences				Comments				

CAS#	Analytical Method		Analytica	l Technique	Sampling Media		
123-86-4 3M Method		GC	:-FID	OVM (3M 3500)			
Sampling Rate† Sampling V		/olumett	LOQ	LOD	Compatibility Code		
31.6	)	15-4	80 1.3 μg		0.65 μg	CS <sub>2</sub>	
	nterferenc	es		Comments			

Butyl(n-) Alcohol								
CAS#	Analytical Method A		Analytical Technique		Sampling Media			
71-36-3	NIOS	NIOSH 1401		-FID	CT (SK	C 226-01, -09)		
Sampling	Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code		
0.01-0	).2	2-10	0	0.67 µg	0.34 μg	1%IPA/CS <sub>2</sub>		
ı	Interferences			Comments				

Butyl(n-) Alcohol								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media			
71-36-3	3M I	3M Method		-FID	OVM	(3M 3500)		
Sampling	Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code		
34.3	3	15-48	30	1.0 µg	0.50 μg	MC		
I	nterferenc	es		Comments				
	Sample separately from other solvents.							

Butyl(n-) Glycidyl Ether								
CAS#	Analytical Method		Analytical Technique		Sampling Media			
2426-08-6	6 NIOSH 1616		GC-FID		CT (SK	C 226-01, -09)		
Sampling Rate† Sampling V		/olumett	LOQ	LOD	<b>Compatibility Code</b>			
0.05-0	.2	15-3	30 1.1 μg		0.55 μg	CS <sub>2</sub>		
Interferences				Comments				

Butyl(n-) Glycidyl Ether								
CAS#	Analytical Method		Analytical Technique		Sampling Media			
2426-08-6	1 ME	3M Method		-FID	OVM (3M 3500)			
Sampling Rate† Sampling V		olumett/	LOQ	LOD	Compatibility Code			
27.0		15-4	·80 1.7 μg		0.85 μg	CS <sub>2</sub>		
li	nterferenc	es		Comments				

Butyl(sec-) Acetate								
CAS#	S # Analytical Method A		Analytica	l Technique	Sampling Media			
105-46-4	<b>105-46-4</b> NIOSH 1450		GC	:-FID	CT (SK	C 226-01, -09)		
Sampling	Sampling Rate† Sampling Vo		olumett/	LOQ	LOD	Compatibility Code		
0.01-0	).2	1-1	0	0.71 µg	0.36 μg	CS <sub>2</sub>		
	nterferenc	es		Comments				

Butyl(sec-) Acetate								
CAS#	Analytical Method A		Analytical Technique		Sampling Media			
105-46-4	3M Method		GC-FID		OVM	(3M 3500)		
Sampling	Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code		
28.6	)	15-48	80	1.1 µg	0.55 μg	CS <sub>2</sub>		
	nterferenc	es		Comments				

Butyl(sec-) Alcohol								
CAS#	Analytical Method		Analytica	l Technique	Samp	oling Media		
78-92-2	NIOS	NIOSH 1401		:-FID	CT (SK	C 226-01, -09)		
Sampling	Sampling Rate† Sampling Vo		olumett/	LOQ	LOD	<b>Compatibility Code</b>		
0.01-0	).2	2-1	0 1.0 μg		0.50 μg	1%IPA/CS <sub>2</sub>		
Interferences				Comments				
					-	-		

Butyl(sec-	) Alcoho	ol					
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media		
<b>78-92-2</b> 3M Method		GC	-FID	OVM (3M 3500)			
Sampling Rate† Sampling Vol		olumett/	LOQ	LOD	<b>Compatibility Code</b>		
34.8 15-480		80	1.5 µg	0.75 μg	MC CS <sub>2</sub>		
Interferences				Comments			

<b>Butyl(tert-</b>	) Acetat	e					
CAS#	Analytical Method A		Analytical Technique		Sampling Media		
540-88-5	<b>540-88-5</b> NIOSH 1450		GC-FID		CT (SKC 226-01, -09)		
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code		
0.01-0	).2	1-1(	0	0.84 µg	0.42 μg	CS <sub>2</sub>	
Interferences				Comments			

Butyl(tert-) Acetate								
CAS#	Analytic	Analytical Method		l Technique	Sampling Media			
540-88-5	3M Method		GC-FID		OVM (3M 3500)			
Sampling Rate† Sampling Vo		olumett	LOQ	LOD	<b>Compatibility Code</b>			
29.4	29.4 15-480		80	1.3 µg	0.65 μg	CS <sub>2</sub>		
Interferences				Comments				

Butyl(tert-) Alcohol								
CAS#	Analytic	Analytical Method A		l Technique	Samı	oling Media		
75-65-0	NIOS	NIOSH 1400		:-FID	CT (SK	C 226-01, -09)		
Sampling	Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code		
0.01-0	).2	2-10	0	0.55 µg	0.28 μg	BUT/CS <sub>2</sub>		
Interferences				Comments				

Butyl(tert-	) Alcoho	ol					
CAS#	Analytical Method		Analytical Technique		Sampling Media		
75-65-0	3M I	3M Method		-FID	OVM	(3M 3500)	
Sampling Rate† Sampling Vo		/olumett	LOQ	LOD	Compatibility Code		
35.2	2	15-4	80	0.83 µg	0.42 μg	CS <sub>2</sub>	
Interferences				Comments			

Butyraldehyde(n-)								
CAS#	Analytical Method A		Analytica	I Technique	Samı	oling Media		
123-72-8	NIOS	NIOSH 2016		PLC	AT Mon	itor (N571AT)		
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code			
8.20	1	15-48	30	0.037 μg 0.019 μg Alde		Aldehyde		
I	nterferenc	es		Comments				
Other aldehydes and ketones will react with the 2,4-DNPH but can be chromatographically resolved.			_	Refrigerate media before and after sampling. Ship samples cold overnight.				

Butyraldehyde(n-)								
CAS#	Analytic	Analytical Method A		l Technique	Sampling Media			
123-72-8	NIOS	NIOSH 2016		PLC	Sep-Pak	(WAT047205)		
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code		
0.1-1.	5	10-10	00	0.19 µg	0.095 μg	Aldehyde		
Į.	Interferences			Comments				
Other aldehydes and ketones will react with the 2,4-DNPH but can be chromatographically resolved.			Ship sar	Refrigerate media before and after sampling. Ship samples cold overnight. <b>Preferred for STEL</b> <b>sampling</b> . Sample at 1.0 lpm for STEL.				

Butyraldehyde(n-)								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media			
123-72-8	<b>2-8</b> NIOSH 2016		Н	PLC	SGT, DNP	H (SKC 226-119)		
Sampling Ratet Sampling Vo			olumett/	LOQ	LOD	Compatibility Code		
0.1-1.	5	1-1	5	0.073 μg 0.037 μg Aldehy		Aldehyde		
	nterferenc	es		Comments				
Other aldehydes and ketones will react with the 2,4-DNPH but can be chromatographically resolved.			Ship sar	Refrigerate media before and after sampling. Ship samples cold overnight. <b>Preferred for STEL</b> <b>sampling</b> . Sample at 1.0 lpm for STEL.				

040 "	id	1.00 (1)				1. 84 1.	
CAS#	Analytic	cal Method	Analytica	l Technique	Sam	pling Media	
107-92-6	NIOS	SH 2011			FE3-SGT** 7A, SKC 226-10-03)		
Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code		
0.05-0	).5	15-1	00	2.3 µg	1.2 µg	Acid2	
Interferences				Comments			
<u> </u>	· ·			Preferred method for STEL and also Lab-preferred method. Use 0.2 lpm flow rate. DO NOT sample with inorganic acids.			

Cadmium	and con	npounds as	s Cd				
CAS#	Analytical Method A		Analytica	l Technique	Samı	oling Media	
7440-43-9	NIOSH 7301 NIOSH 7303 OSHA ID-125G		ICP		MCE or PVC (SKC 225-5 or SKC 225-5-37-P)		
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code		
1-4		500-1	000	0.10 µg	0.050 μg	Metals	
li	nterferenc	es		Comments			
Spectral interferences are the primary interferences encountered in ICP-AES analysis.			internal in your	As part of the Lab's QC protocol, yttrium is used as internal standard in metal analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples.			

Cadmium and compounds as Cd							
CAS#	Analytic	cal Method	Analytica	l Technique	Samı	oling Media	
7440-43-9		A ID-121 ID-125G	I	СР	ghost wipe (SKC 225-2414)		
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code	
NA		NA		0.50 μg 0.25 μg Metals:		Metals2	
I	nterferenc	es		Comments			
Spectral interferences are the primary interferences encountered in ICP-AES analysis.			internal in your	As part of the Lab's QC protocol, yttrium is used as internal standard in metal analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples.			

Cadmium	and con	npounds a	s Cd				
CAS#	Analytic	cal Method	Analytica	l Technique	Samp	oling Media	
7440-43-9		SH 7301 SH 7303	ICF	P-MS	MCE or PVC (SKC 225-5 or SKC 225-5-37-P)		
Sampling Rate† Sampling Vol		olumett/	LOQ	LOD	Compatibility Code		
1-4	1-4 160-240		240	0.032 μg	0.016 µg	Metals	
ı	nterferenc	es		Comments			
			and lute analysis form if y	etium are used s. Please indic yttrium, rhodiu	C protocol, yttrium as internal standa ate in your sample um, and/or lutetiur collected your sa	ards in ICP-MS e submission n are present	

Calcium							
CAS#	Analytical Method A		Analytica	l Technique	Samı	oling Media	
7440-70-2	NIOSH 7301 NIOSH 7303 OSHA ID-125G		ļ	СР	MCE or PVC (SKC 225-5 or SKC 225-5-37-P)		
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code	
1-4		100-10	000	7.9 µg		Metals	
li	nterferenc	es		Comments			
Spectral inter primary interf in ICP-AES an	erences ei		protoco Please i	All forms of calcium are quantified. As part of the Lab's QC protocol, yttrium is used as internal standard in metal analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples.			

Calcium C	Calcium Carbonate									
CAS#	Analytic	cal Method	Analytica	l Technique		Samı	oling Media			
1317-65-3	NIOSH 7301 NIOSH 7303 OSHA ID-125G		ICP		(S	MCE or PVC (SKC 225-5 or SKC 225-5-37-P)				
Sampling Rate† Sampling Vol			olumett	LOQ		LOD	Compatibility Code			
1-4		100-10	00	20 µg		10 µg	Metals			
I	nterferenc	es		Comments						
Spectral inter primary interf in ICP-AES an	erences ei	protoco Please i is prese If client	All forms of calcium are quantified. As part of the Lab's QC protocol, yttrium is used as internal standard in metal analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples. If client wants different calcium salts speciated, please indicate in sample submission form or call/email Lab.							

Calcium Carbonate									
CAS#	S # Analytical Method A		Analytica	l Technique	Sampling Media				
1317-65-3 NIOSH 0500		GI	GRAV Pre-weighed PVC (SKC 2		VC (SKC 225-5-37-P)				
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code				
1-15		20-72	200	50 μg	10 µg				
Interferences				Comments					
All other dusts will interfere.				For personal sampling use a flow rate of 1-2 lpm, for area sampling up to 15 lpm.					

Calcium H	ydroxid	е					
CAS#	Analytic	cal Method	Analytica	l Technique		Samp	oling Media
1305-62-0	NIOS	NIOSH 7301 NIOSH 7303 OSHA ID-125G		ICP		MCE or PVC (SKC 225-5 or SKC 225-5-37-P)	
Sampling Rate† Sampling Vol			olumett	LOQ		LOD	Compatibility Code
1-4		100-10	000	15 µg		7.5 µg	Metals
I	nterferenc	es		Comments			
Spectral inter primary interf in ICP-AES an	erences er	protoco Please i is prese If client	All forms of calcium are quantified. As part of the Lab's QC protocol, yttrium is used as internal standard in metal analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples. If client wants different calcium salts speciated, please indicate in sample submission form or call/email Lab.				

Calcium O	xide							
CAS#	Analytic	cal Method	Analytica	l Technique	San	npling Media		
1305-78-8	NIOS	SH 7301 SH 7303 A ID-125G	I	СР	MCE or PVC (SKC 225-5 or SKC 225-5-37-P)			
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code		
1-4		100-1	000	11 µg	5.5 µg	Metals		
I	nterferenc	es		Comments				
Spectral inter primary interf in ICP-AES an	erences ei		QC prot analysis if yttrium samples	All forms of calcium are quantified. As part of the Lab's QC protocol, yttrium is used as internal standard in metal analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples. If client wants different calcium salts speciated, please indicate in sample submission form or call/email Lab.				

Calcium Oxide									
CAS#	Analytic	cal Method	Analytica	l Technique	Sam	pling Media			
1305-78-8		SH 7301 SH 7303	ICF			CE or PVC or SKC 225-5-37-P)			
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	<b>Compatibility Code</b>			
1-4	4 40-240		40	4.6 µg	2.3 μg	Metals			
I)	nterferenc	es		Comments					
			and lute analysis form if y	etium are used s. Please indic yttrium, rhodic	C protocol, yttriur I as internal stand cate in your sampl um, and/or lutetiu collected your sa	ards in ICP-MS e submission m are present			

Calcium Silicate Synthetic Nonfibrous									
CAS#	CAS # Analytical Method Ar		Analytica	l Technique	Samp	oling Media			
1344-95-2	NIOS	NIOSH 0500		RAV	Pre-weighed P	VC (SKC 225-5-37-P)			
Sampling Rate† Sampling Vol		/olumett	LOQ	LOD	Compatibility Code				
1-15		40-72	200	50 µg	10 µg				
Interferences				Comments					

Calcium Sulfate (Gypsum)									
CAS#	Analytical Method A		Analytica	l Technique	Samp	oling Media			
7778-18-9	18-9 NIOSH 0500		GI	RAV	Pre-weighed P	VC (SKC 225-5-37-P)			
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code				
1-15		20-72	00	50 μg	10 µg				
Interferences				Comments					
All other dusts will interfere.				For personal sampling use a flow rate of 1-2 lpm, for area sampling up to 15 lpm.					

Camphor							
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media		
76-22-2	<b>76-22-2</b> NIOSH 1301		GC	:-FID	CT (SK	C 226-01, -09)	
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	<b>Compatibility Code</b>		
0.01-0	).2	1-25	5	0.53 μg 0.27 μg		MeOH/CS <sub>2</sub>	
ı	nterferenc	es		Comments			
				<b>Preferred method</b> . Sample at 0.2 lpm for STEL. Sample separately from CS <sub>2</sub> compatible solvents.			

Camphor							
CAS#	Analytic	cal Method	Analytica	l Technique	Sampling Media		
76-22-2	-22-2 3M Method		GC	GC-FID OVM (3M 3500)		(3M 3500)	
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code		
21.4		15-48	80	0.80 µg 0.40 µg		CS <sub>2</sub>	
ı	nterferenc	es		Comments			
Sample separately from CS <sub>2</sub> compatible solvents.							

Caprolactam									
CAS#	Analytical Method		Analytical Technique		Sampling Media				
105-60-2	<b>0-2</b> OSHA PV2012		HPLC		0VS 7	(SKC 226-57)			
Sampling	Sampling Rate† Sampling Vo			LOQ	LOD	<b>Compatibility Code</b>			
1		100		2.1 µg	1.1 µg				
	nterferenc	es		Comments					

Carbaryl (SEVIN)									
CAS#	Analytical Method A		Analytica	l Technique	Sam	pling Media			
63-25-2	OS	OSHA 63		PLC	0VS-2 (\$	SKC 226-30-16)			
Sampling	Sampling Rate† Sampling Vo		olumett/	LOQ	LOD	Compatibility Code			
1		10-6	50	0.45 μg	0.23 μg				
ı	Interferences			Comments					

Carbon Black								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media			
1333-86-4	NIOS	NIOSH 5000		RAV	Pre-weighed P	VC (SKC 225-5-37-P)		
Sampling	Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code		
1-2		30-5	70	50 µg	30 µg			
li	nterferenc	es		Comments				
All other dusts will interfere.				Preferred method. For personal sampling use a flow rate of 1-2 lpm, for area sampling up to 15 lpm.				

Carbon Black									
CAS#	Analytical Method A		Analytica	l Technique	Sar	mpling Media			
1333-86-4	OSHA ID-196		GI	RAV	Pre-weighed	PVC (SKC 225-5-37-P)			
Sampling Rate† Sampling Volu		olumett	LOQ	LOD	<b>Compatibility Code</b>				
2	2 460-96		960	850 µg	420 µg				
lı .	nterferenc	es		Comments					
Particulates that are insoluble in THF and that either vaporize or lose weight between 150°C and 600°C will interfere.			Please r	notify lab prio	r to sample colle	ction.			

Carbon Dis	Carbon Disulfide								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media				
75-15-0	NIOSH 1600		GC	c-MS	CT (SK	C 226-01, -09)			
Sampling	Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code			
0.05-0	).2	2-10	0	0.52 μg 0.26 μg		Tol			
ı	Interferences			Comments					
				Sample separately from CS₂ compatible solvents. Store and ship cold.					

Carbon Disulfide									
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media				
75-15-0	3M	Method	GC	C-MS	OVM	(3M 3520)			
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code			
42.8	}	15-4	80	0.78 µg	0.39 µg	Tol			
ı	nterferenc	es		Comments					
			back se	Use 3M 3520. Separate front section of the monitor from the back section and cap immediately after sampling. Sample separately from CS <sub>2</sub> compatible solvents. Store and ship cold.					

Carbon Te	Carbon Tetrachloride (tetrachloromethane)								
CAS#	Analytical Method A		Analytica	l Technique	Samı	pling Media			
56-23-5	NIOSH 1003		GC	-FID	CT (SK	C 226-01, -09)			
Sampling	Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code			
0.01-0	).2	1.5-4	10	11 µg 5.5 µg CS <sub>2</sub>		CS <sub>2</sub>			
I	Interferences				Comments				
				Use a flow rate of 0.2 lpm for STEL. <b>Preferred</b> method for STEL sampling.					

Carbon Tetrachloride (tetrachloromethane)								
CAS#	Analytical Method A		Analytica	l Technique	Samp	Sampling Media		
56-23-5	5 3M Method		GC-FID		OVM	(3M 3500)		
Sampling Rate† Sampling Vo		olumett/	LOQ	LOD	Compatibility Code			
30.2	2	15-4	80	17 µg	8.5 µg	CS <sub>2</sub>		
Interferences				Comments				

Cellosolve (2-Ethoxyethanol)								
CAS#	# Analytical Method A		Analytica	l Technique	Samp	oling Media		
110-80-5	NIOS	NIOSH 1403		:-FID	CT (SK	C 226-01, -09)		
Sampling	Sampling Rate† Sampling Vol			LOQ	LOD	Compatibility Code		
0.01-0	.05	1-6	0.54 μg		0.27 μg	5%MeOH/MC		
	Interferences				Comments			
Sample separately from other solvents.								

Cellosolve (2-Ethoxyethanol)								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media			
110-80-5	3M I	3M Method		:-FID	OVM	(3M 3500)		
Sampling	Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code		
32.4		15-48	80	0.81 µg	0.41 µg	MC CS <sub>2</sub>		
li	Interferences			Comments				
	Sample separately from other solvents.							

Ceramic Fibers									
CAS#				l Technique	Sampling Media				
	NIOS	SH 7400	Р	СМ	MCE, 25 mm	(ZEFON Z008BA)			
Sampling	Sampling Rate† Sampling Volu		olumett	LOQ	LOD	<b>Compatibility Code</b>			
0.5-1	0.5-16 50-720		20	0.050 fiber/ field	0.01 fiber/field				
I	nterferenc	es		Comments					
Chain-like particles which may appear fibrous cause positive interference. High levels of non-fibrous dust particles may obscure fibers.			loading When sl	Adjust sampling flow rate and time to obtain optimum fiber loading on the filter. Do not overload filter. Sample open faced. When shipping your samples, do not pack with untreated polystyrene as can lead to fiber loss from electrostatic effect.					

Chlorine								
CAS#	Analytical Method		Analytical Technique		Sampling Media			
7782-50-5	NIOS	SH 6011	IC		PTFE-AgMF (SKC 225-1708, SKC 225-1802)			
Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code			
0.3-1.	0	80-30	60 2.3 μg		1.2 µg	Cl <sub>2</sub> &Br <sub>2</sub>		
lı	Interferences				Comments			
Hydrochloric	terfere.		<b>Preferred method</b> . Use a flow rate of 1.0 lpm for STEL. Order media one week ahead, media is prepared when ordered.					

Chlorine Dioxide								
CAS#	Analytic	cal Method	Analytica	l Technique		Sampling Media		
10049-04-4	OSHA	4 ID-202		IC		Impinger 4		
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code			
0.5		35-1	20	0.75 μg	0.38 μς			
li	nterferenc	es		Comments				
		sample To avoid	Shelf-life of impinger solution is 3 months. Transfer sample solution to labeled vials before shipping. To avoid "freezing" of glass to glass, rinse impinger with distilled water before returning to the lab.					

Chloro(2-)naphthalene									
CAS#	Analytical Method A		Analytica	l Technique	Samı	oling Media			
91-58-7	NIOS	SH 5515	GC-MS PTFE2/XA (PALL P5PJ037, SK						
Sampling	Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code			
2		200-10	000	0.60 µg	0.30 μg	PNAs			
Į.	nterferenc	es		Comments					
				After sampling, separate filter from sorbent tube. Cap and wrap individually in aluminum foil. Ship and store cold.					

Chlorobenzene								
CAS#	Analytical Method		Analytical Technique		Sampling Media			
108-90-7	NIOSH 1003		GC-FID		CT (SKC 226-01, -09)			
Sampling Ratet Sampling Vo		olumett/	LOQ	LOD	Compatibility Code			
0.01-0	0.01-0.2 1.5-40		40 0.57 μg		0.29 μg	CS <sub>2</sub>		
ı	Interferences			Comments				

	zene						
CAS#	Analytical Method		Analytical	Technique	Sampling Media		
108-90-7	3M I	3M Method		-FID	OVM (3M 3500)		
Sampling Rate† Sampling Vo		/olumett	LOQ	LOD	Compatibility Code		
29.3 15-480		180	0.86 μg 0.43 μg CS <sub>2</sub>				
Interferences				Comments			

Chlorodiphenyl (Polychlorobiphenyl, 42% Chlorine)								
CAS#	Analytical Method A		Analytical Technique		Sampling Media			
53469-21-9	NIOS	SH 5503	GC-MS		GFF-Florisil (Millipore SX0001300/01 /AP2001300 SKC 226-39)			
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code			
0.05-0	.2	1-5	0	0.97 µg	0.49 µg			
lı	Interferences			Comments				
Other chlorinated pesticides may interfere in the quantification of PCB.								

Chlorodiphenyl (Polychlorobiphenyl, 54% Chlorine)								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media			
11097-69-1	NIOS	H 5503 G0		e-MS	GFF-Florisil(Millipore SX0001300/07 AP2001300 SKC 226-39)			
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code			
0.05-0	.2	1-5	0	1.1 µg	0.55 μg			
li	Interferences			Comments				
Other chlorinated pesticides may interfere in the quantification of PCB.								

Chloroform (Trichloromethane)								
CAS#	Analytical Method A		Analytical Technique		Sampling Media			
67-66-3	NIOSH 1003		GC-FID		CT (SK	C 226-01, -09)		
Sampling	Sampling Rate† Sampling Vol			LOQ	LOD	Compatibility Code		
0.01-0	).2	1-50	0	5.9 µg	3.0 µg	CS <sub>2</sub>		
I	Interferences			Comments				

Chloroform (Trichloromethane)								
CAS#	Analytical Method A		Analytical Technique		Sampling Media			
67-66-3	3M I	Method	GC-FID		OVM	(3M 3500)		
Sampling Rate† Sampling Vol		olumett/	LOQ	LOD	Compatibility Code			
33.5	i	15-4	80	8.9 µg	4.5 µg	CS <sub>2</sub>		
	Interferences			Comments				

Chlorophenol(p-)								
CAS#	Analytical Method A		Analytical Technique		Sampling Media			
106-48-9	9 NIOSH 2014		HI	PLC	SGT (	SKC 226-10)		
Sampling Rate† Sampling Vol		olumett/	LOQ	LOD	Compatibility Code			
0.05-0	).2	10-4	10	0.10 µg	0.050 μg			
	Interferences			Comments				

Chloroprene(beta-); (2-Chloro-1,3-butadiene)								
CAS#	Analytical Method A		Analytical Technique		Sampling Media			
126-99-8	NIOS	SH 1002	GC-FID		CT (SK	C 226-01, -09)		
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code			
0.01-0	).1	1.5-	8	0.43 μg 0.22 μg CS		CS <sub>2</sub>		
	Interferences			Comments				
	Store and ship cold.							

Chloropre	Chloroprene(beta-); (2-Chloro-1,3-butadiene)								
CAS#	Analytical Method A		Analytical Technique		Sampling Media				
126-99-8	3M I	Method	GC	:-FID	OVM	(3M 3500)			
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code				
32.2	2	15-48	80	0.65 µg		CS <sub>2</sub>			
I	Interferences			Comments					
	Store and ship cold.								

Chlorotoluene(o-)								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media			
95-49-8	NIOS	NIOSH 1003		-FID	CT (SK	C 226-01, -09)		
Sampling Rate† Sampling Vol		olumett/	LOQ	LOD	Compatibility Code			
0.01-0	).2	1.5-4	40	0.47 μg 0.24 μg		CS <sub>2</sub>		
ı	Interferences			Comments				

Chlorotolu	ene(o-)						
CAS#	CAS # Analytical Method A		Analytical	Technique	Sampling Media		
95-49-8 3M Method		GC-FID		OVM	(3M 3500)		
Sampling Rate† Sampling Vo		/olumett	LOQ	LOD	Compatibility Code		
27.3 15-480		80	0.70 μg 0.35 μg CS <sub>2</sub>		CS <sub>2</sub>		
Interferences				Comments			

Chlorpyrife	Chlorpyrifos (Dursban)									
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media					
2921-88-2	NIOS	SH 5600		-NPD	OVS-2/Q	F (SKC 226-58)				
Sampling Rate† Sampling Vol		/olumett	LOQ	LOD	Compatibility Code					
0.2-1	0.2-1 12-240		40	0.039 µg 0.020 µg						
Interferences				Comments						
Organophosphate compounds may interfere.										

Chromium and Inorganic Compounds as Cr								
CAS#	Analytic	cal Method	Analytica	l Technique	Sampling Media			
7440-47-3	NIOS	NIOSH 7301 NIOSH 7303 OSHA ID-125G		СР	MCE or PVC (SKC 225-5 or SKC 225-5-37-P)			
Sampling Rate† Sampling Vol		olumett/	LOQ	LOD	Compatibility Code			
1-4		670-1	000	1.0 µg	0.50 μg	Metals		
l:	nterferenc	es		Comments				
Spectral interferences are the primary interferences encountered in ICP-AES analysis.			applies entries to of chror is used indicate	to Cr III compo for special inst nium. As part c as internal star in your sample		ium VI and chromate ction for this form otocol, yttrium alysis. <b>Please</b> m if yttrium is		

CAS#	Analytic	cal Method	Analytica	l Technique	Samı	pling Media	
7440-47-3	NIOSH 7301 NIOSH 7303		ICF	P-MS	MCE or PVC (SKC 225-5 or SKC 225-5-37-P)		
Sampling Rate† Sampling Vol		/olumett	LOQ	LOD	Compatibility Code		
1-4	1-4 240-500		500	0.75 µg	0.38 μg Metals		
li	nterferenc	es		Comments			
			applies entries to of chror rhodium in ICP-N submiss	to Cr III compo for special inst mium. As part n, and lutetium IS analysis. Pl sion form if ytt	ructions on colled of the Lab's QC pr are used as inter ease indicate in y	ium VI and chromate ction for this form otocol, yttrium, nal standards our sample nd/or lutetium are	

Chromium	Chromium and Inorganic compounds as Cr								
CAS#				l Technique	Samı	oling Media			
7440-47-3	OSHA ID-121 OSHA ID-125G		I	СР	ghost wipe (SKC 225-2414)				
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code			
NA		NA		1.0 µg 0.50 µg Metals2		Metals2			
li	nterferenc	es		Comments					
Spectral interferences are the primary interferences encountered in ICP-AES analysis.			internal in your	As part of the Lab's QC protocol, yttrium is used as internal standard in metal analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples.					

Chromium, Hexavalent compounds as Cr								
CAS#	Analytic	cal Method	Analytica	l Technique	Sampling Media			
7440-47-3	OSH	A ID-215		IC	PVC (SI	(C 225-5-37-P)		
Sampling	Rate†	Sampling V	olumett	LOQ	LOD	Compatibility Code		
2		500-9	960	0.050 μg	0.020 µg			
Interferences				Comments				
Fe (II) appears to cause a negative interference during sampling and storage.			samples as the e samples as poss TLV. Sam within 6 welding date of samples	d (e.g., spray p xtraction met s. Refrigerate ible. 500 liters mples from pl days from da operations m sampling. If s rs a week ahe	paint, chrome plati hod is different fo samples and ship is is the minimum a ating operations n te of sampling. Sa ust be analyzed w	r spray paint overnight as soon air volume at 50% nust be analyzed amples from rithin 8 days from halable, order IOM Remember IOM		

Chromium, Hexavalent Compounds as Cr								
CAS#	Analytic	cal Method	Analytica	l Technique	Sampling Media			
7440-47-3	OSHA	\ W4001		IC	QFF (Millipore	AQFA03700) Wipes		
Sampling	Ratet	Sampling V	olumett	LOQ	LOD	Compatibility Code		
NA		NA	١	0.050 µg	0.020 µg			
Interferences				Comments				
Fe (II) appears to cause a negative interference during sampling and storage.			Instruct cellulos Cr(VI) to operatio spray pa as soon request stabilize	tions." Do not to e ester (MCE) to Cr(III). Pleas on sampled as aint samples. It was possible. It wials containing the samples.	the extraction me Refrigerate sample	Vhatman, mixed rs as they convert the submission form the ethod is different for es and ship overnight mium plating operation, th 2%NaHCO <sub>3</sub> to alding operations		

Chrysene (see PNA scan)								
CAS#	Analytical Method A		Analytical Technique		Sampling Media			
218-01-9	OSHA 58		HPLC		GFF (SKC 225-7)			
Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code			
2		960	)	0.11 μg 0.055 μg PNAs		PNAs		
I	Interferences			Comments				
Asphalt fumes will interfere.				After sampling, cap and wrap in aluminum foil. Ship and store cold.				

Chrysene (see PNA scan)								
CAS#	Analytical Method A		Analytical Technique		Sampling Media			
218-01-9	NIOS	NIOSH 5506		PLC		PTFE2/XAD-2 (PALL P5PJ037, SKC 226-30-04)		
Sampling	Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code		
2		200-10	00	0.11 µg	0.055 µg	PNAs		
I	nterferenc	es		Comments				
Asphalt fumes will interfere.				After sampling, separate filter from sorbent tube. Cap and wrap individually in aluminum foil. Ship and store cold.				

Coal Dust - Anthracite								
CAS#	Analytical Method A		Analytica	l Technique	Samp	oling Media		
	NIOSH 0600		GI	RAV	Pre-weighed P	VC (SKC 225-5-37-P)		
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code			
1.7		50-8	16	50 µg	10 µg			
li	nterferenc	es		Comments				
All other respirable dusts will interfere.			Oliver) o	Use pre-weighed PVC 2-piece cassette for MSA (Dorr-Oliver) cyclones at 1.7 lpm and 3-piece cassette for BMRC (SKC) cyclones at 2.5 lpm and for BGI-4L at 2.2 lpm.				

<b>Coal Dust</b>	Coal Dust - Bituminous								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media				
	NIOSH 0600		GI	RAV	Pre-weighed PVC (SKC 225-5-37-P)				
Sampling Rate† Sampling Vol		olumett/	LOQ	LOD	Compatibility Code				
1.7		50-8	16	50 μg	10 µg				
I	nterferenc	es		Comments					
All other respirable dusts will interfere.			Oliver) o	Use pre-weighed PVC 2-piece cassette for MSA (Dorr-Oliver) cyclones at 1.7 lpm and 3-piece cassette for BMRC (SKC) cyclones at 2.5 lpm and for BGI-4L at 2.2 lpm.					

CAS#	itch Volatiles, as Be  Analytical Method A		Analytica	l Technique	Sampling Media		
65996-93-2	OS	OSHA 58		RAV	GFF (SKC 225-7)		
Sampling Rate† Sampling Vol		/olumett	LOQ	LOD	Compatibility Code		
2		960		130 µg	28 μg		
li	nterferenc	es		Comments			
The method is non-specific and measures all substances soluble in benzene.		emissio fumes. I is analy: selected	This method is used to air monitor coke oven emissions, petroleum combustion products & asphalt fumes. If the BSF exceeds the PEL, then the sample is analyzed by HPLC to determine the presence of selected polynuclear aromatic hydrocarbons (PAHs). Wrap sample cassettes with aluminum foil.				

Cobalt and	Cobalt and Inorganic compounds as Co								
CAS#	Analytical Method A		Analytical Technique		Samı	oling Media			
7440-48-4	NIOSH 7301 NIOSH 7303 OSHA ID-125G		ICP		MCE or PVC (SKC 225-5 or SKC 225-5-37-P)				
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code				
1-4		140-10	000	0.10 μg 0.050 μg Metal		Metals			
lı	nterferenc	es		Comments					
Spectral interferences are the primary interferences encountered in ICP-AES analysis.			internal in your	As part of the Lab's QC protocol, yttrium is used as internal standard in metal analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples.					

Cobalt and Inorganic compounds as Co								
CAS#	Analytic	cal Method	al Method Analytical Techn		Sampling Media			
7440-48-4		SH 7301 SH 7303	ICP-MS		MCE or PVC (SKC 225-5 or SKC 225-5-37-P)			
Sampling Rate† Sampling Vol		olumett/	LOQ	LOD	Compatibility Code			
1-4		75-2	40	0.025 μg 0.013 μg Metals		Metals		
Tr.	nterferenc	es		Comments				
			and lute analysis form if y	tium are used s. Please indic yttrium, rhodiu	C protocol, yttrium l as internal standa ate in your sample um, and/or lutetiun collected your sa	ards in ICP-MS e submission n are present		

Cobalt and Inorganic compounds as Co								
CAS#	Analytic	cal Method	Analytica	l Technique	Sampling Media			
7440-48-4	OSH	A ID-121 IC		СР	Ghost wipe ( 225-2414)			
Sampling	Sampling Rate† Sampling Volu		olumett	LOQ	LOD	Compatibility Code		
NA		NA		0.5 μg 0.25 μg		Metals 2		
I	nterferenc	es		Comments				
Spectral interferences are the primary interferences encountered in the ICP-AES analysis.			internal your sar	As part of the Lab's QC protocol, yttrium is used as internal standard in ICP analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples.				

Copper (Fume, Dusts and Mists) as Cu								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media			
7440-50-8	NIOSH 7301 NIOSH 7303 OSHA ID-125G		ICP		MCE or PVC (SKC 225-5 or SKC 225-5-37-P)			
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code		
1-4		70-10	00	0 1.4 μg 0.70 μg Metals		Metals		
lı	nterferenc	es		Comments				
Spectral interferences are the primary interferences encountered in ICP-AES analysis.			internal in your	As part of the Lab's QC protocol, yttrium is used as internal standard in metal analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples.				

Copper (Fume, Dusts and Mists) as Cu									
CAS#	Analytic	cal Method	Analytica	l Technique	Sampling Media				
7440-50-8		SH 7301 SH 7303	ICF	P-MS	MCE or PVC (SKC 225-5 or SKC 225-5-37-P)				
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	<b>Compatibility Code</b>			
1-4	40-240		40	0.10 µg	0.050 μg	Metals			
I)	nterferenc	es			Comments				
			and lute analysis form if y	As part of the Lab's QC protocol, yttrium, rhodium, and lutetium are used as internal standards in ICP-MS analysis. Please indicate in your sample submission form if yttrium, rhodium, and/or lutetium are present in the area where you collected your samples.					

Copper (Fume, Dusts and Mists) as Cu								
CAS#	Analytic	nalytical Method A		Analytical Technique		Sampling Media		
7440-50-8	OSH	A ID-121		СР	Ghost wipe ( 225-2414)		pe ( 225-2414)	
Sampling	Sampling Rate† Sampling Volum		olumett	LOQ		LOD	Compatibility Code	
NA		NA		5.0 μg 2.5 μg		Metals 2		
I	nterferenc	es		Comments				
Spectral interferences are the primary interferences encountered in the ICP-AES analysis.			internal your sar	As part of the Lab's QC protocol, yttrium is used as internal standard in ICP analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples.				

Cotton Du	Cotton Dust, Raw									
CAS#	Analytical Method A		Analytica	l Technique	Sam	pling Media				
	NIOS	NIOSH 0500		RAV	See	PVC e Comment				
Sampling Ratet Sampling Vol			olumett	LOQ	LOD	Compatibility Code				
See Com	ment	1000-3	600	00 50 μg 10 μg						
I	nterferenc	es		Comments						
All other dusts will interfere.			PVC cas at 7.4 lp	OSHA: Open-faced sampling with 3-piece pre-weighed PVC cassette on a vertical elutriator, cotton-dust sampler at 7.4 lpm. ACGIH: Use BGI GK2.69 cyclone at 1.6 lpm; sample 768 liters for 65% of new thoracic TLV.						

Cresol, all Isomers									
CAS#	Analytic	Analytical Method		Analytical Technique		Sampling Media			
1319-77-3 95-48-7 108-39-4 106-44-5	OS	HA 32	HPLC		XAD-7 (SKC 226-95)				
Sampling	Sampling Rate† Sampling Vo		olumett	mett LOQ		LOD	Compatibility Code		
0.1		5-2	4	0.39 µg		0.20 µg	Phenol & cresol		
Į.	Interferences			Comments					
This method is applicable for all isomers of cresol (ortho-, meta-, and para-).						r's			

Cumene							
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media		
98-82-8	NIOS	NIOSH 1501		:-FID	CT (SK	C 226-01, -09)	
Sampling	Sampling Rate† Sampling Vol			LOQ	LOD	Compatibility Code	
0.01 -0	0.2	2-30	0	0.55 μg 0.28 μg CS <sub>2</sub>			
I	nterferenc	es		Comments			
			may be	Under conditions of high humidity, the breakthrough volumes may be reduced by as much as 50%. 2018 NIC of TWA to 1ppm, A3 was changed to TWA = 5ppm, A3 in 2020.			

Cumene							
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media		
98-82-8	3M Method		GC	-FID	OVM	(3M 3500)	
Sampling	Sampling Rate† Sampling Vol			LOQ	LOD	Compatibility Code	
24.5	5	15-4	80	0.83 μg 0.42 μg CS <sub>2</sub>			
ı	nterferenc	es		Comments			
				2018 NIC of TWA to 1ppm, A3 was changed to TWA = 5ppm, A3 in 2020.			

Cyclohexane								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media			
110-82-7	NIOS	NIOSH 1500		C-MS	CT (Sk	(C 226-01, -09)		
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code		
0.01-0	).2	2.5-	·5	0.17 μg	0.083 μg	CS <sub>2</sub>		
I	nterferenc	es		Comments				
·								

CAS#	Analytical Method		Analytical	Technique	Sampling Media		
110-82-7	3M I	3M Method		-MS	OVM (3M 3500)		
Sampling Rate† Sampling V		/olumett	LOQ	LOD	Compatibility Code		
32.4	ļ	15-3	60	0.25 μg 0.13 μg		CS <sub>2</sub>	
Interferences				Comments			

Cyclohexanol								
CAS#	Analytical Method		Analytica	l Technique	Sampling Media			
108-93-0	NIOS	SH 1402	GC	:-FID	CT (SK	C 226-01, -09)		
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code			
0.01-0	.2	1-10	0	1.1 µg	0.55 μg	5%PRO/CS <sub>2</sub>		
I	nterferenc	es		Comments				

Cyclohexa	Cyclohexanol									
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media					
108-93-0	3M I	Method	GC	-FID	OVM	(3M 3500)				
Sampling Rate† Sampling Vo		olumett	LOQ	LOD	<b>Compatibility Code</b>					
29.5	1	15-48	80	1.7 µg	0.85 μg	MC				
ı	Interferences				Comments					
	Sample separately from other solvents.									

Cyclohexanone									
CAS#	Analytical Method A		Analytical Technique		Sampling Media				
108-94-1	NIOS	NIOSH 1300		-FID	CT (SK	C 226-01, -09)			
Sampling	Sampling Rate† Sampling Vol		olumett	LOQ	LOD	<b>Compatibility Code</b>			
0.01-0	).2	1-10	0.72 μg		0.36 µg	CS <sub>2</sub>			
	nterferenc	es		Comments					
Preferred for STEL sampling. Sample at a flow rate of 0.2 lpm.									

Cyclohexanone									
CAS#	Analytical Method		Analytical Technique		Sampling Media				
108-94-1	3M I	3M Method		-FID	OVM (3M 3500)				
Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code				
28.9	28.9 15-48		80	1.1 µg	0.54 μg	CS <sub>2</sub>			
Interferences				Comments					

Cyclohexy	lamine					
CAS#	Analytical Method A		Analytical Technique		Sampling Media	
108-91-8	NIOSH 2010		GC-FID		SGT (SKC 226-10)	
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	<b>Compatibility Code</b>	
0.01-	1	5-30	0	5.9 µg	3.0 µg	Amine1
Interferences					Comments	
Methanol could interfere in low level analysis.						

Cyclopent	ane						
CAS#	CAS # Analytical Method		Analytical Technique		Sampling Media		
287-92-3	NIOS	SH 1500	GC-FID		CT (SKC 226-01)		
Sampling Rate† Sampling V		/olumett	LOQ	LOD	Compatibility Code		
0.01-0.2 2.5-5		5.0 0.40 μg		0.20 μg	CS <sub>2</sub>		
I	nterferenc	es		Comments			

Cyclopent	ane						
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media		
287-92-3	3M Method		GC-FID		OVM (3M 3520)		
Sampling	Sampling Rate† Sampling Volu		olumett	LOQ	LOD	<b>Compatibility Code</b>	
36.2	36.2 15-60		0	0.60 µg		CS <sub>2</sub>	
I	Interferences			Comments			
				Use 3M 3520. Separate front section of the monitor from the back section and cap immediately after sampling.			

Desflurane (Suprane)									
CAS#	Analytical Method A		Analytical Technique		Sampling Media				
57041-67-5	OSI	HA 106	GC-FID		Anasorb 74	47 (SKC 226-81A)			
Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code				
0.05		3		6.1 µg	3.1 µg	CS <sub>2</sub>			
li	nterferenc	es		Comments					
Store and ship cold overnight.									

Desflurane	e (Supra	ne)					
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media		
57041-67-5	3M I	3M Method		:-FID	OVM (3M 3520)		
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code	
30.1		15-4	80	9.1 µg	4.6 µg	CS <sub>2</sub>	
Interferences				Comments			
			from the	e back section	e front section of and cap immedia hip cold overnight	tely after	

Diacetone Alcohol (4-Hydroxy-4-methyl-2-pentanone)								
CAS#	Analytical Method		<b>Analytical Technique</b>		Sampling Media			
123-42-2	NIOSH 1402		GC-FID		CT (SKC 226-01, -09)			
Sampling	Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code		
0.01-0	0.01-0.2 1-10		0 0.98 μ		0.49 μg	5%PRO/CS <sub>2</sub>		
I	Interferences			Comments				

Diacetone Alcohol (4-Hydroxy-4-methyl-2-pentanone)									
CAS#	Analytical Method A		Analytical Technique		Sampling Media				
123-42-2	3M I	3M Method		-FID	OVM	(3M 3500)			
Sampling	Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code			
28.2		15-48	0 1.5 μg		0.75 μg	MC			
I	Interferences			Comments					
	Sample separately from other solvents.								

Diacetyl (E Diketone,		•	dione, 2,3	3-Butanedi	one, Diketobu	itane, Dimethyl		
CAS#	Analyti	cal Method	Analytica	l Technique	Samp	oling Media		
431-03-8	OSH	IA 1013	GC	C-MS	SGT/GFF-SGT	7/GFF (SKC 226-183)		
Sampling	Ratet	Sampling \	/olumett	LOQ	LOD	<b>Compatibility Code</b>		
0.05-0	.2	9 (T\ 3 (15-min s		0.16 µg	0.080 µg	95%EtOH		
I	nterferenc	es		Comments				
			tubes in light du wrappin and cap CS <sub>2</sub> con of 3.0L i	series. Samp ring and after og the samples tubes after s npatible solve is required. Fo	d on two specially les should be prot sampling. Order a s during and after ampling. Sample s nts. For STEL sam or TWA sampling, a e and ship cold ove	tected from the followinum foil for sampling. Separate separately from apling, a minimum a minimum of		

Dibenzo[a,h]anthracene (see PNA scan)								
CAS#	Analytical Method A		Analytica	l Technique	Samp	oling Media		
53-70-3	NIOS	SH 5506	HPLC			E2/XAD-2 37, SKC 226-30-04)		
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code			
2		200-1	000	00 0.93 μg 0.47 μg PNAs		PNAs		
li	Interferences			Comments				
Asphalt fumes will interfere.				After sampling, separate filter from sorbent tube. Cap and wrap individually in aluminum foil. Ship and store cold.				

Dibromoc	Dibromochloropropane (DBCP)								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media				
96-12-8	96-12-8 OSHA In-house		GC	-FID	Anasorb 747/ Anasorb 747 (SKC 226-81A)				
Sampling	Sampling Rate† Sampling Vol		olumett	LOQ	LOD	<b>Compatibility Code</b>			
0.20	)	20		0.41 µg	0.205 μg	CS <sub>2</sub>			
I	nterferenc	es		Comments					
				Sample with 2 Anasorb 747 tubes in series. Separate and cap tubes after sampling. Ship cold overnight.					

Dibutyl Ether								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media			
142-96-1	NIOSH 1610		GC-FID		CT (SK	C 226-01, -09)		
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code			
0.05-0	).2	1-10	)	0.85 μg	0.43 μg	CS <sub>2</sub>		
ı	nterferenc	es		Comments				
	Store and ship cold.							

Dibutyl Ph	Dibutyl Phthalate								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media				
84-74-2	NIOS	SH 5020	GC	-FID	MCE	(SKC 225-5)			
Sampling	Sampling Rate† Sampling Vo		olumett/	LOQ	LOD	<b>Compatibility Code</b>			
1-3		10-2	00	0.46 µg	0.23 μg	CS <sub>2</sub>			
I	nterferenc	es		Comments					
	Sample at 1.0 lpm for STEL.								

Dichlorobenzene(o-)								
CAS#	Analytical Method A		Analytica	l Technique	Samı	oling Media		
95-50-1	NIOS	SH 1003	GC-FID		CT (SK	C 226-01, -09)		
Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code			
0.01-0	).2	1-10	0	0.50 μg	0.25 μg	CS <sub>2</sub>		
I	nterferenc	es		Comments				
Preferred for STEL sampling. Sample at a flow rate of 0.2 lpm.								

Dichlorobenzene(o-)								
CAS#	Analytical Method		Analytical Technique		Sampling Media			
95-50-1	3M Method		GC-FID		OVM (3M 3500)			
Sampling Rate† Sampling Vo		olumett/	LOQ	LOD	<b>Compatibility Code</b>			
27.8	1	15-4	80 0.75 μς		0.38 μg	CS <sub>2</sub>		
I	nterferenc	es		Comments				

Dichlorobenzene(p-)								
CAS#	Analytical Method		Analytical Technique		Sampling Media			
106-46-7	NIOS	SH 1003	GC-FID		CT (SK	C 226-01, -09)		
Sampling Rate† Sampling Vo		olumett	LOQ	LOD	<b>Compatibility Code</b>			
0.01-0	).2	1-8		0.45 µg	0.23 μg	CS <sub>2</sub>		
	nterferenc	es		Comments				
Preferred for STEL sampling. Sample at a flow rate of 0.2 lpm.						t a flow rate of 0.2 lpm.		

Dichlorobenzene(p-)								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media			
106-46-7	3M Method		GC-FID		OVM (3M 3500)			
Sampling Rate† Sampling Vol		olumett/	LOQ	LOD	<b>Compatibility Code</b>			
27.8		15-4	80	0.68 µg	0.34 μg	CS <sub>2</sub>		
I	Interferences			Comments				

Dichloroet	Dichloroethane(1,1)								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media				
75-34-3	NIOS	SH 1003	GC	-FID	CT (SK	C 226-01, -09)			
Sampling	Sampling Ratet Sampling Vol		olumett	LOQ	LOD	Compatibility Code			
0.01-0	).2	0.5-1	15	1.7 µg	0.83 µg	CS <sub>2</sub>			
I	nterferenc	es		Comments					
	Preferred for STEL sampling. Sample at a flow rate of 0.2 lpm.								

CAS#			Analytica	l Technique	Sampling Media		
75-34-3			GC	-FID	OVM (3M 3500)		
Sampling Rate† Sampling Vo		/olumett	LOQ	LOD	Compatibility Code		
33.2	2	15-4	80	) 2.5 μg 1.3 μg CS <sub>2</sub>		CS <sub>2</sub>	
Interferences				Comments			

Dichloroethylene(1,2-)(trans); (Acetylene dichloride)								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media			
540-59-0	3M	Method	GC-FID		OVM (3M 3500)			
Sampling Rate† Sampling Vo		olumett/	LOQ	LOD	Compatibility Code			
35.2	1	15-3	60	2.1 µg	1.1 µg	CS <sub>2</sub>		
Interferences				Comments				

Dichloroethylene(1,2-)(cis); (Acetylene dichloride)								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media			
540-59-0	NIOS	SH 1003	GC-FID		CT (SKC 226-01, -09)			
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code			
0.01-0	.2	0.2-	·5	1.6 µg	0.80 µg	CS <sub>2</sub>		
Interferences				Comments				
		·		<u> </u>	·			

Dichloroethylene(1,2-)(cis); (Acetylene dichloride)								
CAS#	Analytic	Analytical Method A		l Technique	Sampling Media			
540-59-0	3M Method		GC-FID		OVM	I (3M 3500)		
Sampling	Sampling Rate† Sampling Vo		olumett/	LOQ	LOD	<b>Compatibility Code</b>		
35.2		15-4	80	2.4 µg	1.2 µg	CS <sub>2</sub>		
Interferences				Comments				

Dichloroethylene(1,2-)(trans); (Acetylene dichloride)								
CAS#	CAS # Analytical Method Ar		Analytica	l Technique	Samı	oling Media		
540-59-0	0 NIOSH 1003		GC-FID		CT (SK	C 226-01, -09)		
Sampling	Sampling Rate† Sampling Vo		olumett/	LOQ	LOD	Compatibility Code		
0.01-0	).2	15-3	60	1.4 µg	0.70 μg	CS <sub>2</sub>		
Interferences				Comments				

ichlorom	ethane	(Methylene	e chlorid	e)			
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media		
75-09-2	5-09-2 NIOSH 1005		GC-FID		CT-CT	(SKC 226-01)	
Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code		
0.01-0	).2	0.5-2	5	3.7 µg 1.9 µg		CS <sub>2</sub>	
ı	nterferenc	es		Comments			
				e tubes and ca g. Ship cold ir	ap immediately aft nmediately.	er	

Dichlorom	Dichloromethane (Methylene chloride)								
CAS#	Analytic	Analytical Method An		l Technique	Sam	pling Media			
75-09-2	3M I	3M Method		-FID	OVM	1 (3M 3520)			
Sampling	Sampling Rate† Sampling Volume			LOQ	LOD	Compatibility Code			
37.9		15-24	40	5.6 μg 2.8 μg CS <sub>2</sub>		CS <sub>2</sub>			
I	nterferenc	es		Comments					
			from the	Use 3M 3520. Separate front section of the monitor from the back section and cap immediately after sampling. Ship cold immediately.					

esel Exh	aust						
CAS#	Analytical Method A		Analytica	l Technique	Sam	pling Media	
	NIOSH 5040		EGA-TDA		QFF		
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code		
2-4	2-4 142-190		000	1.3 µg	NA		
h	nterferenc	es		Comments			
			accredit the med mines, u	This analysis is sub-contracted to an AIHA-LAP, LLC accredited lab. We require a week's notice to procure the media. Media has short shelf-life. For underground mines, use diesel particulate matter (DPM) cassettes (SKC 225-317). Turnaround time is 10 working days.			

Diethanola	amine						
CAS#	Analytic	Analytical Method A		l Technique	Sampling Media		
111-42-2	NIOS	NIOSH 2007		IC	ORBO 53 or SGT** (SUPELCO 20265) (SKC 226-10-03)		
Sampling	Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code	
0.01-0	).5	30		3.0 µg 1.5 µg		EA	
I	nterferenc	es		Comments			
			Store in	freeezer after	sampling. Ship co	old.	

Diethyl Ketone (3- Pentanone)								
CAS#	S # Analytical Method A		Analytica	l Technique	Sampling Media			
96-22-0	NIOS	NIOSH 1300		:-FID	CT (SK	C 226-01, -09)		
Sampling	Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code		
0.01-0	.2	1-10	)	0.67 µg	0.34 μg	CS <sub>2</sub>		
	Interferences Comments							
Preferred for STEL sampling. Sample at a flow rate of 0.2 lpm.								

Diethyl Ke	tone						
CAS#	Analytical Method		Analytica	l Technique	Sam	pling Media	
96-22-0	96-22-0 3M Method		GC-FID		OVM	I (3M 3500)	
Sampling	Sampling Rate† Sampling V		/olumett	LOQ	LOD	Compatibility Code	
32.7	•	15-4	80 1.0 μg		0.50 μg	CS <sub>2</sub>	
I	Interferences			Comments			

Diethyl Ph	thalate						
CAS#	Analytical Method A		Analytica	l Technique	Samı	oling Media	
84-66-2	OSI	OSHA 104		-FID	OVS-Tena	ax (SKC 226-56)	
Sampling	Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code	
1		240	)	0.58 µg	0.29 μg	Tol	
	nterferenc	es		Comments			

Diethyl Su	lfate						
CAS#	Analytic	Analytical Method A		l Technique	Samı	oling Media	
64-67-5	7-5 NIOSH 2524		GC-FID		Porapak-l	P (SKC 226-114)	
Sampling	Sampling Rate† Sampling Vo		olumett/	LOQ	LOD	Compatibility Code	
0.05-0	0.2	0.25	-12	7.2 µg	3.6 µg	Ethyl Ether	
Interferences				Comments			

Diethylamine								
CAS#	Analytical Method A		Analytica	Technique	Sampling Media			
109-89-7	<b>39-7</b> NIOSH 2010		GC-FID		SGT (	SKC 226-10)		
Sampling Rate† Sampling Volu		olumett	LOQ	LOD	Compatibility Code			
0.01-1	.0	5-3	0	0.31 µg	0.16 µg	Amine1		
I	nterferenc	es		Comments				
Nitrogen compounds that co-elute will interfere.								

Diethylene	etriamin	е					
CAS#	Analytical Method		Analytica	l Technique	Sampling Media		
111-40-0	111-40-0 OSHA 60		HPLC		XAD-2, NITC (SKC 226-30-18)		
Sampling Rate† Sampling Vo		/olumett	LOQ	LOD	Compatibility Code		
0.1		10	)	0.10 μg		Amine2	
ı	nterferenc	es		Comments			
Nitrogen com co-elute will i	•	at					

Diglycidyl Ether of Bisphenol A								
CAS#	CAS # Analytical Method A		Analytica	l Technique	Sampling Media			
1675-54-3	<b>75-54-3</b> OSHA 1018		Н	PLC		GFF		
Sampling Rate† Sampling Vo		olumett/	LOQ	LOD	Compatibility Code			
1.5		270	0	0.50 μg 0.25 μg				
Interferences				Comments				

Dimethyl A	Acetami	de					
CAS#	CAS # Analytical Method A		Analytica	l Technique	Sampling Media		
127-19-5 3M Method			GC	:-FID	OVM	(3M 3500)	
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code	
32.0	)	15-48	30 0.99 μg		0.50 μg	MC	
I	nterferenc	es		Comments			
	Sample separately from CS <sub>2</sub> compatible solvents.						

Dimethyl A	Acetami	de					
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media		
127-19-5	127-19-5 NIOSH 2004		GC	-FID	SGT (	SKC 226-10)	
Sampling	Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code	
0.05-	1	15-8	80	0.66 µg	0.33 μg	MeOH	
I	Interferences			Comments			
				Silica gel has a high affinity for water; high relative humidity may adversely affect the efficiency of analyte adsorption.			

Dimethyl Disulfide								
CAS#	Analytic	cal Method	Analytica	l Technique	Sampling Media			
624-92-0	LM-GC-59		GC	-FID	CT (SK	C 226-01, -09)		
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code			
0.1		5		1.6 μg 0.80 μg CS <sub>2</sub>		CS <sub>2</sub>		
	nterferenc	es		Comments				
	Turnaround is 10 business days.							

Dimethyl S	Sulfide					
CAS#	Analytic	cal Method	Analytica	l Technique	Samı	oling Media
75-18-3	<b>75-18-3</b> LM-GC-59		GC	-FID	CT (SK	C 226-01, -09)
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code	
0.1		5		1.1 µg 0.55 µg		CS <sub>2</sub>
I	nterferenc	es			Comments	
	· · · · · · · · · · · · · · · · · · ·		Turnaro	und is 10 bus	iness days.	

Dimethyl(2	2,6-)-4-ŀ	neptanone	(Diisobu	ıtyl ketone	)		
CAS # Analytical Method A		Analytica	l Technique	Sampling Media			
108-83-8 NIOSH 1300		GC	:-FID	CT (SK	C 226-01, -09)		
Sampling Rate† Sampling Vo		olumett/	LOQ	LOD	Compatibility Code		
0.01-0	).2	1-1	0 0.59 μg		0.30 μg	CS <sub>2</sub>	
Interferences				Comments			

Dimethyl(2,6-)-4-heptanone (Diisobutyl ketone)								
CAS#	CAS # Analytical Method Ar		Analytica	l Technique	Sampling Media			
108-83-8	-83-8 3M Method		GC	-FID	OVM	(3M 3500)		
Sampling Rate† Sampling Vol		olumett/	LOQ	LOD	<b>Compatibility Code</b>			
24.6	)	15-4	80 0.89 μg		0.45 μg	CS <sub>2</sub>		
Interferences				Comments				
		<u> </u>		<u> </u>				

Dimethylfo	ormamic	de					
CAS#	CAS # Analytical Method A		Analytica	l Technique	Samı	oling Media	
68-12-2	58-12-2 3M Method		GC	C-FID	OVM	(3M 3500)	
Sampling	Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code	
35.5	i	15-48	30	1.7 µg	0.83 µg	MC	
ı	nterferenc	es		Comments			
	Sample separately from CS <sub>2</sub> compatible solvents.						

Dimethylfo	ormamic	de					
CAS#	CAS # Analytical Method A		Analytica	l Technique	Samı	oling Media	
68-12-2	<b>68-12-2</b> NIOSH 2004		GC	:-FID	SGT (	SKC 226-10)	
Sampling	Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code	
0.05-	1	15-8	30	1.5 µg 0.75 µg MeOH		MeOH	
I	Interferences			Comments			
				Silica gel has a high affinity for water; high relative humidity may adversely affect the efficiency of analyte adsorption.			

Dioctyl Phthalate								
CAS#	CAS # Analytical Method Ar		Analytica	Technique	Samı	oling Media		
117-84-1	OSHA 104		GC-FID		OVS-Tena	ax (SKC 226-56)		
Sampling Rate† Sampling Vo		/olumett	LOQ	LOD	Compatibility Code			
1.0		1-24	40	0.27 µg	0.14 μg	Tol		
Interferences				Comments				

Dioxane(p	-)						
CAS#	CAS # Analytical Method A		Analytica	l Technique	Sampling Media		
123-91-1	123-91-1 NIOSH 1602		GC	-FID	CT (SKC 226-01, -09)		
Sampling	Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code	
0.05-0	).2	1-10	1.3 μg		0.65 μg	CS <sub>2</sub>	
Interferences				Comments			

Dioxane(p	-)						
CAS#	Analytic	cal Method	Analytica	l Technique	Samı	oling Media	
<b>123-91-1</b> 3M Method		GC	:-FID	OVM (3M 3500)			
Sampling Rate† Sampling Vo		/olumett	LOQ	LOD	Compatibility Code		
34.5	j	15-4	·80 2.0 μg		1.0 µg	CS <sub>2</sub>	
Interferences				Comments			

Diphenyl (Biphenyl)								
CAS#	Analytical Method		Analytica	l Technique	Sampling Media			
92-52-4	<b>2-52-4</b> OSHA PV2022		GC	-FID	XAD-7	(SKC 226-95)		
Sampling Rate† Sampling Vol		olumett/	LOQ	LOD	<b>Compatibility Code</b>			
0.20		20		0.46 µg	0.23 μg	CS <sub>2</sub>		
Interferences				Comments				

Dipropylene Glycol Methyl Ether (DPGME)									
CAS#	CAS # Analytical Method A		Analytica	l Technique	Samı	oling Media			
34590-94-8	NIOS	NIOSH 2554		-FID	CT (SK	C 226-01, -09)			
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code				
0.05-0	.2	2-10	)	3.0 µg	1.5 µg	MC			
li	es		Comments						
	2020 NIC, TWA = 50ppm, STEL = 100ppm								

Dipropylene Glycol Methyl Ether (DPGME)									
CAS#	CAS # Analytical Method A		Analytica	l Technique	Samp	oling Media			
34590-94-8	3M I	Method	GC	:-FID	OVM	(3M 3500)			
Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code				
25.3		15-48	80 4.5 μg		2.3 μg	CS <sub>2</sub>			
lı	es		Comments						
2020 NIC, TWA = 50ppm, STEL = 100ppm									

Dipropyler	ie Glyco	I Methyl E	ther Ace	tate (DPGI	MEA)		
CAS#	CAS # Analytical Method A		Analytical	Technique	Samı	oling Media	
88917-22-0	3M I	Method	GC-FID		OVM	(3M 3500)	
Sampling Rate† Sampling Vo		/olumett	LOQ	LOD	Compatibility Code		
22.8		15-4	80	1.5 µg	0.75 μg	CS <sub>2</sub>	
Interferences				Comments			

Divinyl Benzene								
CAS#	AS # Analytical Method		Analytical Technique		Samı	oling Media		
1321-74-0	NIOS	SH 1501	GC-FID		CT (SK	C 226-01, -09)		
Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code			
0.01-0	.2	1-1	0	0.57 μg	0.29 μg	CS <sub>2</sub>		
Interferences				Comments				

Divinyl Be	Divinyl Benzene								
CAS#	CAS # Analytical Method A		Analytica	l Technique	Sampling Media				
1321-74-0	1321-74-0 3M Method		GC	:-FID	OVM	(3M 3500)			
Sampling Rate† Sampling Vo		/olumett	LOQ	LOD	Compatibility Code				
23.3	}	15-4	80	0.86 µg	0.43 μg	CS <sub>2</sub>			
I	Interferences			Comments					

Enflurane (Ethrane)									
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media				
13838-16-9	OSH	OSHA 103		C-FID	Anasorb 7	47 (SKC 226-81A)			
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code				
0.05-0	.2	1-10	)	2.6 µg	1.3 µg	CS <sub>2</sub>			
li	es		Comments						
	Store and ship cold overnight.								

Enflurane (Ethrane)								
CAS#	CAS # Analytical Method A		Analytical	Technique	Sampling Media			
13838-16-9	3M I	3M Method		-FID	OVM	(3M 3500)		
Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code			
28.3		15-48	80	4.0 µg	2.0 μg	CS <sub>2</sub>		
Interferences				Comments				
Store and ship cold overnight.								

Epichlorohydrin (1-Chloro-2,3-epoxy propane)								
CAS#	CAS # Analytical Method A		Analytica	l Technique	Sampling Media			
106-89-8	NIOS	NIOSH 1010		-FID	CT (SK	C 226-01, -09)		
Sampling Rate† Sampling Vo		olumett/	LOQ	LOD	Compatibility Code			
0.05-0	).2	2-3	0	1.5 µg	0.75 μg	CS <sub>2</sub>		
Interferences				Comments				

Epichlorohydrin (1-Chloro-2,3-epoxy propane)								
CAS#	Analytical Method A		Analytica	l Technique	Samı	oling Media		
106-89-8	3M I	3M Method		-FID	OVM	(3M 3500)		
Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code			
29.6	)	15-4	80	2.3 µg	1.2 µg	CS <sub>2</sub>		
Interferences				Comments				

Ethanolan	Ethanolamine (2-Aminoethanol)								
CAS#	Analytical Method A		Analytica	l Technique	Samı	oling Media			
141-43-5	NIOS	SH 2007		IC	ORBO 53 or SGT** (SUPELCO 20265) (SKC 226-10-03)				
Sampling	Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code			
0.01-0	0.01-0.5 5			3.0 µg 1.		EA			
	Interferences			Comments					
	Store in freezer after sampling. Ship cold.								

Ethoxyethanol(2-) (Cellosolve)								
CAS#	Analytical Method		Analytical Technique		Sampling Media			
110-80-5	NIOSH 1403		GC-FID		CT (SKC 226-01, -09)			
Sampling	Sampling Ratet Sampling Vol		olumett	LOQ	LOD	Compatibility Code		
0.01-0.	.05	1-6	, ,	0.54 μg	0.27 μg	5%MeOH/MC		
I	Interferences			Comments				

Ethoxyethanol(2-) (Cellosolve)								
CAS#	Analytical Method A		Analytical Technique		Sampling Media			
110-80-5	3M I	Method	GC-FID		OVM	(3M 3500)		
Sampling	Rate†	Sampling V	olumett	LOQ	LOD	Compatibility Code		
32.4	32.4 15-480		80	0.81 μg 0.41 μg MC				
Interferences Comments								
Sample separately from other solvents.								

Ethoxyethyl(2-) Acetate (Cellosolve acetate)							
CAS#	Analytic	cal Method	Analytical Technique		Sampling Media		
111-15-9	<b>-15-9</b> NIOSH 1450			:-FID	CT (SK	C 226-01, -09)	
Sampling	Rate†	Sampling V	olumett	LOQ	LOD	Compatibility Code	
0.01-0.2 1-10			0	2.8 µg	1.4 µg	CS <sub>2</sub>	
I	nterferenc	es			Comments		

Ethoxyethyl(2-) Acetate (Cellosolve acetate)								
CAS#	Analytical Method A			l Technique	Sampling Media			
111-15-9	3M Method		GC-FID		OVM (3M 3500)			
Sampling	Ratet	Sampling \	olumett/	LOQ	LOD	Compatibility Code		
26.6 15-480			80	4.2 µg	2.1 µg	CS <sub>2</sub>		
I	nterferenc	es			Comments			

Ethyl 2-cyanoacrylate								
CAS#	Analytical Method A		Analytical Technique		Sampling Media			
7085-85-0	<b>85-85-0</b> OSHA 55		HPLC		XAD-7, Ac	id (SKC 226-98)		
Sampling Ratet Sampling Vo			olumett	LOQ	LOD	Compatibility Code		
0.1 12				0.70 μg	0.35 μg			
Į.	nterferenc	es		Comments				
Ship and store cold.								

Ethyl 3-ethoxypropionate								
CAS#	AS # Analytical Method A		Analytical Technique		Sampling Media			
763-69-9	OSHA PV2025		GC-FID		CT (SK	C 226-01, -09)		
Sampling Ratet Sampling Vol			olumett	LOQ	LOD	Compatibility Code		
0.05-0.2 1-10		0	1.1 µg	0.55 μg	CS <sub>2</sub>			
Interferences					Comments			

CAS # Analytical Method Analytical Technique Sampling Media 763-69-9 3M Method GC-FID OVM (3M 3500)  Sampling Rate† Sampling Volume†† LOQ LOD Compatibil	
Sampling Rate† Sampling Volume†† LOQ LOD Compatibil	
05.0	lity Code
25.8 15-480 1.7 μg 0.85 μg CS	2
Interferences Comments	

Ethyl Acetate								
CAS#	Analytical Method A		Analytical Technique		Sampling Media			
141-78-6	NIOSH 1457		GC-FID		CT (SK	C 226-01, -09)		
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code		
0.01-0	0.01-0.2 1-10		0	1.2 µg	0.60 μg	CS <sub>2</sub>		
Į.	nterferenc	es			Comments			

thyl Acet	ate					
CAS # Analytical Method A			Analytica	l Technique	Samı	oling Media
141-78-6	3M Method		GC-FID		OVM (3M 3500)	
Sampling Rate† Sampling Vo			/olumett	LOQ	LOD	Compatibility Code
34.5 15-360		60	1.8 µg	0.90 μg	CS <sub>2</sub>	
ı	nterferenc	es			Comments	

<b>Ethyl Acry</b>	late						
CAS#	Analytical Method		Analytical Technique		Sampling Media		
140-88-5	NIOSH 1450		GC-FID		CT (SKC 226-01, -09)		
Sampling Rate† Sampling Vo			/olumett	LOQ	LOD	Compatibility Code	
0.01-0.2 1-10		0	0.98 μg 0.49 μg CS <sub>2</sub>		CS <sub>2</sub>		
ı	nterferenc	es		Comments			
				Preferred for STEL sampling. Sample at a flow rate of 0.2 lpm. Store and ship cold overnight.			

Ethyl Acrylate								
CAS#	Analytical Method A		Analytical Technique		Sampling Media			
140-88-5	3M Method		GC-FID		OVM	(3M 3500)		
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code		
32.2	32.2 15-480		80	1.5 µg	0.75 μg	CS <sub>2</sub>		
I	nterferenc	es		Comments				
	Store and ship cold overnight.							

Ethyl Alco	hol (Eth	anol)					
CAS#	Analytic	cal Method	Analytical Technique		Sampling Media		
64-17-5	NIOSH 1400		GC-FID		CT (SK	C 226-01, -09)	
Sampling	Ratet	Sampling V	olumett	LOQ	LOD	Compatibility Code	
0.01-0.2 0.1-1			1	1.2 µg	0.60 µg	BUT/CS <sub>2</sub>	
ı	nterferenc	es		Comments			
			Store ar	nd ship cold o	vernight.		

<b>Ethyl Alco</b>	hol (Eth	anol)					
CAS#	Analytic	Analytical Method An		l Technique	Sampling Media		
64-17-5	3M I	Method	GC-FID		OVM (3M 3520)		
Sampling Rate† Sampling Vol			olumett/	LOQ	LOD	Compatibility Code	
43.7	43.7 15-120		20	1.8 µg 0.90 µg ACN		ACN	
I	nterferenc	es			Comments		
Use 3M 3520. Separate the front section of the monitor from the back section and cap immediately after sampling. Store ship cold overnight. Sample separately from other solvents.						fter sampling. Store and	

Ethyl Benzene								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media			
100-41-4	NIOSH 1501		GC	-FID	CT (SK	C 226-01, -09)		
Sampling Ratet Sampling Vol		olumett	LOQ	LOD	<b>Compatibility Code</b>			
0.01-0	0.01-0.2 1-30		)	0.5 μg	0.25 μg	CS <sub>2</sub>		
	Interferences				Comments			
				Under conditions of high humidity, the breakthrough volumes may be reduced by as much as 50%.				

Ethyl Benzene								
CAS#	Analytical Method		Analytical Technique		Sampling Media			
100-41-4	3M	3M Method		:-FID	OVM (3M 3500)			
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code			
27.3		15-4	80	0.75 μg	0.36 µg	CS <sub>2</sub>		
ļ	Interferences			Comments				

<b>Ethyl Ethe</b>	r						
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media		
60-29-7	<b>60-29-7</b> NIOSH 1610		GC-FID		CT (SK	C 226-01, -09)	
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code		
0.01-0.2 1-10		)	0.75 μg 0.38 μg Ethyl Aceta		Ethyl Acetate		
Interferences				Comments			
				High humidity may greatly decrease breakthrough volume. Store and ship cold.			

Ethyl Ethe	r						
CAS#	Analytic	Analytical Method A		l Technique	Sampling Media		
60-29-7	3M I	Method	GC	-FID	OVM (3M 3520)		
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code	
36.8	36.8 15-240		40	1.1 μg 0.55 μg CS <sub>2</sub>		CS <sub>2</sub>	
I	nterferenc	es		Comments			
Use 3M 3520. Separate the front section of the monitor from the back section and cap immediately after sampling. Store and ship cold.							

Ethyl Lactate								
CAS#	Analytical Method A		Analytica	l Technique	Samı	oling Media		
687-47-8	NIOSH 1450		GC-FID		CT (SKC 226-01, -09)			
Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code			
0.01-0	).2	1-1	0	0.85 µg	0.43 µg	CS <sub>2</sub>		
Interferences				Comments				
			i					

Ethyl Methacrylate								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media			
97-63-2	NIOSH 1450		GC	:-FID	CT (SK	C 226-01, -09)		
Sampling	Sampling Ratet Sampling Vol		olumett	LOQ	LOD	Compatibility Code		
0.01-0	0.01-0.2 1-10		)	0.65 µg	0.33 μg	CS <sub>2</sub>		
I	Interferences			Comments				
	Ship and store cold.							

Ethylamin	е						
CAS#	Analytical Method A		Analytica	Technique	Sampling Media		
75-04-7	<b>75-04-7</b> NIOSH 2010		GC-FID		SGT (SKC 226-10)		
Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code		
0.01-1 5-30		0	NA	NA	Amine1		
Interferences				Comments			
Nitrogen compounds that co-elute will interfere.							

Ethylene Chlorohydrin (2-Chloroethanol)								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media			
107-07-3	3 NIOSH 2513		GC-FID		CT (SK	C 226-01, -09)		
Sampling	Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code		
0.01-0	.2	1-10	)	0.51 μg	0.26 μg	5%IPA/CS <sub>2</sub>		
I	Interferences				Comments			
Preferred for STEL sampling. Sample at flow rate of 0.2 lpm. High humidity may greatly decrease the breakthrough volum								

Ethylene C	Ethylene Chlorohydrin (2-Chloroethanol)								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media				
107-07-3	3M	Method	GC	:-FID	OVM (3M 3500)				
Sampling	Sampling Rate† Sampling Volu		olumett/	LOQ	LOD	Compatibility Code			
33.9	33.9 15-480		80	0.77 μg	0.39 μg	MC CS <sub>2</sub>			
I	Interferences			Comments					
		·		·					

Ethylene Dichloride (1,2-Dichloroethane)								
CAS#	Analytical Method A		Analytical Technique		Sampling Media			
107-06-2	NIOSH 1003		GC-FID		CT (SK	C 226-01, -09)		
Sampling	Sampling Rate† Sampling Vol			LOQ	LOD	Compatibility Code		
0.01-0	).2	1-50	0	1.5 µg	0.74 μg	CS <sub>2</sub>		
I	Interferences			Comments				

		· · · · · · · · · · · · · · · · · · ·	hloroetha	- /			
CAS#	Analytical Method		Analytical Technique		Sampling Media		
107-06-2	3M N	Method	GC-FID		OVM (3M 3500)		
Sampling Rate† Sampling Vo		/olumett	LOQ	LOD	<b>Compatibility Code</b>		
33.2		15 -4	180	2.3 μg	1.1 µg	CS <sub>2</sub>	
Interferences				Comments			

Ethylene Glycol								
CAS#	Analytical Method		Analytical Technique		Sampling Media			
107-21-1	NIOSH 5523		GC-FID		0VS 7	(SKC 226-57)		
Sampling Rate† Sampling Vo			olumett/	LOQ	LOD	Compatibility Code		
0.5-2	2	5-6	0 2.2 μg		1.1 µg	MeOH		
ı	nterferenc	es		Comments				

Ethylene C	xide						
CAS#	Analytical Method A		Analytical Technique		Sampling Media		
75-21-8	ASTM D5578-04		GC-FID		ORBO 78 (SUPELCO 20355)		
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code	
0.05-0	.15	1-2	4	0.64 µg	0.64 μg 0.32 μg ACN/T		
I	nterferenc	es			Comments		
				Store and ship cold. Sample separately from ${\rm CS}_2$ compatible solvents.			

Ethylene C	Oxide						
CAS#	Analyti	Analytical Method A		l Technique	Sampling Media		
75-21-8	3M	3M Method		:-FID	OVM (3M 3551)		
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code	
49.3	3	15 -4	80	0.96 μg 0.48 μg		ACN/TOL	
ı	nterferenc	es		Comments			
				nd ship cold. Sa <sub>2</sub> compatible s	ample separately olvents.		

Ethylenedi	iamine						
CAS#	Analytic	cal Method	Analytical Technique		Sampling Media		
107-15-3	-15-3 OSHA 60		HPLC		XAD-2, NITC (SKC 226-30-18)		
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code		
0.1		10		0.080 µg	0.040 µg	Amine2	
Interferences				Comments			
Nitrogen com	•	at					

Flour Dust								
CAS#	Analytical Method A		Analytica	Analytical Technique		Sampling Media		
	HSE N	MDHS-14	GI	GRAV		PVC, IOM		
Sampling Rate† Sampling Vol			olumett/	LOQ	LOD Compatibility		Compatibility Code	
2		96	0	100 μg 10 μg				
li	nterferenc	es		Comments				
All other dusts will interfere.			week be	Use IOM sampler with pre-weighed PVC. Contact Lab one week before intended use. The availability of IOM samplers is limited. Rental charge for the IOM samplers applies.				

Fluoranthe	ene (see	PNA scan	)				
CAS#	Analytic	Analytical Method A		l Technique	Samı	oling Media	
206-44-0	NIOS	SH 5506	HPLC			E2/XAD-2 37, SKC 226-30-04)	
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code		
2		200-10	000	0.30 µg	0.15 μg	PNAs	
lı	nterferenc	es		Comments			
Asphalt fumes will interfere.				After sampling, separate filter from sorbent tube. Cap and wrap individually in aluminum foil. Ship and store cold.			

Fluorene (	see PNA	scan)					
CAS#	Analytic	cal Method	Analytical Technique		Sampling Media		
86-73-7	NIOS	SH 5506	HPLC			E2/XAD-2 37, SKC 226-30-04)	
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code		
2		200-10	000	0.32 μg	0.16µg	PNAs	
I	nterferenc	es		Comments			
Asphalt fume	s will inter	fere.		After sampling, separate filter from sorbent tube. Cap and wrap individually in aluminum foil. Ship and store cold.			

Fluorides,	Particu	late/Hydro	gen Fluo	ride			
CAS#	Analytic	Analytical Method A		l Technique	Sampling Media		
	NIOSH 7906			IC	Cellulose Nitrate,Na <sub>2</sub> CO <sub>3</sub> (SKC 225-9031)		
Sampling Rate† Sampling Vol		olumett/	LOQ	LOD	Compatibility Code		
1-2		70-10	000	13 µg	6.5 µg	Acid1	
li	nterferenc	es		Comments			
Recovery of gaseous HF is reduced at high humidity.			ahead o	Treated filter is stable for 14 days. Order media one week ahead of survey date. Media are prepared when ordered. Store and ship cold. Specialty filter. Media charge applies.			

Forane (Iso	oflurane	e)						
CAS # Analytical Method Analytical Technique Sampling Media								
26675-46-7	OSI	HA 103	GC-FID		Anasorb 74	47 (SKC 226-81A)		
Sampling	Ratet	Sampling Vo	olumett	LOQ	LOD	Compatibility Code		
0.05		12		4.9 µg	2.5 μg	CS <sub>2</sub>		
lı	Interferences Comments							
			Store ar	nd ship cold o	vernight.			

Forane (Iso	oflurane	<u>:</u> )					
CAS#	Analytic	cal Method	Analytica	l Technique	Sampling Media		
26675-46-7	3M I	Method	GC	GC-FID OVM (3M 3500)		(3M 3500)	
Sampling	Ratet	Sampling V	olumett	LOQ	LOD	Compatibility Code	
28.3		15-4	80	7.1 µg 3.6 µg CS <sub>2</sub>			
lı	Interferences Comments						
		<u> </u>	Store ar	nd ship cold o	vernight.		

Formaldeh	ıyde						
CAS#	Analytical Method A		Analytica	l Technique	Samp	oling Media	
50-00-0	NIOS	SH 2016	Н	PLC	AT Mon	itor (N571AT)	
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code		
16.2	6.2 15-480		80	0.018 µg 0.0090 µg		Aldehyde	
I	nterferenc	es		Comments			
Other aldehydes and ketones will react with the 2,4-DNPH but can be chromatographically resolved.			_	Refrigerate media before and after sampling. Ship samples cold overnight.			

Formaldel	nyde						
CAS#	Analytic	Analytical Method A		l Technique	Sampling Media		
50-00-0	NIOS	SH 2016	Н	PLC	Sep-Pak (WAT047205)		
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code	
0.1-1.	5	10-1	00	0.090 µg	0.045 µg	Aldehyde	
Į.	nterferenc	es			Comments		
Other aldehydes and ketones will react with the 2,4-DNPH but can be chromatographically resolved.			Ship sar	Refrigerate media before and after sampling. Ship samples cold overnight. Preferred for STEL sampling. Use a flow rate of 1.0 lpm for STEL.			

CAS#	Analytic	cal Method	Analytica	l Technique	Samı	oling Media		
50-00-0	NIOS	SH 2016	Н	PLC	SGT, DNP	H (SKC 226-119)		
Sampling	Ratet	Sampling \	/olumett	LOQ	LOD Compatibility Coc			
0.1-1.	5	1-1	5	0.036 µg	0.018 µg	Aldehyde		
Interferences				Comments				
Other aldehyd react with the chromatogra	2,4-DNPH	l but can be	cold overate of 1 TVOC a with Cha	Refrigerate media before and after sampling. Ship samples cold overnight. Preferred for STEL sampling. Use a flow rate of 1.0 lpm for STEL. For IAQ and LEED sampling where TVOC and formaldehyde are collected, do not sample with Charcoal Tubes and DNPH tubes in tandem. The sorbent in the DNPH tubes may off-gas acetonitrile which can cause a positive interference in the TVOC results.				

Formamide									
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media				
75-12-7	NIOS	NIOSH 2004		:-FID	SGT (SKC 226-10)				
Sampling Rate† Sampling Vol			olumett/	LOQ	LOD	Compatibility Code			
0.05-	1	15-8	30	3.1 µg	1.6 µg	MeOH			
ı	nterferenc	es		Comments					
			may adv	Silica gel has a high affinity for water; high relative humidity may adversely affect the efficiency of analyte adsorption. 2019 NIC, TWA = 1ppm, Skin; A3 adopted in 2020.					

ormic Ac	id						
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media		
64-18-6	NIOS	SH 2011		IC	PTFE3-SGT** (SKC 225-17A, SKC 226-10-03)		
Sampling	Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code	
0.05-0	).5	5-10	00	1.5 µg	0.75 μg	Acid2	
I	nterferenc	es		Comments			
			Do not s	sample with ir	norganic acids.		

Furfural							
CAS#	Analytical Method		Analytical Technique		Sampling Media		
98-01-1	8-01-1 OSHA 72		GC-FID		SKC 226-81A		
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code		
0.1-1		180	)	0.96 µg	0.48 µg	1%DMF/CS <sub>2</sub>	
I	nterferenc	es		Comments			
Furfuryl Alcoh sampling inte							

Furfuryl Alcohol									
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media				
98-00-0	3M I	Method	GC-FID		OVM (3M 3500)				
Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code				
30.6	)	15-48	80 0.96 μg		0.48 μg	MC			
I	nterferenc	es		Comments					
Sample separately from CS <sub>2</sub> compatible solvents.									

Gasoline							
CAS#	Analytic	Analytical Method A		l Technique	Sampling Media		
8006-61-9	NIOS	NIOSH 1550		-FID	CT (SK	C 226-01, -09)	
Sampling Rate† Sampling Vol			olumett/	LOQ	LOD	Compatibility Code	
0.01-0	.2	1.3-	20	1.1 µg	0.55 μg	CS <sub>2</sub>	
I	nterferenc	es		Comments			
			separat	Please send bulk sample. Please ship bulk sample separately from the air samples. <b>Preferred for STEL sampling</b> . Use a flow rate of 0.2 lpm for STEL.			

Gasoline							
CAS#	Analytical Method		Analytica	l Technique	Sampling Media		
8006-61-9	3M I	3M Method		:-FID	OVM (3M 3500)		
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code		
30.5	j	15-48	80	1.7 µg	0.85 µg	CS <sub>2</sub>	
Į.	nterferenc	es		Comments			
				Please send bulk sample. Please ship bulk sample separately from the air samples.			

Germanium								
CAS#	Analytical Method A		Analytica	l Technique	Samı	oling Media		
7440-56-4	NIOSH 7300		I	СР	MCE or PVC (SKC 225-5 or SKC 225-5-37-P)			
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code			
1-4		100-10	000	0 0.38 μg 0.19 μg Metals		Metals		
lı	nterferenc	es		Comments				
Spectral interferences are the primary interferences encountered in ICP-AES analysis.			internal in your	As part of the Lab's QC protocol, yttrium is used as internal standard in metal analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples.				

Glutaralde	Glutaraldehyde								
CAS#	Analytical Method A		Analytica	l Technique	Samı	oling Media			
111-30-8	OSHA 64		HPLC		AT Mon	itor (N571AT)			
Sampling	Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code			
7.24		15-4	80	0.016 µg 0.0080 µg					
I	Interferences				Comments				
Refrigerate media before and after sampling. Ship cold overnight.									

Glutaraldehyde								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media			
111-30-8	NIOSH 2016		HI	PLC	Sep-Pak	(WAT047205)		
Sampling	Sampling Rate† Sampling Volu		olumett	LOQ	LOD	Compatibility Code		
0.1-1.	5	10-10	00	0.080 µg 0.040 µg				
I	nterferenc	es		Comments				
			_	<b>Refrigerate</b> media before and after sampling. Ship cold overnight. <b>Preferred for STEL sampling</b> .				

Glutaraldehyde								
CAS#	Analytical Method		Analytica	l Technique	Sampling Media			
111-30-8	NIOSH 2532		HI	PLC	SGT, DNP	H (SKC 226-119)		
Sampling	Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code		
0.05-0	).5	1-3	0	0.032 μg 0.016 μg				
I	nterferenc	es		Comments				
			_	<b>Refrigerate</b> media before and after sampling. Ship cold overnight. <b>Preferred for STEL sampling</b> .				

Gold							
CAS#	Analytical Method A		Analytica	l Technique	Samı	oling Media	
7440-57-5	NIOSH 7301 NIOSH 7303		I	СР	MCE or PVC (SKC 225-5 or SKC 225-5-37-P)		
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code	
1-4		50-10	00	0 0.28 μg 0.14 μg Metals		Metals	
lı	nterferenc	es		Comments			
Spectral interferences are the primary interferences encountered in ICP-AES analysis.			internal in your	As part of the Lab's QC protocol, yttrium is used as internal standard in metal analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples.			

<b>Grain Dus</b>	t						
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media		
	NIOSH 0500		GI	RAV	Pre-weighed P	VC (SKC 225-5-37-P)	
Sampling	Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code	
1-15	5	50-72	00	50 μg	10 µg		
I	nterferenc	es		Comments			
All other dusts will interfere.				For personal sampling use a flow rate of 1-2 lpm, for area sampling up to 15 lpm.			

Graphite							
CAS#	Analytic	Analytical Method A		l Technique	Samı	pling Media	
7782-42-5	12-5 NIOSH 0600		GI	RAV	PVC (Sk	(C 225-5-37-P)	
Sampling Rate† Sampling Vol			olumett/	nett LOQ		Compatibility Code	
1.7		100-8	316	50 μg	10 µg		
I	nterferenc	es		Comments			
All other respi	rable dust	s will interfer	Oliver) o	Use pre-weighed PVC 2-piece cassette for MSA (Dorr- Oliver) cyclones at 1.7 lpm and 3-piece cassette for BMRC (SKC) cyclones at 2.5 lpm and for BGI-4L at 2.2 lpm.			

Halothane (Fluothane)									
CAS#	Analytical Method A		Analytical Technique		Sampling Media				
151-67-7	OSHA 103		GC-FID		Anasorb 74	17 (SKC 226-81A)			
Sampling Rate† Sampling Vol			lumett	LOQ	LOD	Compatibility Code			
0.05	i	12		3.4 µg	1.7 µg	CS <sub>2</sub>			
I	nterferenc	es		Comments					
	Store and ship cold overnight.								

Halothane (Fluothane)									
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media				
151-67-7	3M I	Method	GC-FID		OVM	(3M 3500)			
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code				
30.2		15-48	30	5.1 µg	2.5 μg	CS <sub>2</sub>			
I	es		Comments						
Store and ship cold overnight.									

Heptane							
CAS#	# Analytical Method A		Analytical Technique		Sampling Media		
142-82-5	<b>2-5</b> NIOSH 1500		GC	:-FID	CT (SK	C 226-01, -09)	
Sampling Rate† Sampling Vo			olumett	LOQ	LOD	Compatibility Code	
0.01-0	).2	1-10		0.45 μg 0.23		CS <sub>2</sub>	
I	nterferenc	es		Comments			
	Preferred for STEL sampling. Sample at 0.2 lpm.						

Heptane							
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media		
142-82-5	3M I	3M Method		:-FID	OVM (3M 3500)		
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	<b>Compatibility Code</b>		
28.9	)	15-4	80	0.68 µg	0.34 μg	CS <sub>2</sub>	
	nterferenc	es		Comments			

Heptanone(2-) (Methyl Amyl Ketone)								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media			
110-43-0	NIOS	NIOSH 1301		-FID	CT (SKC 226-01, -09)			
Sampling Rate† Sampling Vol			olumett/	LOQ	LOD	Compatibility Code		
0.01-0	.2	1-2	5	0.64 µg	0.32 μg	MeOH/CS <sub>2</sub>		
I	nterferenc	es		Comments				

Heptanone(2-) (Methyl Amyl Ketone)								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media			
110-43-0	3M I	Method	GC-FID		OVM (3M 3500)			
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code		
27.9		15-4	80	0.96 µg	0.48 µg	CS <sub>2</sub>		
I	es		Comments					

Hexameth	Hexamethylene Diisocyanate (1,6-) Homopolymer (HDI Homo)									
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media					
28182-81-2	OSHA	N PV2125	V2125 HI		HPLC GFF, 1-2PP					
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code				
1	1 15			0.30 µg	0.15 μg	Isocyanate				
lı	nterferenc	es		Comments						
Any compoun retention time possible inter chromatograp altered to sep	as the an ference. H phic condit	alyte is a owever, tions can be	before a	ınd after sampl	edia must be stoi ling. Filter is stabl iip cold overnight	le for 6				

Hexameth	Hexamethylene Diisocyanate (1,6-) Homopolymer (HDI Homo)								
CAS#	Analytical Method A		Analytica	Analytical Technique		Sampling Media			
28182-81-2	_	SHA /2125	Н	HPLC		GFF Wipes			
Sampling Rate† Sampling Vol			olumett	LOQ		LOD	Compatibility Code		
N/A		N/A	4	0.30 µg		Isocyanate			
li	nterferenc	es		Comments					
Potential interferences include anhydrides, amines, alcohols and carboxylic acids.			after sa vial con week ah	Follow "Isocyanate Wipe Sampling Procedure". Immediately after sampling, glass fiber filters must be placed in a vial containing derivatizing solution. Order media one week ahead of survey. Media are prepared when ordered. Derivatizing solution has a shelf life of 1 month if kept cold.					

Hexamethylene Diisocyanate (1,6-) (HDI)									
CAS#	Analytic	Analytical Method A		l Technique	Sampling Media				
822-06-0	OS	HA 42	HI	PLC	GF	FF, 1-2PP			
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code			
1	1 15-240		40	0.020 µg		Isocyanate			
I	Interferences				Comments				
Potential interferences include anhydrides, amines, alcohols and carboxylic acids.			before a	Sample open-faced. Media must be stored cold before and after sampling. Filter is stable for 6 months if kept cold. Ship cold overnight.					

CAS#	Analytic	cal Method	Analytical	Technique	Samp	oling Media	
822-06-0	OS	HA 42	Н	PLC	GFF Wipes		
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code	
N/A N/A		4	0.020 µg	0.010 μg	Isocyanate		
ı	nterferenc	es		Comments			
Potential interferences include anhydrides, amines, alcohols and carboxylic acids.			after sai vial cont week ah	Follow "Isocyanate Wipe Sampling Procedure". Immediately after sampling, glass fiber filters must be placed in a vial containing derivatizing solution. Order media one week ahead of survey. Media are prepared when ordered. Derivatizing solution has a shelf life of 1 month if kept cold.			

Hexane(n-	)						
CAS#	Analytic	cal Method	Analytical Technique		Sampling Media		
110-54-3	NIOS	NIOSH 1500		:-FID	CT (SK	C 226-01, -09)	
Sampling Rate† Sampling Vo			olumett	LOQ	LOD	Compatibility Code	
0.01-0	).2	1-10	)	0.45 μg	0.23 μg	CS <sub>2</sub>	
I	Interferences Comments						
Preferred for STEL sampling. Sample at 0.2 lpm.							

Hexane(n-	)						
CAS#	Analytic	Analytical Method A		l Technique	Sampling Media		
110-54-3	3M I	3M Method		:-FID	OVM (3M 3500)		
Sampling Rate† Sampling Vo		olumett LOQ		LOD	<b>Compatibility Code</b>		
32.0	)	15-4	80	0.72 μg	0.36 µg	CS <sub>2</sub>	
ı	nterferenc	es		Comments			

Hexyl Acrylate								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media			
2499-95-8	NIOS	NIOSH 1450		C-FID	CT (SK	C 226-01, -09)		
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code			
0.01-0	.2	1-10	)	0.90 µg	0.45 μg	CS <sub>2</sub>		
I	nterferenc	es		Comments				
	Store and ship cold overnight.							

Hexylene Glycol (2-Methyl-2,4-pentanediol)								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media			
107-41-5	NIOS	SH 5523	GC-FID		OVS 7 (SKC 226-57)			
Sampling Rate† Sampling Vo		olumett LOQ		LOD	Compatibility Code			
0.5-2	2	5-6	0	2.5 µg	1.3 µg	MeOH		
Interferences				Comments				

Hydrazine							
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media		
302-01-2	OSHA 108		HI	PLC	G	FF, Acid	
Sampling	Sampling Rate† Sampling Vol			LOQ	LOD	Compatibility Code	
1		240	)	0.025 μg 0.013 μg			
I	nterferenc	es		Comments			
				Media have short shelf-life. Media are prepared on request. Please contact the Lab 5 days before survey.			

Hydrogen Bromide								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media			
10035-10-6	NIOS	SH 7903		IC	MCE2, SGT** (SKC 225-19, SKC 226-10-03)			
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code		
0.2-0.	5	10-10	00	4.6 µg	2.3 µg	Acid1		
li	Interferences				Comments			
Particulate salts of the acid will give a positive interference.			Use a flo	Use a flow rate of 0.5 lpm for STEL sampling.				

Hydrogen	Hydrogen Bromide									
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media					
10035-10-6	NIOS	SH 7907		IC	SKC	225-9032				
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code				
2		35-6	00	3.8 µg	1.9 µg					
I	nterferenc	es		Comments						
Inorganic acids can react with co- sampled particulate matter on the pre-filter, leading to low results.				Order media one week ahead of survey. Ship and store cold. <b>Specialty Filter. Media charge applies</b> .						

Hydrogen Chloride									
CAS#	Analytical Method A		Analytica	l Technique	Samp	oling Media			
7647-01-0	NIOS	SH 7903	IC		MCE2, SGT** (SKC 225-19, SKC 226-10-03)				
Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code				
0.2-0.	5	10-10	00	2.3 µg	1.2 µg	Acid1			
lı	nterferenc	es		Comments					
Particulate salts of the acid will give a positive interference.			Use a flo	Use a flow rate of 0.5 lpm for STEL sampling.					

Hydrogen Chloride									
CAS#	Analyti	cal Method	Analytica	l Technique	Sam	pling Media			
7647-01-0	NIOS	SH 7907		IC	SKC	225-9032			
Sampling	Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code			
2	2 40-600		00	13 µg	6.4 µg				
Interferences				Comments					
Inorganic acids can react with co- sampled particulate matter on the pre-filter, leading to low results. Potentially interfering particulate chlorides and nitrates removed by the pre-filter can react with the sampled acids and liberate HCl and HNO <sub>3</sub> , which gets collected on the sampling filter, leading to high results.		cold. Sp		k ahead of survey. <b>Media charge ap</b> p					

CAS#	Analytic	Cyanide  Analytical Method A		l Technique	Samr	oling Media	
	7	our mounou	71114174104	. reominque	•		
74-90-8	NIOS	SH 7904	I	SE	Soda Lime Tube (SKC 226-210)		
Sampling Rate† Sampling Vol			olumett/	LOQ	LOD	Compatibility Code	
0.2		10-9	90	5.2 μg	2.6 µg		
	nterferenc	es		Comments			
Sulfide, chloride, iodide, bromide, cadmium, zinc, silver, nickel, cuprous iron and mercury interfere.				Use a flow rate of 0.2 lpm for STEL sampling. Method is not covered under our AIHA-LAP, LLC scope of accreditation.			

Cyanide S	alts as (	CN					
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media		
74-90-8	NIOS	SH 7904	I	SE	PVC		
Sampling Rate† Sampling Vol			olumett/	LOQ	LOD	Compatibility Code	
1	1 15-10		00	5.2 µg	2.6 µg		
ı	nterferenc	es		Comments			
Sulfide, chloride, iodide, bromide, cadmium, zinc, silver, nickel, cuprous iron and mercury interfere.				Preferred for STEL sampling. Method is not covered under our AIHA-LAP, LLC scope of accreditation.			

Hydrogen Fluoride, as F									
CAS#	Analytical Method A		Analytica	l Technique	Samı	oling Media			
7664-39-3	NIOSH 7903			IC		E2, SGT** 9, SKC 226-10-03)			
Sampling Ratet Sampling Vol		lumett	LOQ	LOD	Compatibility Code				
0.2-0.	5	30-10	0	3.0 µg	1.5 µg	Acid1			
li	nterferenc	es		Comments					
Particulate salts of the acid will give a positive interference.			Use the	Use the maximum flow rate for STEL sampling.					

Hydrogen Peroxide									
CAS#	Analytical Method A		Analytica	l Technique		Sampling Media			
7722-84-1	OSHA	OSHA ID-1019		UV/VIS		QFF, titanium oxysulfate (SKC 225-9030)			
Sampling	Sampling Rate† Sampling Volu		olumett	LOQ		LOD	<b>Compatibility Code</b>		
1.0	1.0 240		)	10.0 µg		5.0 μg			
l:	nterferenc	es		Comments					
Any compound with a response, or that reacts with the titanium oxysulfate to produce a response, at 410nm is a potential interferent.			and wra wrappin method	After sampling seal the cassette with the end plugs and wrap each cassette with tin foil. Order tin foil for wrapping the samples. Filters have limited shelf-life. This method is not covered under our AIHA-LAP, LLC scope of accreditation. Specialty Filter. Media charge applies.					

Hydrogen Sulfide								
CAS#	Analytical Method		Analytica	l Technique	Sampling Media			
7783-06-4	NIOSH 6013			IC	ORBO 34 (	SUPELCO 20211)		
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code			
0.1-1.	5	30-7	0	8.9 µg	4.4 μg			
I	nterferenc	es		Comments				
Sulfur dioxide gas may give a positive interference for hydrogen sulfide.			Use a flo	Use a flow rate of 0.5 lpm for STEL.				

Hydroquinone (Dihydroxybenzene)								
CAS#	Analytical Method Ar		Analytica	l Technique	Sampling Media			
123-31-9	NIOS	NIOSH 5004		HPLC		CE (SKC 225-5)		
Sampling Rate† Sampling Vol			olumett/	LOQ	LOD	Compatibility Code		
1-4	1-4 30-180		80	10 µg	5 μg			
J	nterferenc	es		Comments				
			Stabilize	Hydroquinone is unstable on the collecting media. Stabilize immediately after collecting by transferring filter into a vial containing 1% acetic acid.				

Hydroquinone (Dihydroxybenzene)								
CAS#	AS # Analytical Method A		Analytica	l Technique	Sam	pling Media		
123-31-9	OSHA	PV2094	HPLC		XAD-7, Ad	cid (SKC 226-98)		
Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code			
0.2		20		0.30 µg	0.15 μg			
	nterferenc	es		Comments				
Preferred method.								

Indium and Compounds as In								
CAS#	Analytical Method Ar		Analytica	l Technique	Samı	oling Media		
7440-74-6	NIOSH 7301 NIOSH 7303 OSHA ID-125G		ICP		MCE or PVC (SKC 225-5 or SKC 225-5-37-P)			
Sampling Rate† Sampling Vol			lumett	LOQ	LOD	Compatibility Code		
1-4		150-10	00	0 1.5 μg 0.75 μg Metals		Metals		
I	nterferenc	es		Comments				
Spectral interferences are the primary interferences encountered in ICP-AES analysis.			internal in your	As part of the Lab's QC protocol, yttrium is used as internal standard in metal analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples.				

norganic Acid Scan									
CAS#	Analytic	Analytical Method A		l Technique	Samı	oling Media			
	NIOSH 7903		l	IC	MCE2, SGT** (SKC 225-19, SKC 226-10-03)				
Sampling	Sampling Rate† Sampling Vo		olumett LOQ		LOD	Compatibility Code			
0.2-0	).5	50-1	00	N/A	N/A				
Interferences				Comments					
See List of Scans for list of individual inorganic acid/anion.						organic acid/anion.			

Iodine and Iodides as I								
CAS#	Analytical Method A		Analytica	l Technique	Samı	oling Media		
7553-56-2	NIOS	NIOSH 6005		IC	CT, KOH	(SKC 226-67)		
Sampling Rate† Sampling Vol		olumett/	LOQ	LOD	Compatibility Code			
0.5-1.	0	50-2	00	5.4 μg	2.7 μg			
I	nterferenc	es		Comments				
Particulate iodide salts, hydrogen iodide or organic iodides may give a positive interference.		Use a flo	ow rate of 1.0 I	pm for STEL.				

Iron Oxide							
CAS#	Analytical Method A		Analytica	l Technique	Sam	pling Media	
1309-37-1	NIOSH 7301 NIOSH 7303 OSHA ID-125G		ICP		MCE or PVC (SKC 225-5 or SKC 225-5-37-P)		
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code		
1-4		25-10	00	4.3 μg 2.2 μg Met		Metals	
li	nterferenc	es		Comments			
Spectral interferences are the primary interferences encountered in ICP-AES analysis.			protoco Please i	All forms of iron are quantified. As part of the Lab's QC protocol, yttrium is used as internal standard in metal analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples.			

Iron Oxide							
CAS#	Analytic	Analytical Method A		l Technique	Sam	pling Media	
1309-37-1		SH 7301 SH 7303	ICP-M		MCE or PVC (SKC 225-5 or SKC 225-5-37-P)		
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code	
1-4		25-10	00	) 3.6 μg 1.8 μg Metals		Metals	
I	nterferenc	es		Comments			
			protoco standar submis	l, yttrium, rhoods ds in ICP-MS a sion form if yt		are used as internal idicate in your sample ind/or lutetium are	

Iron							
CAS#	Analytical Method A		Analytica	l Technique	Sam	pling Media	
1309-37-1	-1 OSHA ID-121		I	СР	Ghost v	vipe (225-2414)	
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code	
NA	NA NA		1	30 μg 15 μg Metals 2		Metals 2	
I	nterferenc	es		Comments			
Spectral interferemces are the primary interferences encountered in the ICP-AES analysis.			internal your sar	As part of the Lab's QC protocol, yttrium is used as internal standard in ICP analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples.			

Isobutyl Acetate								
CAS#	Analytic	cal Method	Analytica	l Technique	Samı	oling Media		
110-19-0	NIOS	NIOSH 1450		:-FID	CT (SK	C 226-01, -09)		
Sampling Rate† Sampling Vo		/olumett	LOQ	LOD	Compatibility Code			
0.01-0	).2	1-1	0	0.81 µg	0.41 μg	CS <sub>2</sub>		
ı	nterferenc	es		Comments				

sobutyl Acetate								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media			
110-19-0	3M Method		GC-FID		OVM	(3M 3500)		
Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code			
31.0		15-48	80 1.2 μg		0.60 μg	CS <sub>2</sub>		
Interferences				Comments				

sobutyl Alcohol								
CAS#	Analytical Method		Analytical Technique		Samı	oling Media		
78-83-1	NIOS	NIOSH 1401		:-FID	CT (SK	C 226-01, -09)		
Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code			
0.01-0	).2	1-10	0.59 μg		0.30 µg	1%PRO/CS <sub>2</sub>		
Interferences				Comments				
<u> </u>		<u> </u>		<u> </u>	·	·		

Isobutyl A	Icohol						
CAS#	Analytical Method		Analytical Technique		Sampling Media		
78-83-1	3M	3M Method		-FID	OVM (3M 3500)		
Sampling	Sampling Ratet Sampling Vol		olumett	LOQ	LOD	Compatibility Code	
35.9	)	15-4	80	0.89 µg	0.45 μg	MC CS <sub>2</sub>	
I	Interferences			Comments			

Isocyanat	e Scan						
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media		
	OSHA 42		Н	PLC	GFF, 1-2PP		
Sampling Rate† Sampling Vo			/olumett	LOQ	LOD	Compatibility Code	
	nterferenc	es		Comments			
Potential interferences include anhydrides, amines, alcohols and carboxylic acids.			faced. N	See List of Scans for individual isocyanates. Sample open- faced. Media must be stored cold before and after sampling. Filter is stable for 6 months if kept cold. Ship cold overnight.			

Isoflurane	Isoflurane (Forane)								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media				
26675-46-7	OSHA 103		GC-FID		Anasorb 74	17 (SKC 226-81A)			
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code				
0.05		12		4.9 µg	2.5 µg	CS <sub>2</sub>			
li	nterferenc	es		Comments					
				Store and ship cold overnight. 2019 NIC, TWA = 5 ppm, A4 was retained in 2020.					

Isoflurane	(Forane	e)					
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media		
26675-46-7	3M Method		GC	:-FID	OVM	(3M 3500)	
Sampling Ratet Sampling Vol			olumett/	LOQ	LOD	Compatibility Code	
28.3		15-4	80	7.4 μg 3.2 μg CS <sub>2</sub>		CS <sub>2</sub>	
lı	nterferenc	es		Comments			
				Store and ship cold overnight. 2019 NIC, TWA = 5 ppm, A4 was retained in 2020.			

Isooctane							
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media		
540-84-1	<b>540-84-1</b> NIOSH 1500		GC-FID		CT (SK	C 226-01, -09)	
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code		
0.01-0	).2	1-10	0	0.52 µg	0.26 μg	CS <sub>2</sub>	
	Interferences			Comments			

CAS#			Analytical	Technique	Sampling Media		
540-84-1			GC	-FID	OVM (3M 3500)		
Sampling Rate† Sampling V		/olumett	LOQ	LOD	Compatibility Code		
27.1		15-4	-80	0.78 µg	0.39 µg	CS <sub>2</sub>	
I	nterferenc	es		Comments			

Isophoron	е							
CAS#	Analytical Method		Analytica	l Technique	Sampling Media			
78-59-1	NIOSH 2508		GC	-FID	CT (SK	C 226-01, -09)		
Sampling	Sampling Rate† Sampling Vo			LOQ	LOD	Compatibility Code		
0.01-0	).2	1-1	0	0.90 μg 0.45 μg CS <sub>2</sub>		CS <sub>2</sub>		
I	Interferences				Comments			
				Use a flow rate of 0.2 lpm for STEL. High humidity may greatly decrease the breakthrough volume.				

CAS#	Analytical Method		Analytica	l Technique	Sampling Media		
78-59-1	3M Method		GC	-FID	OVM (3M 3500)		
Sampling Rate† Sampling Vo		olumett/	LOQ	LOD	Compatibility Code		
21.7	7	15-4	80	1.4 µg	0.70 μg	CS <sub>2</sub>	
ı	nterferenc	es		Comments			

Isophoron	Isophorone Diisocyanate (IPDI)								
CAS#	Analytical Method Ar		Analytica	l Technique	Sampling Media				
4098-71-9	OSHA 42		H	PLC	G	FF, 1-2PP			
Sampling Rate† Sampling Vol			olumett/	LOQ	LOD	<b>Compatibility Code</b>			
1	1 15-240		40	0.034 µg		Isocyanate			
I	nterferenc	es		Comments					
Potential interferences include anhydrides, amines, alcohols and carboxylic acids.			before a	Sample open-faced. Media must be stored cold before and after sampling. Filter is stable for 6 months if kept cold. Ship cold overnight.					

Isophoron	e Diisoc	yanate (IP	DI)				
CAS#	Analytical Method A		Analytical Technique		Sampling Media		
4098-71-9	OS	HA 42	HPLC		GFF Wipes		
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code	
N/A	N/A N/A		4	0.034 µg	0.017 μg	Isocyanate	
ı	nterferenc	es		Comments			
Potential interferences include anhydrides, amines, alcohols and carboxylic acids			after sa vial con week ah	Follow "Isocyanate Wipe Sampling Procedure". Immediately after sampling, glass fiber filters must be placed in a vial containing derivatizing solution. Order media one week ahead of survey. Media are prepared when ordered. Derivatizing solution has a shelf life of 1 month if kept cold.			

Isopropyl	sopropyl Acetate								
CAS#	Analytical Method		Analytical Technique		Sampling Media				
108-21-4	NIOS	NIOSH 1454		:-FID	CT (SK	C 226-01, -09)			
Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code				
0.02-0	).2	0.1-9	9 1.0 μg		0.50 μg	CS <sub>2</sub>			
I	nterferenc	es		Comments					
			Use a flo	Use a flow rate of 0.2 lpm for STEL.					

sopropyl	Acetate						
CAS#	Analytical Method		Analytica	l Technique	Samı	oling Media	
108-21-4	3M I	3M Method		-FID	OVM	(3M 3500)	
Sampling Rate† Sampling Vo		/olumett	LOQ	LOD	Compatibility Code		
31.7	,	15-4	80	1.5 µg	0.75 μg	CS <sub>2</sub>	
Interferences				Comments			

Isopropyl Alcohol (Isopropanol)							
CAS#	Analytical Method A		Analytical Technique		Sampling Media		
67-63-0	7-63-0 NIOSH 1400		GC	GC-FID CT (SKC 226-01, -0		C 226-01, -09)	
Sampling	Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code	
0.01-0	).2	0.3-	3	1.0 µg	0.51 μg	BUT/CS <sub>2</sub>	
Interferences					Comments		

Isopropyl Alcohol (Isopropanol)								
CAS#	AS # Analytical Method A		Analytical Technique		Sampling Media			
67-63-0	3M Method		GC	:-FID	OVM	(3M 3520)		
Sampling	Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code		
39.4	39.4 15-24		10	1.5 µg	0.77 μg	ACN CS <sub>2</sub>		
I	Interferences			Comments				
				Use 3M 3520. Separate the front section of the monitor from the back section and cap immediately after sampling. Ship cold.				

Kaolin							
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media		
1332-58-7	NIOSH 0600		GI	GRAV		(C 225-5-37-P)	
Sampling Rate† Sampling Vol			olumett/	LOQ	LOD	<b>Compatibility Code</b>	
1.7	1.7 100-816		316	50 μg	10 µg		
I	nterferenc	es		Comments			
All other respi	irable dust	s will interfer	Oliver) o	yclones at 1.7	2-piece cassette Ipm and 3-piece Ipm and for BGI-4	cassette for BMRC	

Kerosene								
CAS#	Analytical Method A		Analytical Technique		Sampling Media			
8008-20-6	NIOSH 1550		GC-FID		CT (SKC 226-01, -09)			
Sampling	Sampling Ratet Sampling Vol			LOQ	LOD	Compatibility Code		
0.01-0	.2	1.3-2	20	) 2.9 μg 1.5 μ		CS <sub>2</sub>		
Ti II	nterferenc	es		Comments				
				send bulk samp ely from the air				

Kerosene								
CAS#	S # Analytical Method A		Analytica	l Technique	Sampling Media			
8008-20-6	08-20-6 3M Method		GC	GC-FID OVM (3M 3500)		(3M 3500)		
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code			
24.3		15-4	80	4.4 μg	2.2 µg	CS <sub>2</sub>		
Į,	nterferenc	es		Comments				
				send bulk sam ely from the ai				

Lactic Acid								
CAS#	CAS # Analytical Method A		Analytica	l Technique	Sampling Media			
50-21-5	NIOS	NIOSH 2011		IC	SGT**(SKC 226-10-03)			
Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code			
0.2-0.5 5-100		0	3.0 µg 1.2 µg Acid2		Acid2			
ı	nterferenc	es		Comments				
Do not sample for inorganic acids using the same tube.								

Lanthanum							
CAS#	Analytical Method A		Analytical Technique		Samp	oling Media	
7439-91-0	NIOSH 7301		ICP		MCE or PVC (SKC 225-5 or SKC 225-5-37-P)		
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code	
1-4		120-10	000	0.10 µg	0.050 µg	Metals	
lı	nterferenc	es		Comments			
Spectral interferences are the primary interferences encountered in ICP-AES analysis.			internal in your	As part of the Lab's QC protocol, yttrium is used as internal standard in metal analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples.			

Lead and Inorganic Compounds as Pb							
CAS#	Analytical Method A		Analytical Technique		Sampling Media		
7439-92-1	OSHA ID-121		ICP		ghost wip	e (SKC 225-2414)	
Sampling	Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code	
NA	NA NA		\	1.0 µg	0.50 μg	Metals2	
I	nterferenc	es		Comments			
Spectral interferences are the primary interferences encountered in ICP-AES analysis.			internal in your s	As part of the Lab's QC protocol, yttrium is used as internal standard in metal analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples.			

Lead and Inorganic Compounds as Pb							
CAS#	Analytic	cal Method	Analytica	l Technique	Samp	oling Media	
7439-92-1	<b>7439-92-1</b> NIOSH 7301 NIOSH 7303		ICP		MCE or PVC (SKC 225-5 or SKC 225-5-37-P)		
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code	
1-4		120-10	00	0.25 μg	0.13 μg	Metals	
I	nterferenc	es		Comments			
Spectral interferences are the primary interferences encountered in ICP-AES analysis.			internal in your	As part of the Lab's QC protocol, yttrium is used as internal standard in metal analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples.			

Lead and Inorganic Compounds as Pb									
CAS#	Analytic	cal Method	Analytica	l Technique	Sam	pling Media			
7439-92-1		SH 7301 SH 7303	ICF	P-MS	MCE or PVC (SKC 225-5 or SKC 225-5-37-P)				
Sampling Rate† Sampling Vol		olumett/	LOQ	LOD	Compatibility Code				
1-4		40-2	40	0.032 µg		Metals			
I	nterferenc	es		Comments					
			and lute analysis form if y	As part of the Lab's QC protocol, yttrium, rhodium, and lutetium are used as internal standards in ICP-MS analysis. Please indicate in your sample submission form if yttrium, rhodium, and/or lutetium are present in the area where you collected your samples.					

Lead and I	Lead and Inorganic Compounds as Pb								
CAS#	Analytical Method A		Analytica	l Technique	Sam	pling Media			
7439-92-1	OSHA ID-121 NIOSH 7301		I	СР	P	aint chips			
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code			
NA		NA		0.25 μg 0.13 μg Meta		Metals2			
li	nterferenc	es		Comments					
Spectral interferences are the primary interferences encountered in ICP-AES analysis.			protoco Please i	Needs at least 1 gram of bulk sample. As part of the Lab's QC protocol, yttrium is used as internal standard in metal analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples.					

Lead Chromate as Cr(VI)									
CAS#	Analytic	cal Method	Analytica	I Technique	Sam	pling Media			
7758-97-6	OSH	A ID-215		IC	(SKC	PVC 225-5-37-P)			
Sampling	Rate†	Sampling \	olumett/	LOQ	LOD	Compatibility Code			
2		500-9	960	0.05 μg	0.02 μg				
I	nterferenc	es		Comments					
Spectral inter primary interf in ICP-AES an	erences e		sample the extr Refriger 500 lite plating samplin within 8	d (e.g., spray paction method rate samples ars is the minin operations mung. Samples frages from days	inint, chrome plati It is different for sp and ship overnight num air volume at ast be analyzed wir om welding operat te of sampling. He	orm the operation ng, welding, etc.) as oray paint samples. as soon as possible. 50% TLV. Samples from thin 6 days from date of tions must be analyzed exavalent chromium cessing as Chrome (VI).			

Limonene(d-)									
CAS#	Analytical Method		Analytica	Technique	Samı	oling Media			
138-86-3	NIOS	NIOSH 1552		-FID	CT (SK	C 226-01, -09)			
Sampling Rate† Sampling Vo		olumett/	LOQ	LOD	Compatibility Code				
0.01-0	).2	1-1	0	0.52 μg	0.26 μg	CS <sub>2</sub>			
	nterferenc	es		Comments					

Limonene(d-)									
CAS#	Analytical Method		Analytica	l Technique	Sampling Media				
138-86-3	3M Method		GC-FID		OVM	(3M 3500)			
Sampling	Sampling Rate† Sampling Vo		olumett LOQ		LOD	Compatibility Code			
24.7	,	15-4	80 0.78 μg		0.39 μg	CS <sub>2</sub>			
ı	Interferences			Comments					

Lithium Sa	lts						
CAS#	Analytical Method A		Analytica	l Technique	Samı	oling Media	
7439-93-1	NIOSH 7301		10	СР	MCE or PVC (SKC 225-5 or SKC 225-5-37-P)		
Sampling Rate† Sampling Vo			olumett	LOQ	LOD	Compatibility Code	
1-4		250-10	000	0 0.10 μg 0.050μg Metals		Metals	
I	nterferenc	es		Comments			
Spectral interferences are the primary interferences encountered in ICP-AES analysis.			protoco Please i	All forms of lithium are quantified. As part of the Lab's QC protocol, yttrium is used as internal standard in metal analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples.			

Magnesiu	m						
CAS#	Analytical Method A		Analytica	l Technique	Samı	pling Media	
7439-95-4	NIOSH 7301 NIOSH 7303 OSHA ID-125G		ļ	СР	MCE or PVC (SKC 225-5 or SKC 225-5-37-P)		
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	<b>Compatibility Code</b>	
1-4		25-10	00	1.0 µg 0.50 µg		Metals	
I	nterferenc	es		Comments			
Spectral interferences are the primary interferences encountered in ICP-AES analysis.			protoco Please i	All forms of magnesium are quantified. As part of the Lab's QC protocol, yttrium is used as internal standard in metal analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples.			

Magnesiui	n Oxide						
CAS#	Analytical Method A		Analytica	l Technique	Samı	oling Media	
1309-48-4	NIOSH 7301 NIOSH 7303 OSHA ID-125G		ICP		MCE or PVC (SKC 225-5 or SKC 225-5-37-P)		
Sampling Rate† Sampling Vol		lumett LOQ		LOD	Compatibility Code		
1-4		25-100	00	1.7 µg	0.85 μg	Metals	
I	nterferenc	es		Comments			
Spectral interferences are the primary interferences encountered in ICP-AES analysis.			protoco Please i	All forms of magnesium are quantified. As part of the Lab's QC protocol, yttrium is used as internal standard in metal analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples.			

Magnesiu	n Oxide						
CAS#	Analytical Method A		Analytica	l Technique	Samı	oling Media	
1309-48-4		NIOSH 7301 NIOSH 7303		P-MS	MCE or PVC (SKC 225-5 or SKC 225-5-37-P)		
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code	
1-4		40-24	10	2.5 µg 1.3 µg		Metals	
ı	nterferenc	es		Comments			
			and lute analysis form if y	As part of the Lab's QC protocol, yttrium, rhodium, and lutetium are used as internal standards in ICP-MS analysis. Please indicate in your sample submission form if yttrium, rhodium, and/or lutetium are present in the area where you collected your samples.			

Magnesium Oxide								
CAS#	Analytic	Analytical Method A		l Technique	Sampling Media			
1309-48-4	NIOSH 0500		GI	RAV	Pre-weighed P	VC (SKC 225-5-37-P)		
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code			
1-15		40-72	200	) 50 μg				
lı	nterferenc	es			Comments			
All other dusts will interfere.				For personal sampling use a flow rate of 1-2 lpm, for area sampling up to 15 lpm.				

Maleic Anhydride									
CAS#	Analytic	Analytical Method		l Technique	Samp	oling Media			
108-31-6	OSHA 86		HI	PLC	GFI	F, Vamine			
Sampling Rate† Sampling Vo		olumett/	LOQ	LOD	Compatibility Code				
0.5		60	)	0.74 μg	0.37 µg	ACN/DMS0			
I	nterferenc	es		Comments					
Both phthalic amd trimellitic anhydride should be considered as potential sampling interferences.				Sampling media has short shelf-life, so media is prepared when ordered. Please order filters at least 5 days prior to survey date.					

Maleic An	hydride							
CAS#	Analytical Method A		Analytica	l Technique		Sampling Media		
108-31-6	3-31-6 OSHA 25		Н	HPLC		XAD-2,p-An/XAD-2 (SKC 226-30-07, SKC 226-30)		
Sampling Rate† Sampling Vo		olumett/	nett LOQ		LOD	Compatibility Code		
0.1		20		0.030 μg 0.015 μg				
I	nterferenc	es		Comments				
Both phthalic amd trimellitic anhydride should be considered as potential sampling interferences.			tube in s Media h	Sample with XAD-2 treated tube and XAD-2 untreated tube in series. Separate and cap tubes after sampling. Media has short shelf-life. Please contact the Lab before survey date for more info. Preferred method.				

Manganese, Elemental and Inorganic compounds as Mn									
CAS#	Analytic	cal Method	Analytica	l Technique	Sam	pling Media			
7439-96-5	NIOSH 7301 NIOSH 7303 OSHA ID-125G		I	СР	MCE or PVC (SKC 225-5 or SKC 225-5-37-P)				
Sampling	Ratet	Sampling \	olumett/	LOQ	LOD	Compatibility Code			
1-4		125-1	000	0.15 μg	0.075 μg	Metals			
li	nterferenc	es		Comments					
Spectral interferences are the primary interferences encountered in ICP-AES analysis.			standar submiss collecte respirat in your weighed	d in metal anal sion form if ytt ed your sample ble PPI. Use a f request if you d. Please conta	lysis. Please indic crium is present in s. Manganese m flow rate of 2 lpm want the filter ins	ide the PPI pre- fore your survey if			

CAS#	Analytic	cal Method	Analytica	l Technique	Sam	pling Media		
7439-96-5		SH 7301 SH 7303		ICP-MS MCE or PVC (SKC 225-5 or SKC 22				
Sampling	g Rate† Sampling Volume††		LOQ	LOD	Compatibility Code			
1-4		75-2	240	0.15 μg	0.075µg	Metals		
Interferences				Comments				
			lutetium Please i rhodium collecte respirat in your i weighed	n are used as i indicate in you n, and/or lutet ed your sample ole PPI. Use a request if you d. Please cont	r sample submiss um are present in es. Manganese ma flow rate of 2 lpm want the filter ins	in ICP-MS analysis. sion form if yttrium, the area where you ay be sampled using . Please indicate ide the PPI pre- fore your survey if		

Manganese, elemental and Inorganic compounds as Mn								
CAS#	Analytical Method A		Analytica	l Technique	Samı	oling Media		
7439-96-5	OSHA ID-121 OSHA ID-125G		I	СР	ghost wipe	e (SKC 225-2414)		
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code		
NA		NA		0.60 µg	0.30 µg	Metals2		
lı	nterferenc	es		Comments				
Spectral interferences are the primary interferences encountered in ICP-AES analysis.			internal in your	As part of the Lab's QC protocol, yttrium is used as internal standard in metal analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples.				

Medical G	ases						
CAS#	Analytic	Analytical Method A		l Technique	Samp	oling Media	
		SH 0500 MI-A5	GRAV, GC-FID GC- ECD, GC-TCD GC-XSD, GC-DID		PTFE4 (PALL TF-450) Cylinder		
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	<b>Compatibility Code</b>	
Note 2* see Comments 1000 (gravin 300cc/25 (Cylinde		psig	Note 2* see Comments				
	nterferenc	es		Comments			
At high levels argon interferes with oxygen and carbon dioxide interferes with nitrous oxide.				*See Note 2 in the Comments section of "IH Lab Sampling Guide Analyte Descriptions and Abbreviations"			

Mercury as Hg (Elemental and inorganic forms)									
CAS#	Analytical Method A		Analytica	l Technique	Sam	pling Media			
7439-97-6	NIOSH 6009		AA	A-CV		/ Anasorb C300 226-17-1A/3A)			
Sampling Rate† Sampling Vo		olumett/	LOQ	LOD	Compatibility Code				
0.15-0.	25	50-1	20	0.12 µg	0.060 µg				
li li	nterferenc	es		Comments					
Inorganic and compounds n interference. including chlo	nay cause Oxidizing g	a positive gases,	precedi	A 37-mm, cellulose ester membrance filter in a cassette preceding the sorbent may be used if particulate mercury is to be determined separately.					

Mercury as Hg (Elemental and inorganic forms)								
CAS#	Analytic	cal Method	Analytica	l Technique		Sampling Media		
7439-97-6	OSH	OSHA ID-140		A-CV		PS (SKC 520-02A/03)		
Sampling	Sampling Rate† Sampling Volu			LOQ		LOD	Compatibility Code	
0.020	)	9.6	j	0.12 µg		0.060 µg		
I	nterferenc	es		Comments				
Particulate mercury compounds are a positive interference.			of passi if sampl	Call Lab one week before sampling. Lab has limited number of passive mercury monitor holders. Refer to OSHA ID-145 if sampling in workplaces containing both mercury vapor and particulate. Specialty media. Media charge applies.				

Mercury as Hg Particulate									
CAS#	Analytic	Analytical Method A		l Technique	Sampling Media				
7439-97-6	OSHA ID-145		AA	A-CV	Air MCE (SKC225-5) Wipe (Whatman#42) Bulk				
Sampling	Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code			
2		50	1	0.12 µg	0.060 µg				
li li	nterferenc	es			Comments				
			please r	If mercury vapor is suspected to be present, please refer to OSHA ID-140 or NIOSH 6009 for additional sampling information.					

Mesityl Oxide									
CAS#	Analytical Method A		Analytica	l Technique	Samı	oling Media			
141-79-7	NIOS	NIOSH 1301		:-FID	CT (SK	C 226-01, -09)			
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code				
0.2		25		1.3 µg	0.65 μg	CS <sub>2</sub>			
I	nterferenc	es		Comments					

Metalworking Fluids									
CAS#	Analytical Method A		Analytica	l Technique	Sam	pling Media			
	NIOS	SH 5524	GI	RAV	Pre-weighed PTFE1 (Zefon FPTFE137				
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code				
2		768-960		75 µg	15 µg				
li	nterferenc	es		Comments					
The method is non-specific and measures all substances extractable by organic solvents.			sample Refriger Ship col	NIOSH 5524 recommends submitting one bulk sample of each type of fluid for solubility testing. Refrigerate samples if unable to ship immediately. Ship cold. Please note that samples must be analyzed within 2 weeks after collection.					

Methanol	(Methyl	alcohol)					
CAS#	Analytic	cal Method	Analytica	l Technique	Samı	oling Media	
67-56-1	OSH	IA 5001	GC	:-FID	Anasorb747/Ana	asorb747 (SKC 226-82)	
Sampling	Rate† Sampling Vol		Volumett	LOQ	LOD	Compatibility Code	
0.05	j	1	5	2.3 µg	1.1 µg	DMF/CS <sub>2</sub>	
I	nterferenc	es		Comments			
series back s volume liters v				"Part A" as the ction. Please is 5 liters whe nen relative hu	mple with 2 Anasce front section and order as a set.) Re in relative humidity imidity is <50% at ling. Store and shi	"Part B" as the commended air y is >50% and 3 25°C. Separate and	

Methanol	(Methyl	alcohol)					
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media		
67-56-1	NIOS	NIOSH 2000		:-FID	SGT-SG	Γ (SKC 226-51)	
Sampling Rate† Sampling Volu		olumett	LOQ	LOD	<b>Compatibility Code</b>		
0.02-0	).2	1-5	j	2.5 µg	1.3 µg	5%IPA	
I	nterferenc	es		Comments			
			after sa	Sample using 2 SGT tubes in series. Separate and cap tubes after sampling. Use a flow rate of 0.2 lpm for STEL. <b>Do not use</b> in area where humidity is high. Store and ship cold overnight.			

Methoxy(1-)-2-propanol (Propylene glycol monomethyl ether, PGME)								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media			
107-98-2	NIOS	NIOSH 1403		-FID	CT (SK	C 226-01, -09)		
Sampling	Sampling Rate† Sampling Vol		olumett	LOQ	LOD	<b>Compatibility Code</b>		
0.01-0	.05	1-1	0	1.3 µg	0.65 μg	MeOH/MC		
I	Interferences			Comments				
		<u> </u>		<u> </u>		·		

Methoxy(1	-)-2-pro	panol (Pro	pylene g	glycol mone	omethyl ethei	, PGME)	
CAS#	Analytic	Analytical Method		l Technique	Sampling Media		
107-98-2	3M I	3M Method		-FID	OVM (3M 3500)		
Sampling Rate† Sampling Volu		olumett	LOQ	LOD	Compatibility Code		
32.4		15-48	80	2.0 µg	1.0 µg	MC CS <sub>2</sub>	
li	nterferenc	es			Comments		

Methoxye	thanol(2	-) (Methyl	cellosol	ve, EGME)		
CAS#	Analytic	cal Method	Analytica	l Technique	Samı	oling Media
109-86-4	NIOS	SH 1403	GC	-FID	CT (SK	C 226-01, -09)
Sampling	Ratet	Sampling V	olumett	LOQ	LOD	Compatibility Code
0.01-0	.05	1-5	0	1.7 µg	0.85 μg	%MeOH/MC
I	nterferenc	es			Comments	
	·	·	Preferre	ed method for	STEL sampling. S	ample at 0.05 lpm.

Methoxyet	thanol(2	-) (Methyl	cellosol	ve, EGME)			
CAS#	CAS # Analytical Method Ar		Analytica	l Technique	Sampling Media		
109-86-4	3M Method		GC-FID		OVM	(3M 3500)	
Sampling	Ratet	Sampling V	olumett	LOQ	LOD	Compatibility Code	
36.3		120-4	180	2.6 µg	1.3 µg	MC CS <sub>2</sub>	
li	nterferenc	es			Comments		
				·			

Methoxye	thoxy(2-	(2-)) Ethan	ol (Dieth	nylene glyd	col methyl eth	er)
CAS#	Analytic	Analytical Method A		l Technique	Sampling Media	
111-77-3	3 NIOSH 1403		GC-FID		CT (SK	C 226-01, -09)
Sampling	Rate†	Sampling V	olumett	LOQ	LOD	Compatibility Code
0.01-0	.05	1-1(	0	1.3 µg	0.65 μg	5%MeOH/MC
ı	nterferenc	es			Comments	

Methoxyet	thoxy(2-	(2-)) Ethan	ol (Dieth	nylene glyc	ol methyl eth	er)	
CAS#	Analytical Method A		Analytical Technique		Sampling Media		
111-77-3	3M I	3M Method		-FID	OVM	(3M 3500)	
Sampling Rate† Sampling Volu		olumett	LOQ	LOD	Compatibility Code		
27.8		15-4	80	2.0 µg	1.0 µg	MC CS <sub>2</sub>	
li	nterferenc	es			Comments		

Methoxyet	thyl(2-) <i>i</i>	Acetate (M	ethyl ce	llosolve ac	cetate, EGMEA	<b>a</b> )
CAS#	Analytic	Analytical Method A		l Technique	Sampling Media	
110-49-6	<b>110-49-6</b> NIOSH 1451		GC-FID		CT (SK	C 226-01, -09)
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code
0.01-0	.2	0.2-2	0	0.46 μg 0.23 μg CS <sub>2</sub>		
I	nterferenc	es			Comments	
			Preferre	ed method for	STEL sampling.	

Methoxye	thyl(2-) <i>i</i>	Acetate (N	lethyl ce	llosolve ac	etate, EGMEA	N)	
CAS#	Analytic	Analytical Method		l Technique	Sampling Media		
110-49-6	3M I	3M Method		-FID	OVM	(3M 3500)	
Sampling	Ratet	Sampling V	olumett/	LOQ	LOD	Compatibility Code	
29.0	)	120-4	180	0.67 µg	0.34 μg	CS <sub>2</sub>	
I	nterferenc	es			Comments		

Methoxyethyl(2-) Ether (Diethylene glycol dimethyl ether)							
CAS#	-		Analytica	l Technique	Sampling Media		
111-96-6			GC	-FID	CT (SKC 226-01, -09)		
Sampling	Ratet	Sampling V	olumett	LOQ	LOD	Compatibility Code	
0.01-0	.05	1-1	0	0.58 µg	0.29 μg	5%MeOH/MC	
I	nterferenc	es			Comments		

Methoxyet	t <b>hyl(2-)</b> l	Ether (Diet	hylene g	lycol dime	thyl ether)	
CAS#	Analytical Method A		Analytical Technique		Sampling Media	
111-96-6	3M I	3M Method		:-FID	OVM (3M 3500)	
Sampling	Rate†	Sampling V	olumett	LOQ	LOD	Compatibility Code
26.7		15-4	80	0.87 µg	0.44 μg	MC CS <sub>2</sub>
I	nterferenc	es			Comments	

Methyl Ac	etate						
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media		
79-20-9	NIOS	SH 1458	GC-FID		CT (SK	C 226-01, -09)	
Sampling	Rate†	Sampling V	olumett	LOQ	LOD	Compatibility Code	
0.01-0	).2	0.2-1	0	1.5 µg	0.75 μg	CS <sub>2</sub>	
	nterferenc	es			Comments		
			Preferre	ed method for	STEL sampling. S	ample at 0.2 lpm.	

Methyl Ac	etate					
CAS#	Analytic	cal Method	Analytica	l Technique	Samı	oling Media
79-20-9	3M I	Method	od GC-FID		OVM (3M 3520)	
Sampling	Ratet	Sampling V	olumett	LOQ	LOD	Compatibility Code
37.0	)	15-48	30	2.3 µg	1.2 µg	CS <sub>2</sub>
ı	nterferenc	es			Comments	
						n of the monitor from fter sampling. Ship cold.

CAS#			Analytical	Technique	Sam	pling Media
96-33-3			GC	-FID	CT (SKC 226-01, -09)	
Sampling	Ratet	Sampling V	olumett/	LOQ	LOD	Compatibility Code
0.01-0	).2	1-5	5	1.1 µg	0.55 μg	CS <sub>2</sub>
ı	nterferenc	es			Comments	

Methyl Acrylate								
CAS#	Analytical Method		Analytical Technique		Sampling Media			
96-33-3	3M Method		GC-FID		OVM	(3M 3500)		
Sampling	Sampling Rate† Sampling Vo		olumett/	LOQ	LOD	Compatibility Code		
35.8	3	15-4	80 1.7 μg		0.85 μg	CS <sub>2</sub>		
ı	Interferences			Comments				

Methyl Alcohol (Methanol)									
CAS#	Analytical Method		Analytical Technique		Sampling Media				
67-56-1	OSH	IA 5001	GC	-FID	Anasorb747/Anasorb747 (SKC 226-82)				
Sampling	Sampling Rate† Sampling Vol			LOQ	LOD	<b>Compatibility Code</b>			
0.05	0.05 1-5		5	2.3 µg	1.1 µg	DMF/CS <sub>2</sub>			
	nterferenc	es		Comments					
				Preferred method. Sample Anasorb 747 tubes in series (with "Part A" in front and "PART B" in back section. Recommended air volume is 5 liters when relative humidity is >50% and 3 liters when relative humidity is <50% at 25° C. Separate and cap tubes after sampling. Store and ship cold overnight.					

Methyl Alcohol (Methanol)								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media			
67-56-1	NIOS	NIOSH 2000		-FID	SGT-S0	GT (SKC 226-51)		
Sampling	Sampling Ratet Sampling Vol			LOQ	LOD	Compatibility Code		
0.02-0	0.02-0.2 1-5		5	2.3 μg	1.7 µg	5%IPA		
I	nterferenc	es		Comments				
				Sample using 2 SGT tubes in series. Use a flow rate of 0.2 lpm for STEL. Separate and cap tubes immediately after sampling. Do not use in area where humidity is high. Store and ship cold overnight				

Methyl Amyl Ketone (2-Heptanone)								
CAS#	CAS # Analytical Method A		Analytical	l Technique	Sampling Media			
110-43-0	NIOS	SH 1301	GC-FID		CT (SK	C 226-01, -09)		
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code			
0.01-0	).2	1-25	5	0.61 µg		MeOH/CS <sub>2</sub>		
Interferences				Comments				
Use a flow rate of 0.2 lpm for STEL.								

CAS#	Analytical Method		Analytical	Technique	Sampling Media		
110-43-0	0 3M Method		GC-FID		OVM (3M 3500)		
Sampling Rate† Sampling V		/olumett	LOQ	LOD	Compatibility Code		
27.9		15-4	80 0.92 μg		0.46 µg	CS <sub>2</sub>	
	nterferenc	es		Comments			

Methyl Aniline								
CAS#	AS # Analytical Method A		Analytical Technique		Sampling Media			
100-61-8	100-61-8 NIOSH 2002		GC-FID		SGT (	(SKC 226-10)		
Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code			
0.02-0	).5	5-3	0	NA	NA	Amine3		
I	Interferences			Comments				
Nitrogen compounds that co-elute will interfere.								

Methyl Chloroform (1,1,1-Trichloroethane)								
CAS#	Analytic	Analytical Method A		l Technique	Sampling Media			
71-55-6	NIOSH 1003		GC-FID		CT (SKC 226-01, -09)			
Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code			
0.01-0	).2	1-1	0	2.2 µg	1.1 µg	CS <sub>2</sub>		
Interferences				Comments				

Methyl Chloroform (1,1,1-Trichloroethane)								
CAS#	Analytical Method A		Analytical Technique		Sampling Media			
71-55-6	3M Method		GC-FID		OVM	(3M 3500)		
Sampling	Sampling Ratet Sampling Vo		olumett/	LOQ	LOD	Compatibility Code		
30.9	)	15-4	80	3.3 µg	1.7 µg	CS <sub>2</sub>		
Interferences				Comments				

Methyl Cyclopentane								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media			
96-37-7	NIOS	NIOSH 1500		:-FID	CT (SK	C 226-01, -09)		
Sampling Rate† Sampling Vo		olumett/	LOQ	LOD	Compatibility Code			
0.01-0	).2	1-1	0	0.38 µg	0.19 μg	CS <sub>2</sub>		
Interferences				Comments				

Methyl Cy	clopenta	ane					
CAS#	CAS # Analytical Method		Analytica	l Technique	Sampling Media		
96-37-7	96-37-7 3M Method		GC-FID		OVM (3M 3500)		
Sampling Rate† Sampling V		/olumett LOQ		LOD	<b>Compatibility Code</b>		
31.5	i	15-4	.80	0.57 μg	0.29 μg	CS <sub>2</sub>	
Interferences				Comments			

Methyl Eth	Methyl Ethyl Ketone (2-Butanone, MEK)								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media				
78-93-3	3-3 NIOSH 2500		GC	:-FID	CT (SK	C 226-01, -09)			
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code				
0.01-0	).2	0.25-	12	0.86 µg	0.43 μg	CS <sub>2</sub>			
I	nterferenc	es		Comments					
				Preferred for STEL sampling. Sample at a flow rate of 0.2 lpm. Ship and store cold.					

Methyl Ethyl Ketone (2-Butanone, MEK)								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media			
78-93-3	3M Method		GC	-FID	OVM (3M 3500)			
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code			
36.3	3	15-4	80	1.3 µg	0.65 μg	CS <sub>2</sub>		
I	nterferenc	es		Comments				
Isopropyl acetate may co- elute with MEK.		Ship and	Ship and store cold.					

Methyl Isoamyl Ketone								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media			
110-12-3	NIOSH 1300		GC-FID		CT (SK	C 226-01, -09)		
Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code			
0.01-0	).2	1-1	0 0.66 μg		0.33 μg	CS <sub>2</sub>		
Interferences				Comments				

Methyl Isoamyl Ketone								
CAS#	AS # Analytical Method		Analytical	Technique	Samp	oling Media		
110-12-3	3M Method		GC-FID		OVM	(3M 3500)		
Sampling Rate† Sampling V		/olumett	LOQ	LOD	Compatibility Code			
28.0		15-4	80	0.99 µg	0.50 μg	CS <sub>2</sub>		
ı	nterferenc	es		Comments				

Methyl Iso	Methyl Isobutyl Ketone (MIBK)								
CAS#	CAS # Analytical Method A		Analytica	l Technique	Samp	oling Media			
108-10-1	08-10-1 NIOSH 1300		GC	-FID	CT (SK	C 226-01, -09)			
Sampling	Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code			
0.01-0	).2	1-10	0.54 μg		0.27 μg	CS <sub>2</sub>			
ı	nterferenc	es		Comments					
	Preferred for STEL sampling. Sample at 0.2 lpm.								

Methyl Isobutyl Ketone (MIBK)								
CAS#	Analytic	Analytical Method A		l Technique	Sampling Media			
108-10-1	3M I	3M Method		-FID	OVM	(3M 3500)		
Sampling	Sampling Rate† Sampling Vol		olumett	LOQ	LOD	<b>Compatibility Code</b>		
30.0	)	15-4	80 0.80 μg		0.40 μg	CS <sub>2</sub>		
Interferences				Comments				

Methyl Iso	Methyl Isopropyl Ketone								
CAS#	CAS # Analytical Method A		Analytica	l Technique	Sam	oling Media			
563-80-4	-80-4 NIOSH 1300		GC	C-FID	CT (SK	C 226-01, -09)			
Sampling	Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code			
0.01-0	).2	1-10	)	1.0 µg	0.50 μg	CS <sub>2</sub>			
	nterferenc	es		Comments					
	Ship and store cold.								

Methyl Isopropyl Ketone								
CAS#	CAS # Analytical Method A		Analytical Technique		Sampling Media			
563-80-4	3M Method		GC-FID		OVM	(3M 3500)		
Sampling	Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code		
32.8	3	15-48	1.5 μg		0.75 μg	CS <sub>2</sub>		
	nterferenc	es		Comments				
	Ship and store cold.							

Methyl Methacrylate								
CAS#	Analytical Method A		Analytica	l Technique	Samı	oling Media		
80-62-6	3M	3M Method		-FID	OVM	(3M 3500)		
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code			
31.8	3	15-48	80	1.5 µg	0.75 μg	CS <sub>2</sub>		
ı	nterferenc	es		Comments				
Ship cold.								

Methyl Propyl Ketone (2-Pentanone)								
CAS#	Analytical Method A		Analytical Technique		Sampling Media			
107-87-9	NIOSH 1300		GC-FID		CT (SK	C 226-01, -09)		
Sampling	Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code		
0.01-0	).2	1-10	0 0.73 μ		0.37 μg	CS <sub>2</sub>		
	Interferences			Comments				

Methyl Propyl Ketone (2-Pentanone)								
CAS#	Analytic	Analytical Method A		l Technique	Sampling Media			
107-87-9	3M I	3M Method		-FID	OVM	(3M 3500)		
Sampling	Sampling Rate† Sampling Vo		olumett/	LOQ	LOD	Compatibility Code		
33.0	)	15-4	80 1.1 μg		0.55 μg	CS <sub>2</sub>		
Interferences				Comments				

Methyl St	yrene(a-	)					
CAS#	Analytic	Analytical Method Ar		l Technique	Sampling Media		
98-83-9	NIOS	NIOSH 1501		-FID	CT (SKC 226-01, -09)		
Sampling Rate† Sampling Volu		olumett	LOQ	LOD	Compatibility Code		
0.01-0	).2	1-3	0	0.41 µg	0.21 µg	CS <sub>2</sub>	
	nterferenc	es		Comments			
			volumes	Under conditions of high humidity, the breakthrough volumes may be reduced by as much as 50%. Store and ship cold overnight.			

Methyl Styrene(a-)								
CAS#	Analytic	Analytical Method A		l Technique	Sampling Media			
98-83-9	3M I	3M Method		:-FID	OVM	(3M 3500)		
Sampling	Sampling Rate† Sampling Vol		olumett LOQ		LOD	Compatibility Code		
25.0	)	15-4	80	0.62 μg	0.31 µg	CS <sub>2</sub>		
	nterferenc	es		Comments				
	Store and ship cold overnight.							

Methyl Tert-butyl Ether (MTBE)								
CAS#	Analytic	Analytical Method A		l Technique	Sampling Media			
1634-04-4	NIOSH 1615		GC	-FID	CT-CT	(SKC 226-01)		
Sampling Rate† Sampling Vo		/olumett	LOQ	LOD	Compatibility Code			
0.1-0.	2	2-9	6	0.67 μg		CS <sub>2</sub>		
lı	nterferenc	es		Comments				
Preferred for STEL sampling. Sample at 0.2 lpm. Store and ship cold immediately.								

Methyl Ter	rt-butyl	ether (MTI	BE)				
CAS#	Analytical Method An		Analytica	l Technique	Sampling Media		
1634-04-4	3M Method		GC	-FID	OVM	(3M 3520)	
Sampling	Sampling Rate† Sampling Vol			LOQ	LOD	Compatibility Code	
30.8		15-4	80	1.0 μg 0.50 μg CS <sub>2</sub>		CS <sub>2</sub>	
li	nterferenc	es		Comments			
			monitor	Use 3M 3520. Separate the front section of the monitor from the back section and cap immediately after sampling. Store and ship cold immediately.			

Methyl Vir	ıyl Ketoı	ne					
CAS#	Analytical Method A		Analytica	l Technique	Samı	oling Media	
78-94-4	NIOSH 1300		GC	-FID	CT (SK	C 226-01, -09)	
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code		
0.01-0	).2	1-10	)	0.27 µg	0.14 μg	CS <sub>2</sub>	
I	nterferenc	es		Comments			
Store and ship cold overnight.							

Methyl(1-)	-2-pyrro	lidinone					
CAS#	Analytical Method A		Analytica	l Technique	Samı	oling Media	
872-50-4	872-50-4 NIOSH 1302		GC-FID		CT (SK	C 226-01, -09)	
Sampling	Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code	
0.05-0	).2	0.5-1	25	1.1 µg	0.55 μg	5%MeOH/MC	
I	Interferences			Comments			

Methyl(1-)	-2-pyrro	lidinone					
CAS#	Analytical Method A		Analytical Technique		Sampling Media		
872-50-4	872-50-4 3M Method		GC-FID		OVM (3M 3500)		
Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code		
28.8	}	15-48	30	1.7 µg	0.85 μg	MC CS <sub>2</sub>	
Interferences				Comments			

Methylacr	ylonitril	е					
CAS # Analytical Method		Analytica	l Technique	Sampling Media			
126-98-7 NIOSH 1604		GC-FID		CT (SKC 226-01, -09)			
Sampling Rate† Sampling V		olumett/	LOQ	LOD	Compatibility Code		
0.01-0	).2	3.5-	20 1.0 μg		0.50 μg	AC/CS <sub>2</sub>	
I	nterferenc	es		Comments			

Methylcyc	lohexan	е					
CAS#	CAS # Analytical Method A		Analytical Technique		Sampling Media		
108-87-2	108-87-2 NIOSH 1500		GC-FID		CT (SKC 226-01, -09)		
Sampling	Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code	
0.01-0	).2	4	0.45 µg		0.23 μg	CS <sub>2</sub>	
	Interferences			Comments			

Methylcyc	lohexan	е					
CAS#	CAS # Analytical Method A		Analytica	l Technique	Sampling Media		
108-87-2	-87-2 3M Method		GC-FID		OVM	(3M 3500)	
Sampling	Sampling Rate† Sampling Vo		/olumett	LOQ	LOD	Compatibility Code	
28.9	)	15-4	20 0.68 μg		0.34 μg	CS <sub>2</sub>	
I	nterferenc	es		Comments			

Methylene	Bis(4-c	yclohexyli	isocyana	te) (HMDI)			
CAS#	Analytical Method Ar		Analytica	l Technique	Sampling Media		
5124-30-1	OSHA 47		Н	PLC	GFF, 1-2PP		
Sampling Rate† Sampling Vol			olumett/	LOQ	LOQ	Compatibility Code	
1		15-2	40	0.070 µg	0.035 μg	Isocyanate	
li	nterferenc	es		Comments			
Potential interferences include anhydrides, amines, alcohols and carboxylic acids.			Sample	Keep media refrigerated before and after sampling. Sample open-faced. Ship cold overnight. Filter is stable for 6 months if kept cold.			

Methylene	Methylene Bisphenyl Isocyanate (MDI)							
CAS#	Analytical Method Ar		Analytica	l Technique	Samp	oling Media		
101-68-8	OSHA 47		Н	PLC	GF	F, 1-2PP		
Sampling Rate† Sampling Vol			olumett/	LOQ	LOD	Compatibility Code		
1		15-2	40	0.014 μg 0.0070 μg Isocyanate				
I	nterferenc	es		Comments				
Potential interferences include anhydrides, amines, alcohols and carboxylic acids.			Sample	Keep media refrigerated before and after sampling. Sample open-faced. Ship cold overnight. Filter is stable for 6 months if kept cold.				

Methylene	Methylene Bisphenyl Isocyanate (MDI)							
CAS#	Analyti	Analytical Method A		l Technique	Sampling Media			
101-68-8	OSHA 47		Н	PLC	GF	FF Wipes		
Sampling	Sampling Rate† Sampling Vol		olumett/	LOQ	LOD	Compatibility Code		
N/A	N/A N/A		4	0.014 μg	0.0070 μg	Isocyanate		
I	nterferenc	es		Comments				
Potential interferences include anhydrides, amines, alcohols and carboxylic acids.			after sa vial con week ah	Follow "Isocyanate Wipe Sampling Procedure". Immediately after sampling, glass fiber filters must be placed in a vial containing derivatizing solution. Order media one week ahead of survey. Media are prepared when ordered. Derivatizing solution has a shelf life of 1 month if kept cold.				

Methylene	Methylene Chloride (Dichloromethane)							
CAS#	Analytical Method A		Analytica	l Technique	Samı	oling Media		
75-09-2	<b>75-09-2</b> NIOSH 1005		GC	:-FID	CT-CT	(SKC 226-01)		
Sampling	Sampling Rate† Sampling Vol		olumett	LOQ	LOD	<b>Compatibility Code</b>		
0.01-0	.2	0.5-2	2.5	2.8 µg	1.4 µg	CS <sub>2</sub>		
I	nterferenc	es		Comments				
				Sample using two CT in series. Separate and cap tubes after sampling. Ship and store cold immediately.				

Methylene	Chlorid	le (Dichlor	omethan	ie)			
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media		
75-09-2	3M Method		GC	-FID	OVM (3M 3520)		
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code		
37.9		15-2	40	4.2 μg	2.1 µg	CS <sub>2</sub>	
ı	nterferenc	es		Comments			
			monitor	Use 3M 3520. Separate the front section of the monitor from the back section and cap immediately after sampling. Ship and store cold immediately.			

Methylene	(4,4'-) D	ianiline (M	IDA)					
CAS#	Analyti	cal Method	Analytica	l Technique	Samı	pling Media		
101-77-9	NIOS	SH 5029	HI	PLC	G	FF, Acid		
Sampling	Sampling Rate† Sampling Vo			LOQ	LOD	Compatibility Code		
1-2	1-2 10-100		00	0.68 µg	0.34 μg			
I	nterferenc	es		Comments				
4,4'-Diphenyl methane diisocyanate (MDI) will interfere.			Please of media. Note to a glass	contact the lab Within 4 hours ss vial contain	life so it is not ke o one week before of sampling, tran ing 4 ml 0.1 N me be used for wipe	sampling to order esfer the filter thanolic KOH.		

Methylene(4,4'-)-bis(2 chloroaniline) (MOCA)									
CAS#	Analytic	Analytical Method A		Analytical Technique		mpling Media			
101-14-4	' '	IOSH AM 236	HPLC		GFF-SGT (SKC 225-16, SKC226-10)				
Sampling	Sampling Rate† Sampling V		/olumett	LOQ	LOD	Compatibility Code			
0.2-1		50	)	0.50 μg	0.25 μg				
Interferences				Comments					
	·			·	·				

Methylnap	hthalen	e(2-)					
CAS#	Analytical Method A		Analytica	l Technique	Samı	oling Media	
91-57-6	NIOS	SH 5515	GC	C-MS		E2/XAD-2 37, SKC 226-30-04)	
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code		
2		200-10	000	0.66 µg	0.33 μg	PNAs	
ı	Interferences				Comments		
					ate filter from sort uminum foil. Ship	pent tube. Cap and and store cold.	

Mica							
CAS#	Analytic	cal Method	Analytica	l Technique		Sam	pling Media
12001-26-2	NIOS	SH 0600	GI	RAV	PVC (SKC 225-5-37-P)		(C 225-5-37-P)
Sampling	Sampling Rate† Sampling Vol		olumett	LOQ		LOD	Compatibility Code
1.7	500-120		200	50 µg		10 μg	
li	nterferenc	es				Comments	
All other respirable dusts will interfere.			Oliver) of	Use pre-weighed PVC 2-piece cassette for MSA (Dorr-Oliver) cyclones at 1.7 lpm and 3-piece cassette for BMRC (SKC) cyclones at 2.5 lpm and BGI-4L at 2.2 lpm. 2020 NIC, TWA = 0.1mg/m <sup>3(R)</sup>			

Mineral Oil (Oil mist)									
CAS#	Analytical Method A		Analytica	l Technique	Samp	oling Media			
8012-95-1	NIOS	NIOSH 0500		RAV	Pre-weighed P	VC (SKC 225-5-37-P)			
Sampling Rate† Sampling Vol		olumett/	LOQ	LOD	Compatibility Code				
1-15		40-72	200	50 μg	10 µg				
I	nterferenc	es			Comments				
All other dusts will interfere.				This method is not for oil mist containing PNAs; it does not collect vapor.					

Mineral Oil, excluding Metal Working Fluids, Pure, highly and severely refined.									
CAS#	Analytic	cal Method	Analytica	l Technique	Samı	pling Media			
8012-95-1	NIOS	SH 5026	F	TIR	Р	VC, IOM			
Sampling Rate† Sampling Vo		olumett/	LOQ	LOD	Compatibility Code				
2		100-	500	32 µg 16 µg					
li	nterferenc	es		Comments					
Any aerosol (e.g. tobacco smoke) which absorbs infrared radiation near 2950 cm-1 interferes.			IOMs or use of I	Concentrated bulk oil sample required for analysis. Request IOMs one week before survey date. Rental charges for use of IOM samplers apply. This method is not covered under our AIHA-LAP, LLC scope of accreditation.					

Mineral Oil, used in metal working									
CAS#	Analytic	Analytical Method A		l Technique	San	npling Media			
8012-95-1	NIOS	NIOSH 5524		RAV	Pre-weighed P	TFE1 (Zefon FPTFE137)			
Sampling Rate† Sampling Vol			olumett/	LOQ	LOD	Compatibility Code			
2		768-9	960	75 μg 38 μg					
I	nterferenc	es			Comments				
The method is non-specific and measures all substances extractable by organic solvents.			samples	Bulk is recommended to test solubility. Refrigerate samples if unable to ship immediately. Ship cold. Samples must be analyzed within two weeks of collection.					

Mineral Spirits (Stoddard Solvent)									
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media				
8052-41-3	NIOS	NIOSH 1550		-FID	CT (SK	C 226-01, -09)			
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code				
0.01-0	).2	1.3-2	20	1.4 µg	0.71 μg	CS <sub>2</sub>			
I	nterferenc	es			Comments				
Please send bulk sample. Ship bulk sample separately from air samples.					ple				

Mineral Sp	Mineral Spirits (Stoddard Solvent)									
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media					
8052-41-3	3M I	Method	GC	:-FID	OVM	(3M 3500)				
Sampling	Sampling Rate† Sampling Vol		olumett/	LOQ	LOD	Compatibility Code				
24.3		15-4	80	2.1 µg 1.1 µg		CS <sub>2</sub>				
li	nterferenc	es			Comments					
				Please send bulk sample. Ship bulk sample separately from air samples.						

Mineral W	Mineral Wool Fiber									
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media					
	NIOSH 0500		GI	RAV	Pre-weighed P	VC (SKC 225-5-37-P)				
Sampling	Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code				
1-15		40-72	00	50 μg	10 µg					
li	Interferences				Comments					
All other dusts will interfere.			For personal sampling use a flow rate of 1-2 lpm, for area sampling up to 15 lpm.							

Molybdenum as Mo									
CAS#	Analytic	Analytical Method A		l Technique	Samı	pling Media			
7439-98-7		NIOSH 7301 NIOSH 7303		СР		CE or PVC or SKC 225-5-37-P)			
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code				
1-4		25-10	00	0.10 µg	0.050 μg	Metals			
I	nterferenc	es			Comments				
Spectral interferences are the primary interferences encountered in ICP-AES analysis.			internal in your	As part of the Lab's QC protocol, yttrium is used as internal standard in metal analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples.					

Molybden	um as M	lo					
CAS#	Analytic	nalytical Method A		l Technique	Sam	pling Media	
7439-98-7		SH 7301 SH 7303	ICF	P-MS	MCE or PVC (SKC 225-5 or SKC 225-5-37-P)		
Sampling	Ratet	Sampling V	ampling Volume†† LOQ LOD Compatibilit			Compatibility Code	
1-4	1-4 40-240		40	0.025 µg	0.013 µg	Metals	
I	nterferenc	es		Comments			
and lut analysi form if			tium are used s. Please indic yttrium, rhodio	C protocol, yttriun I as internal stand ate in your sampl um, and/or lutetiu collected your sa	ards in ICP-MS e submission m are present		

Molybden	um as M	lo					
CAS#	Analytical Method A		Analytica	l Technique	Sam	pling Media	
7439-98-7	9-98-7 OSHA ID-121		1	СР	Ghost v	vipe (225-2414)	
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code		
NA		NA		1.0 µg	0.5 μg	Metals 2	
I	nterferenc	es		Comments			
Spectral interferences are the primary interferences encountered in the ICP-AES analysis.			internal your sar	As part of the Lab's QC protocol, yttrium is used as internal standard in ICP analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples.			

Morpholine									
CAS#	Analytical Method A		Analytica	l Technique	Samı	pling Media			
110-91-8	NIOSH S-150		GC	-FID	SGT (	SKC 226-10)			
Sampling	Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code			
0.1		10		2.8 µg	1.4 µg	dil acid			
I	Interferences			Comments					

Naphthale	ene						
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media		
91-20-3 NIOSH 1501		GC	:-FID	CT (SK	C 226-01, -09)		
Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code		
0.01-0	).2	1-10	)	0.47 μg	0.24 μg	CS <sub>2</sub>	
ı	nterferenc	es		Comments			
				Under conditions of high humidity, the breakthrough volumes may be reduced by as much as 50%.			

CAS # Analytical Method Analytical Technique Sampling Media								
CA3 π	Allalytic	zai Methou	Allalytical	recinique	Samp	Jillig Wedia		
91-20-3	3M I	Method	GC-FID		OVM	(3M 3500)		
Sampling Rate† Sampling V		/olumett	LOQ	LOD	Compatibility Code			
24.6	)	15-4	.80	0.70 µg	0.35 μg	CS <sub>2</sub>		
ı	nterferenc	es		Comments				

Naphthale	Naphthalene (see PNA scan)									
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media					
91-20-3	NIOSH 5506		HPLC			E2/XAD-2 37, SKC 226-30-04)				
Sampling	Sampling Rate† Sampling Vo		olumett/	LOQ	LOD	Compatibility Code				
2		200-1	000	0.32 μg	0.16 μg	PNAs				
I	nterferenc	es		Comments						
Asphalt fumes will interfere.				After sampling, separate filter from sorbent tube. Cap and wrap individually in aluminum foil. Ship and store cold.						

Naproxen	Naproxen Sodium									
CAS#	Analytical Method A		Analytica	Analytical Technique		Sampling Media				
22204-53-1	LM-Pharma-4		LC	LC-MS		PTFE5				
Sampling Rate† Sampling Vol			olumett	LOQ	L	OD	Compatibility Code			
2		200	)	0.0010 μg						
li	nterferenc	es		Comments						
			must ha	It is critical that the PTFE filter used for sampling must have a pore size of 1.0um. Contact the lab to determine the minimum air volume required.						

Naproxen	Naproxen Sodium									
CAS#	Analytical Method A		Analytica	l Technique	Samp	oling Media				
22204-53-1	LM-P	LM-Pharma-4		r-MS	GF	F Wipes				
Sampling Rate† Sampling Volu		olumett	LOQ	LOD	Compatibility Code					
N/A		N/A	Ą	0.0020 μg	0.0010 µg					
li	nterferenc	es		Comments						
			Procedu	Follow "Naproxen Sodium Wipe Sampling Procedure. Order media one week ahead of survey. Media are prepared when ordered.						

Nickel and inorganic compounds as Ni									
CAS#	Analytical Method A		Analytica	I Technique	Sampling Media				
7440-02-0	NIOSH 7301 NIOSH 7303 OSHA ID-125G		ICP		MCE or PVC (SKC 225-5 or SKC 225-5-37-P)				
Sampling Rate† Sampling Vol			lumett	LOQ	LOD	Compatibility Code			
1-4		50-100	00	0 0.10 μg 0.05 μg Metals		Metals			
lı	nterferenc	es		Comments					
Spectral interferences are the primary interferences encountered in ICP-AES analysis.			internal in your	As part of the Lab's QC protocol, yttrium is used as internal standard in metal analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples.					

Nickel and	Nickel and inorganic compounds as Ni									
CAS#	Analytical Method A		Analytica	Analytical Technique		Samp	oling Media			
7440-02-0		SH 7301 SH 7303	ICP-MS			MCE or PVC (SKC 225-5 or SKC 225-5-37-P)				
Sampling Rate† Sampling Vol			olumett	LOQ		LOD	Compatibility Code			
1-4		40-24	40	0.16 μg 0.080 μg Metal		Metals				
I	nterferenc	es		Comments						
			and lute analysis form if y	s. Please indic	d as in cate in um, ar	ternal standa your sample nd/or lutetiur	ards in ICP-MS e submission n are present			

Nickel and	Nickel and inorganic compounds as Ni								
CAS#	Analytic	cal Method	Analytica	l Technique	Sam	pling Media			
7440-02-0		A ID-121 ID-125G	ICP		ghost wip	e (SKC 225-2414)			
Sampling Rate† Sampling Vol			olumett	LOQ	LOD Compatib				
NA		NA		0.50 μg 0.25 μg Meta		Metals2			
li li	nterferenc	es		Comments					
Spectral interferences are the primary interferences encountered in ICP-AES analysis.			internal in your	As part of the Lab's QC protocol, yttrium is used as internal standard in metal analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples.					

Nicotine							
CAS#	Analytical Method A		Analytica	l Technique	Sam	pling Media	
54-11-5	NIOSH 2544		Н	PLC	XAD-2 (	SKC 226-30-04)	
Sampling	Sampling Rate† Sampling Vo		olumett LOQ		LOD	Compatibility Code	
1		60-4	00 2.0 μg		1.0 µg		
	nterferenc	es		Comments			

Nitric Acid	l						
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media		
7697-37-2	NIOS	SH 7903		IC	MCE2, SGT** (SKC 225-19, SKC 226-10-03)		
Sampling Rate† Sampling Vo		lumett	LOQ	LOD	<b>Compatibility Code</b>		
0.2-0.	.5	5-100	)	2.3 µg	1.2 µg		
li	nterferenc	es	Comments				
Particulate salts of the acid will give a positive interference.		Use the	Use the maximum flow rate for STEL sampling.				

Nitric acid								
CAS#	Analyti	alytical Method A		l Technique	Samı	oling Media		
7697-37-2	NIOS	SH 7907		IC	SKC	225-9032		
Sampling	Ratet	Sampling V	g Volumett LOQ LOD Compa		mett LOQ LOD Comp			
2		35-6	00	3.8 µg	1.9 µg	Acid1		
Interferences				Comments				
Inorganic acids can react with co- sampled particulate matter on the pre-filter, leading to low results. Potentially interfering particulate chlorides and nitrates removed by the pre-filter can react with the sampled acids and liberate HCl and HNO <sub>3</sub> , which gets collected on the sampling filter, leading to high results.			are prep	pared when or	k ahead of survey. dered. Ship and st dia charge applies	ore cold.		

Nitric Oxid	Nitric Oxide and Nitrogen Dioxide								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media				
10102-43-9		D-190 (NO), D-182 (NO2)		IC	SKC	C 226-40A			
Sampling	Sampling Rate† Sampling Vo			LOQ	LOD	Compatibility Code			
0.1		3-2	4	0.78 µg	0.39 µg	NO&NO <sub>2</sub>			
lı	nterferenc	es		Comments					
				Use SKC 226-40A (2TEA coated tubes + oxidizer) to sample NO only or NO2 and NO. <b>Store and ship cold</b> .					

Nitroethar	ne						
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media		
79-24-3	<b>79-24-3</b> NIOSH 2526		GC	:-FID	XAD-2 (SKC 226-3002A) (Part A + Part B)		
Sampling	Sampling Rate† Sampling Vol		olumett	LOQ	LOD	<b>Compatibility Code</b>	
0.01-0	.05	1.5-	3	1.8 µg	0.90 µg	Ethyl Acetate	
I	nterferenc	es		Comments			
				Sample using 2 XAD-2, (front 600 mg and backup 300 mg), tubes in series. After sampling, separate and cap sorbent tubes.			

Nitrogen Dioxide									
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media				
10102-44-0	OSH	OSHA ID-182		IC	TEA-IMS (	(SKC 226-40-02)			
Sampling Rate† Sampling Volu			olumett	LOQ	LOD	Compatibility Code			
0.2		35		1.2 µg	0.60 μg				
li	nterferenc	es			Comments				
				Sample with TEA IMS (226-40-02) for $NO_2$ only. Store and ship cold.					

Nitrometh	ane						
CAS#	Analytical Method		Analytica	l Technique	Sampling Media		
75-52-5	-5 NIOSH 2527		GC	:-FID	CS 106 (SKC 226-111A)		
Sampling Rate† Sampling V		Volumett	LOQ	LOD	Compatibility Code		
0.01-0	.05	5-1	10	2.3 μg	1.2 µg	Ethyl Actate	
ı	nterferenc	es		Comments			

Nitrous Oxide								
CAS#	Analytic	cal Method	Analytica	Analytical Technique		Sampling Media		
10024-97-2	OSH	4 ID-166	GC-ECD			AT N <sub>2</sub> O Monitor (X575AT)		
Sampling	Sampling Rate† Sampling Volu		olumett	LOQ		LOD	Compatibility Code	
0.75	0.75 15-480		80	0.20 μg		NA		
- In	nterferenc	es		Comments				
Halogenated anesthetic gases, CFC's and HCFC's do not interfere when tested at their PELs.			samplin Do not u	Monitors must be received by Lab within one week after sampling and stored at controlled room temperature.  Do not use after expiration date. This analysis is subcontracted to an AIHA-LAP, LLC accredited lab.				

Organic S	olvent S	can					
CAS#	Analytic	cal Method	Analytical 7	Гесhnique	Sampling Media		
	LM-G	GCMS-13					
Sampling Rate† Sampling V		olumett/	LOQ	LOD	Compatibility Code		
Interferences				Comments			
			See List o	of Scans for	list of individual or	ganic solvents.	

CAS#	Analytical Method A		Analytica	l Technique	Sampling Media		
144-62-7	OSHA I	D-PV2115		IC	GFF	(SKC 225-7)	
Sampling Rate† Sampling V		/olumett	LOQ	LOD	Compatibility Code		
1.0		30-1	00	3.0 µg	1.5 µg		
Interferences				Comments			

Ozone								
CAS#	Analytic	cal Method	Analytica	l Technique	Sampling Media			
10028-15-6	OSH	A ID-214		IC	GF	F, NaNO <sub>2</sub>		
Sampling	Ratet	Sampling V	olumett	LOQ	LOD	Compatibility Code		
0.25-0.5 See Comm section			4.8 μg	2.4 μg				
Interferences				Comments				
Particulate salts of nitrate and nitric acid give positive interferences for ozone. SO <sub>2</sub> will cause a negative interference.			for shor rate of ( media c ordered ozone. I detecto to the or in the sa	t term samplir 0.5 lpm. For 25 one week ahead . Sulfur dioxidd f SO <sub>2</sub> is susper r tube. If prese zone filters. Ox ampling train.	g. For longer sam % of TLV, you will d of survey. Media e (SO <sub>2</sub> ) has a nega cted, check for its nt, request oxidize idizer tube preced After sampling se	flow rate of 1.5 lpm upling time, use a flow need 125L. Order are prepared when arive interference on presence using a SO <sub>2</sub> er tubes in addition des the ozone filter al the cassette with vith aluminum foil.		

Palladium							
CAS#	Analytical Method Ar		Analytica	l Technique	Samı	oling Media	
7440-05-3	NIOSH 7301 NIOSH 7303 OSHA ID-125G		Į.	СР	MCE or PVC (SKC 225-5 or SKC 225-5-37-P)		
Sampling Rate† Sampling Vo			olumett	LOQ	LOD	Compatibility Code	
1-4		50-10	00	0.32 μg 0.16 μg Meta		Metals	
li	nterferenc	es		Comments			
Spectral interferences are the primary interferences encountered in ICP-AES analysis.			internal in your s	As part of the Lab's QC protocol, yttrium is used as internal standard in metal analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples.			

Paraffin Wax Fume								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media			
8002-74-2	8002-74-2 NIOSH 0500		GI	RAV	Pre-weighed P	VC (SKC 225-5-37-P)		
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code			
1-15		100-7:	200	50 μg	10 µg			
li	nterferenc	es			Comments			
All other dusts will interfere.				For personal sampling use a flow rate of 1-2 lpm, for area sampling up to 15 lpm.				

<b>Particles</b>	(insolub	le or poorly	soluble	) Not other	wise specifie	d; inhalable	
CAS#	Analytical Method Ar		Analytica	l Technique	Sampling Media		
	HSE MDHS 14		GRAV		PVC, IOM		
Sampling	Sampling Rate† Sampling Vol			LOQ	LOD	Compatibility Code	
2		40-96	50	100 µg	10 µg		
	Interferenc	es		Comments			
All other dusts will interfere.			week be	Use IOM sampler with pre-weighed PVC. Contact Lab 1 week before intended use. The availability of IOM samplers is limited. Rental charge for the IOM samplers applies.			

Particles (	(insolub	le or poorl	y soluble	) Not othe	rwise specifie	ed; respirable	
CAS#	Analytic	Analytical Method A		l Technique	Sam	pling Media	
	NIOS	SH 0600	GI	RAV	PVC (Sk	(C 225-5-37-P)	
Sampling Rate† Sampling Vol			olumett/	LOQ	LOD	Compatibility Code	
1.7	1.7 100-81		316	50 μg	10 µg		
I	nterferenc	es		Comments			
All other respirable dusts will interfere.			Oliver) o	Use pre-weighed PVC 2-piece cassette for MSA (Dorr- Oliver) cyclones at 1.7 lpm and 3-piece cassette for BMRC (SKC) cyclones at 2.5 lpm and for BGI-4L at 2.2 lpm.			

Particles (insoluble or poorly soluble) Not otherwise specified; total								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media			
	NIOS	SH 0500	GI	RAV	Pre-weighed P	VC (SKC 225-5-37-P)		
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code			
1-15		40-72	200	50 μg	10 µg			
I	Interferences			Comments				
All other dusts will interfere.				For personal sampling use a flow rate of 1-2 lpm, for area sampling up to 15 lpm.				

Pentane(n	-)						
CAS#	# Analytical Method		Analytica	Technique	Sampling Media		
109-66-0	NIOS	NIOSH 1500		-FID	CT (SK	C 226-01, -09)	
Sampling Rate† Sampling Vo		olumett/	LOQ	LOD	Compatibility Code		
0.01-0	).2	4		0.48 µg	0.24 μg	CS <sub>2</sub>	
I	nterferenc	es		Comments			
			-				

Pentane(n	-)						
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media		
109-66-0	3M I	Method	GC	:-FID	OVM	I (3M 3520)	
Sampling Rate† Sampling Vol			olumett/	LOQ	LOD	Compatibility Code	
35.3	35.3 15-180		80	0.73 μg 0.37 μg CS <sub>2</sub>		CS <sub>2</sub>	
li	nterferenc	es		Comments			
from				e back sectior	te front section of n and cap immedia tore cold immediat	tely after	

Pentanedi	Pentanedione(2,3-)									
CAS#	Analyti	cal Method Analytica		alytical Technique Sampling Media		ampling Media				
600-14-6	OSF	IA 1016 GC		GC-MS SGT/GFF-SGT/GFF (SKC 226-		SGT/GFF (SKC 226-18	3)			
Sampling	Ratet	Sampling Volu		LOQ	LOD	Compatibility (	Code			
0.05-0	).2	10L (T 3L (shor		0.59 µg	0.30 µg	95% EtOH				
I	nterferenc	es		Comments						
			tubes in light du after sa	series. Samp ring and after mpling. Samp	les should be p sampling. Sep le separately f	ally washed silica gel protected from the arate and cap tubes rom CS2 compatible apping the samples.				

Pentanedi	one(2,4	-)					
CAS#	Analytical Method		Analytical Technique		Sampling Media		
123-54-6	3M Method		GC-FID		OVM (3M 3500)		
Sampling Rate† Sampling Vo		olumett	LOQ	LOD	<b>Compatibility Code</b>		
31.7	,	15-3	00	2.7 µg	1.3 μg	CS <sub>2</sub>	
I	nterferenc	es		Comments			

CAS#	Analytical Method A		Analytical	Technique	Sampling Media		
107-87-9	107-87-9 NIOSH 1300		GC	-FID	CT (SKC 226-01, -09)		
Sampling Rate† Sampling Vo		olumett/	LOQ	LOD	Compatibility Code		
0.01-0	).2	1-1	0	0.70 μg	0.35 μg	CS <sub>2</sub>	
Interferences				Comments			

Pentanone(2-) (Methyl propyl ketone)								
CAS#	# Analytical Method		Analytica	Technique	Sampling Media			
107-87-9	<b>07-87-9</b> 3M Method		GC	-FID	OVM	(3M 3500)		
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code			
33.0		15-4	80	1.1 µg	0.53 μg	CS <sub>2</sub>		
I	Interferences			Comments				

Peracetic A	Acid						
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media		
79-21-0	NON 57		HPLC		SKC 225-9030 (Hydrogen Peroxide) + SKC-226-193-UC (Peracetic Acid)		
Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code		
1 LPN	1 LPM 15 Liters		Max	0.50 µg/ sample	N/A	Sample with hydrogen peroxide	
I	nterferenc	es		Comments			
Must sample for hydrogen peroxide			method	This analysis is sub-contracted to another laboratory. This method is not covered under the laboratory's AIHA-LAP, LLC scope of accreditation. Turnaround time is 10 business days.			

Perchloro	Perchloroethylene (Tetrachloroethylene)									
CAS#	Analytical Method		Analytical Technique		Sampling Media					
127-18-4	NIOSH 1003		GC-FID		CT (SK	C 226-01, -09)				
Sampling	Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code				
0.01-0	.2	1-40	0	1.8 µg	0.90 μg	CS <sub>2</sub>				
Į.	Interferences			Comments						

Perchloro	ethylene	e (Tetrachl	oroethyl	ene)			
CAS#	Analytical Method		Analytica	l Technique	Sampling Media		
127-18-4	27-18-4 3M Method		GC-FID		OVM (3M 3500)		
Sampling Rate† Sampling Vo		/olumett	LOQ	LOD	Compatibility Code		
28.3	3	15-4	80	2.7 µg	1.4 µg	CS <sub>2</sub>	
Interferences				Comments			

Perfluoro	Perfluorooctanoic Acid									
CAS#	Analytical Method		Analytica	l Technique	Sampling Media					
335-67-1	DuPo	DuPont-PF0A		:-MS	OVS-2 (S	SKC 226-30-16)				
Sampling	Sampling Rate† Sampling Vo			LOQ	LOD	Compatibility Code				
1.0		480	)	1.4 µg 0.70 µg						
I	nterferenc	es		Comments						
				Sample 480 L if possible; 280 L will give 50% of recommended exposure limit.						

Petroleum	Petroleum Ether									
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media					
8032-32-4	<b>32-32-4</b> NIOSH 1550		GC	:-FID	CT (SK	C 226-01, -09)				
Sampling Rate† Sampling Volu		olumett	LOQ	LOD	Compatibility Code					
0.01-0	0.01-0.2 1.3-20		20	0.50 μg 0.25 μg C		CS <sub>2</sub>				
Interferences Comments										
				Please send bulk sample. Ship bulk sample separately from air samples.						

Petroleum	Petroleum Ether									
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media					
8032-32-4	3M Method		GC	-FID	OVM	(3M 3500)				
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code				
33.1	33.1 15-480		80	0.75 μg 0.38 μg CS <sub>2</sub>		CS <sub>2</sub>				
li	Interferences				Comments					
				Please send bulk sample. Ship bulk sample separately from air samples.						

Phenanthrene (see PNA scan)									
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media				
85-01-8	OSHA 58		HI	PLC	GFF (	SKC 225-7)			
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code				
2		960	)	0.12 µg	0.060 µg	PNAs			
Interferences					Comments				
Asphalt fumes will interfere.				After sampling, cap and wrap in aluminum foil. Ship and store cold.					

Phenanthrene (see PNA scan)									
CAS#	Analytical Method A		Analytica	l Technique	Samp	oling Media			
85-01-8	<b>85-01-8</b> NIOSH 5506		Н	PLC		PTFE2/XAD-2 (PALL P5PJ037, SKC 226-30-04)			
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code				
2		200-10	000	0 0.12 μg 0.060 μg PNAs		PNAs			
Į.	nterferenc	es		Comments					
Asphalt fumes will interfere.				After sampling, separate filter from sorbent tube. Cap and wrap individually in aluminum foil. Ship and store cold.					

CAS#	Δnalytic	al Method	Δnalytica	I Technique	Sam	pling Media	
OAO II	Analytic	our ivictiou	Allalytica	recinique	Odili	pillig Mcala	
<b>108-95-2</b> OSHA 32		Н	PLC	XAD-7 (SKC 226-95)			
Sampling Rate† Sampling Vo		/olumett	LOQ	LOD	Compatibility Code		
0.1		5-2	4	0.20 µg	0.10 μg	Phenol and cresol	
Interferences				Comments			

Phenylcyc	Phenylcyclohexene(4-)									
CAS#	Analytical Method A		Analytica	Analytical Technique		Sampling Media				
4994-16-5	NIOS	SH 1500	GC	GC-FID		CT (SKC 226-01, -09)				
Sampling Rate† Sampling Volu			olumett	LOQ		LOD	Compatibility Code			
0.01-0	0.01-0.2 1-60			0.38 μg 0.18 μg CS <sub>2</sub>			CS <sub>2</sub>			
li	Interferences					Comments				
		Minimu	Please indicate if samples are for "LEED" compliance. Minimum sample volume for "LEED" samples is 60 L. Preferred air sampling method.							

Phenylcyc	lohexen	e (4-)					
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media		
4994-16-5	<b>94-16-5</b> 3M Method		GC	-FID	OVM (3M 3500)		
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code		
20.3	20.3 15-480		80	0.57 μg	0.28 µg	CS <sub>2</sub>	
Interferences Comments							
				Please indicate if samples are for "LEED" compliance. Minimum sample volume for "LEED" samples is 60 L.			

Phenylene(1,3-) diamine									
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media				
108-45-2	OSHA 87		HI	PLC	G	FF, Acid			
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code			
1		10-10	00	0.83 µg	0.42 μg				
Į.	Interferences					Comments			
				Sampling media has a short shelf-life so it is not kept in stock. Contact lab one week before sampling to order media.					

Phosphine									
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media				
7803-51-2	OSH	IA 1003		СР	GFF- PE,HgCl <sub>2</sub> (SKC 225-9018)				
Sampling	Sampling Rate† Sampling Volu			LOQ	LOD	Compatibility Code			
1		250		3.6 µg	1.8 µg				
I	nterferenc	es		Comments					
Spectral inter primary interf in ICP-AES an	erences e		media h in stock media. / as interi in your s	as a shelf-life o . Contact lab or As part of the La nal standard in i sample submiss	f only two weeks	lease indicate um is present			

CAS#	Analytic	cal Method	Analytica	l Technique	Samı	oling Media	
7664-38-2	664-38-2 NIOSH 7903			IC	MCE2, SGT** (SKC 225-19, SKC 226-10-03)		
Sampling Rate† Sampling Vol		olumett/	LOQ	LOD	Compatibility Code		
0.2-0.	5	25-1	00	2.3 μg 1.2 μg Acid1			
Interferences				Comments			
Particulate salts of the acid will give a positive interference.			Sample	Sample at a flow rate of 0.5 lpm for STEL.			

Phosphori	c Acid						
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media		
7664-38-2	NIOS	SH 7908		IC	SKC 225-9033		
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code	
1-5	1-5 50-1000		000	3.8 µg	1.9 µg		
Interferences				Comments			
Particulate salts of sulfate or phosphate will give positive interference.			Ship and	Ship and store cold. Specialty filter. Media charge applies.			

Phosphoru	ıs (elem	ents)					
CAS#	Analytical Method A		Analytica	l Technique	Samı	oling Media	
7723-14-0	NIOSH 7301 NIOSH 7303		I	СР	MCE or PVC (SKC 225-5 or SKC 225-5-37-P)		
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code	
1-4	1-4 330-100		000	0 3.3 μg 1.7 μg Metals		Metals	
li	nterferenc	es		Comments			
Spectral interferences are the primary interferences encountered in ICP-AES analysis.			internal in your	As part of the Lab's QC protocol, yttrium is used as internal standard in metal analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples.			

Phthalic Anhydride								
CAS#	Analytical Method A		Analytica	Analytical Technique		ampling Media		
85-44-9	OS	OSHA 90		HPLC		GFF, Vamine		
Sampling Rate† Sampling Vol		/olumett	LOQ	LOD	Compatibility Code			
1.0		75	j	0.13 µg	0.065 µg			
I	nterferenc	es		Comments				
Isocyanates, acid chlorides and other anhydrides will give a positive interference.				Sample open-faced. Order filters one week ahead, filters are prepared when ordered and have one month shelf-life.				

Piperazine	•						
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media		
110-85-0	-85-0 OSHA In-house IMIS P250		Н	PLC	XAD-2, NITC (SKC 226-30-18)		
Sampling Ratet Sampling Vo		/olumett	LOQ	LOD	<b>Compatibility Code</b>		
0.1		10	)	0.12 μg 0.060 μg			
I	nterferenc	es		Comments			

Platinum N	vietal an	ia Soluble	Saits as	Pt			
CAS#	Analytical Method A		Analytica	l Technique	Samı	pling Media	
7440-06-4	NIOSH 7301 NIOSH 7303		I	СР	MCE or PVC (SKC 225-5 or SKC 225-5-37-P)		
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	<b>Compatibility Code</b>	
1-4		500-10	000	0.25 μg 0.13 μg Meta		Metals	
li	nterferenc	es		Comments			
Spectral interferences are the primary interferences encountered in ICP-AES analysis.			internal in your	As part of the Lab's QC protocol, yttrium is used as internal standard in metal analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples.			

CAS#	Analytic	Analytical Method Ar		l Technique	PTFE2/XAD-2 (PALL P5PJ037, SKC 226-30-04)		
	NIOSH 5506		Н	PLC			
Sampling Rate† Sampling Vol		/olumett	LOQ	LOD	Compatibility Code		
2		200-1	000				
	Interferenc	es		Comments			
Asphalt fumes will interfere.			and wra	After sampling, separate filter from sorbent tube. Cap and wrap individually in aluminum foil. Ship and store cold. Analysis price is for the filter and tube together.			

PNA Scan (OSHA 58)								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media			
	OSHA 58		HI	PLC	GFF (	(SKC 225-7)		
Sampling	Sampling Rate† Sampling Vol		/olumett	LOQ	LOD	Compatibility Code		
2		96	0					
I	Interferences			Comments				
Asphalt fumes will interfere.				After sampling, cap and wrap in aluminum foil. Ship and store cold.				

Polychlorobiphenyl (Chlorodiphenyl, 54% Chlorine) (PCB)								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media			
11097-69-1	NIOS	NIOSH 5503		C-MS	GFF-Florisil (Millipore SX0001300/01/ AP2001300 SKC 226-39)			
Sampling Rate† Sampling Volu		olumett	LOQ	LOD	Compatibility Code			
0.05-0	.2	1-5	0	1.1 µg	0.55 μg			
lı	Interferences			Comments				
Other chlorinated pesticides may interfere in the quantification of PCB.								

Polychlorobiphenyl (Chlorodiphenyl, 42% Chlorine) (PCB)								
CAS#	# Analytical Method A		Analytica	l Technique	Sampling Media			
53469-21-9	169-21-9 NIOSH 5503		GC	C-MS	GFF-Florisil (Millipore SX0001300/01/ AP2001300 SKC 226-39)			
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	<b>Compatibility Code</b>			
0.05-0	.2	1-5	0	0.97 µg	0.49 μg			
Interferences				Comments				
Other chlorina interfere in the								

Polyvinyl Chloride (PVC)								
CAS#	Analytical Method A		Analytica	l Technique	Sam	pling Media		
9002-86-2	NIOS	NIOSH 0600		RAV	PVC (SI	(C 225-5-37-P)		
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	<b>Compatibility Code</b>		
1.7		100-8	316	50 μg	10 µg			
I	nterferenc	es		Comments				
All other respi	irable dust	s will interfer	Oliver) o	Use pre-weighed PVC 2-piece cassette for MSA (Dorr-Oliver) cyclones at 1.7 lpm and 3-piece cassette for BMRC (SKC) cyclones at 2.5 lpm and for BGI-4L at 2.2 lpm.				

Portland Cement								
CAS#	Analytical Method A		Analytica	Analytical Technique		ampling Media		
65997-15-1	NIOS	SH 0600	GRAV		PVC	(SKC 225-5-37-P)		
Sampling	Sampling Rate† Sampling Volu		olumett	LOQ	LOD	Compatibility Code		
1.7 (See com	1.7 (See comment) 500-8		316 50 μg		10 µg			
I	nterferenc	es		Comments				
All other dusts will interfere.			Oliver) o	Use pre-weighed PVC 2-piece cassette for MSA (Dorr- Oliver) cyclones at 1.7 lpm and 3-piece cassette for BMRC (SKC) cyclones at 2.5 lpm and for BGI-4L at 2.2 lpm.				

Potassium	Hydrox	ride					
CAS#	Analytical Method A		Analytica	l Technique	Samı	oling Media	
1310-58-3	NIOSH 7301 NIOSH 7303		ICP		MCE or PVC (SKC 225-5 or SKC 225-5-37-P)		
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code	
1-4		85-10	0	17 μg 8.5 μg M		Metals	
I	nterferenc	es		Comments			
All forms of potassium are quantified. Spectral interferences are the primary interferences encountered in ICP-AES analysis.			internal in your s	As part of the Lab's QC protocol, yttrium is used as internal standard in metal analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples.			

Propanol(ı	n-)						
CAS#	Analytical Method A		Analytical	l Technique	Sam	pling Media	
71-23-8	NIOS	NIOSH 1401		-FID	CT (SKC 226-01, -09)		
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	<b>Compatibility Code</b>		
0.01-0	).2	1-10	0	0.83 µg	0.42 μg	1%IPA/CS <sub>2</sub>	
Interferences				Comments			
			Store an	nd ship cold o	vernight.		

Propanol(r	Propanol(n-)								
CAS#	Analytical Method		Analytical Technique		Sampling Media				
71-23-8	23-8 3M Method		GC-FID		OVM	(3M 3500)			
Sampling	Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code			
39.7		15-42	20 1.2 μg		0.60 µg	MC CS <sub>2</sub>			
li	nterferenc	es		Comments					
	Store and ship cold overnight.								

Propionaldehyde									
CAS#	Analytical Method A		Analytical Technique		Sampling Media				
123-38-6	NIOSH 2016		HPLC		AT Monitor (N571AT)				
Sampling Rate† Sampling Rate†		Sampling V	Sampling Volumett		LOD	Compatibility Code			
9.58		15-480		0.029 µg	0.015 µg	Aldehyde			
Interferences				Comments					
Other aldehydes and ketones will react with the 2,4-DNPH but can be chromatographically resolved.				Keep media refrigerated before and after sampling. Ship cold overnight.					

Propionaldehyde										
CAS#	Analytical Method		Analytical Technique		Sampling Media					
123-38-6	NIOSH 2016		HPLC		Sep-Pak (WAT047205)					
Sampling Rate† Sa		Sampling V	ampling Volumett		LOD	Compatibility Code				
0.1-1.5		10-100		0.15 µg	0.075 μg	Aldehyde				
Interferences				Comments						
Other aldehydes and ketones will react with the 2,4-DNPH but can be chromatographically resolved.				Keep media refrigerated before and after sampling. Ship cold overnight. <b>Preferred for STEL sampling</b> .						

Propional	dehyde						
CAS#	Analytical Method		Analytica	l Technique	Sampling Media		
123-38-6	NIOSH 2016		HPLC		SGT, DNPH (SKC 226-119)		
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code	
0.1-1.	5	1-1	5	0.059 µg	0.030 µg	Aldehyde	
Interferences				Comments			
Other aldehydes and ketones will react with the 2,4-DNPH but can be chromatographically resolved.				Keep media refrigerated before and after sampling. Ship cold overnight. <b>Preferred for STEL sampling</b> .			

Propionic	Acid						
CAS#	Analytic	Analytical Method A		l Technique	Sampling Media		
79-09-4	09-4 NIOSH 2011		l	IC	PTFE3-SGT** (SKC 225-17A, SKC 226-10-03)		
Sampling	Ratet	Sampling \	olumett/	LOQ	LOD	Compatibility Code	
0.05-0	).5	15-1	00	2.3 µg	1.2 µg	Acid2	
I	nterferenc	es			Comments		
			Do not s	ample with ir	norganic acids.		

Propoxyethanol(2-) (Ethylene glycol monopropyl ether)							
CAS#	AS # Analytical Method A		Analytica	l Technique	Sampling Media		
2807-30-9	NIOSH 1403		GC-FID		CT (SK	C 226-01, -09)	
Sampling Rate† Sampling Vol		olumett/	LOQ	LOD	Compatibility Code		
0.01-0.	.05	1-1	0	1.1 µg	0.55 μg	5%MeOH/MC	
ļ	nterferenc	es			Comments		

Propoxyet	hanol(2	-) (Ethylen	e glycol	monoprop	yl ether)		
CAS#	•		Analytica	l Technique	Sampling Media		
2807-30-9			GC	-FID	OVM (3M 3500)		
Sampling	Ratet	Sampling V	olumett	LOQ	LOD	Compatibility Code	
29.4		15-4	80	1.7 µg	0.85 µg	MC CS <sub>2</sub>	
li li	nterferenc	es			Comments		

Propyl Bro	mide						
CAS#	CAS # Analytical Method A		Analytica	l Technique	Sampling Media		
106-94-5	OSHA PV2061		GC-FID		CT (SKC 226-01, -09)		
Sampling	Ratet	Sampling V	olumett/	LOQ	LOD	Compatibility Code	
0.1		12	2	1.3 µg	0.65 μg	1%DMF/CS <sub>2</sub>	
Interferences				Comments			

Propyl Bro	mide						
CAS#	CAS # Analytical Method A		Analytica	l Technique	Sampling Media		
106-94-5	5 3M Method		GC-FID		OVM (3M 3500)		
Sampling Rate† Sampling Vo		olumett/	LOQ	LOD	Compatibility Code		
31.7	,	15-4	80	2.0 µg	1.0 µg	CS <sub>2</sub>	
I	nterferenc	es			Comments		

Propyl(n-)	Acetate	<b>:</b>					
CAS#	,		Analytica	Technique	Sampling Media		
109-60-4			GC	-FID	CT (SKC 226-01, -09)		
Sampling	Ratet	Sampling V	olumett	LOQ	LOD	<b>Compatibility Code</b>	
0.05-0	).2	1-10	)	0.78 µg	0.39 μg	CS <sub>2</sub>	
I	nterferenc	es			Comments		
				ed for STEL sa e of 0.2 lpm fo	<b>mpling</b> . Use a r STEL.		

Propyl(n-)	Acetate	<b>;</b>					
CAS#	,		Analytica	l Technique	Sampling Media		
109-60-4			GC	:-FID	OVM (3M 3500)		
Sampling	Ratet	Sampling V	olumett/	LOQ	LOD	Compatibility Code	
30.1	30.1 15-480		80	1.2 µg	0.60 μg	CS <sub>2</sub>	
I	nterferenc	es			Comments		

Propyl(n-)	Alcohol						
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media		
71-23-8	<b>71-23-8</b> NIOSH 1401		GC	-FID	CT (SK	C 226-01, -09)	
Sampling	Ratet	Sampling V	olumett	LOQ	LOD	Compatibility Code	
0.01-0	0.01-0.2 1-10		)	0.83 µg	0.42 μg	1%IPA/CS <sub>2</sub>	
I	nterferenc	es			Comments		
			Store ar	nd ship cold o	vernight.		

Propyl(n-)	Alcohol						
CAS#			Analytica	Technique	Sampling Media  OVM (3M 3500)		
71-23-8			GC	-FID			
Sampling	Ratet	Sampling V	olumett	LOQ	LOD	Compatibility Code	
39.7	39.7 15-420		20	1.2 µg	1.2 µg 0.60 µg		
I	nterferenc	es			Comments		
			Store ar	nd ship cold o	vernight.		

CAS # Analytical Method		eal Method	Analytical Technique		Sampling Media		
		Allalytica	recinique				
107-98-2	NIOSH 1403		GC	-FID	CT (SKC 226-01, -09)		
Sampling	Ratet	Sampling \	/olumett	LOQ	LOD	Compatibility Code	
0.01-0	.05	1-1	0	1.3 µg	0.65 μg	5%MeOH/MC	
ı	nterferenc	es			Comments		

CAS # Analytical Method A 107-98-2 3M Method		Analytica	l Technique	Sampling Media		
		GC	GC-FID		OVM (3M 3500)	
Sampling Rate† Sampling Vo		olumett/	LOQ	LOD	Compatibility Code	
32.4 15-48		80	2.0 µg 1.0 µg		MC CS <sub>2</sub>	
I	nterferenc	es			Comments	

Propylene Glycol Monomethyl Ether Acetate (PGMEA)								
CAS#	Analytical Method A		Analytical Technique		Samı	oling Media		
108-65-6	NIOS	NIOSH 1450		-FID	CT (SK	C 226-01, -09)		
Sampling	Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code		
0.01-0	).2	1-1	0	1.1 µg	0.55 μg	CS <sub>2</sub>		
ı	Interferences			Comments				

Propylene Glycol Monomethyl Ether Acetate (PGMEA)								
CAS#	Analytical Method		Analytical Technique		Sampling Media			
108-65-6	3M	3M Method		-FID	OVM (3M 3500)			
Sampling	Sampling Rate† Sampling Vol		olumett/	LOQ	LOD	Compatibility Code		
25.2	2	15-4	80	1.7 µg	0.85 μg	CS <sub>2</sub>		
I	nterferenc	es		Comments				

Propylene Glycol (1,2-Propanediol)								
CAS#	Analytical Method A		Analytica	l Technique	Sam	oling Media		
57-55-6	NIOSH 5523		GC-FID		0VS 7	(SKC 226-57)		
Sampling Rate† Sampling Vo		olumett LOQ		LOD	Compatibility Code			
0.5-2	2	5-6	0	6.2 µg	3.1 µg	MeOH		
I	nterferenc	es		Comments				

Propylene	Propylene Oxide (1,2-Epoxypropane)									
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media					
75-56-9	ASTM	ASTM D5578-04		-FID	ORBO 78 (SUPELCO 20355)					
Sampling	Sampling Ratet Sampling Vol			LOQ	LOD	Compatibility Code				
0.05-0	.15	1-2	4	0.51 μg 0.25 μg ACN/TOL		ACN/TOL				
I	Interferences				Comments					
				Sample separately from $\mathrm{CS}_2$ compatible solvents. Store and ship cold overnight.						

Propylene	Propylene Oxide (1,2-Epoxypropane)									
CAS#	Analytic	Analytical Method Ar		l Technique		Samp	oling Media			
75-56-9	3M I	3M Method		GC-FID		OVM (3M 3520)				
Sampling	Sampling Rate† Sampling Vol		olumett	LOQ		LOD	Compatibility Code			
37.7	7.7 15-480		80	0.76 μg		0.38 µg				
ı	nterferenc	es		Comments						
		from the samplin	e back sectior g. Sample se	n ar par	front section of nd cap immedia ately from CS <sub>2</sub> c cold overnight.	tely after				

Pyrene (see PNA scan)									
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media				
129-00-0	OS	OSHA 58		PLC	GFF (SKC 225-7)				
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code			
2		960	)	0.60 μg 0.30 μg PNA		PNAs			
lı	Interferences				Comments				
Asphalt fumes will interfere.				After sampling, cap and wrap in aluminum foil. Ship and store cold.					

Pyrene (see PNA scan)									
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media				
129-00-0	NIOS	SH 5506	HPLC		PTFE2/XAD-2 (PALL P5PJ037, SKC 226-30-04)				
Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code				
2		200-10	000	0.60 µg	0.30 μg	PNAs			
li	nterferenc	es		Comments					
Asphalt fumes will interfere.				After sampling, separate filter from sorbent tube. Cap and wrap individually in aluminum foil. Ship and store cold.					

Pyrethrum	1						
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media		
8003-34-7	NIOS	SH 5008	HPLC		GFF	(SKC 225-7)	
Sampling	Sampling Rate† Sampling Vol		/olumett	LOQ	LOD	Compatibility Code	
1-4		20-4	.00	0.13 µg	0.065 µg		
I	nterferenc	es		Comments			

Pyridine							
CAS#	Analytical Method A		Analytica	l Technique	Sam	pling Media	
110-86-1	NIOS	NIOSH 1613		:-FID	CT (SK	C 226-01, -09)	
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code		
0.05-1	.0	18-15	50	0.23 μg	0.12 μg	MC	
I	nterferenc	es		Comments			
Sample separately from CS <sub>2</sub> compatible solvents.							

Resin Acids									
CAS#	Analytic	cal Method	Analytica	l Technique	Sampling Media				
8050-09-7	LM	-LC-30	H	PLC	G	FF, IOM			
Sampling	Sampling Rate† Sampling Vo		olumett/	LOQ	LOD	Compatibility Code			
2		200 (min	imum)	0.091 µg	0.045 μg				
li	nterferenc	es		Comments					
			0.001mg Acids in 200-L w 400-L w	g/cu m (I), DSE Iclude Abietic Vill give you 46' Vill give you 23	as total resin acid EN;RSEN adopted Acid and Dehydroa % (0.00046 mg/cu % (0.00023 mg/cu % (0.00010 mg/cu	in 2020. Resin abietic Acid. Im) of TLV. Im) of TLV.			

Resorcino	I						
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media		
108-46-3	OSHA	PV2053	GC-FID		0VS 7	(SKC 226-57)	
Sampling Rate† Sampling Vo		/olumett	LOQ	LOD	Compatibility Code		
1		20-4	00	5.0 μg	2.5 µg	MeOH	
ı	nterferenc	es		Comments			

Rhodium a	Rhodium as Rh									
CAS#	Analytical Method A		Analytica	l Technique	Samı	oling Media				
7440-16-6	OSHA ID-125G		ļ	СР		CE or PVC or SKC 225-5-37-P)				
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code				
1-4		500-10	000	0 0.50 μg 0.25 μg M		Metals				
li	nterferenc	es		Comments						
Spectral interferences are the primary interferences encountered in ICP-AES analysis.			internal in your s	As part of the Lab's QC protocol, yttrium is used as internal standard in metal analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples.						

Scan for A	can for Aldehydes										
CAS#	Analyti	Analytical Method A		l Technique	Sampling Media						
	NIOSH 2016		Н	PLC							
Sampling	Sampling Rate† Sampling Vo		/olumett	LOQ	LOD	Compatibility Code					
	Interferences			Comments							
See List of Scans for individual aldehydes. Ship and store cold											

can for Aliphatic Amines										
CAS#	Analytic	Analytical Method A		Analytical Technique		Sampling Media				
	NIOSH 2010		GC	GC-FID		SGT (SKC 226-10)				
Sampling Rate† Sampling Volu		olumett/	LOQ		LOD	Compatibility Code				
0.01	-1	5-3	0				Amine1			
1	nterferenc	es		Comments						
			also be	Ethylamine, diethylamine and triethylamine can also be analyzed using this method. Please call Lab for other types of amines.						

Scan for A	can for Anesthetic Gases										
CAS#	Analytic	Analytical Method A		Analytical Technique		Sampling Media					
	OSHA 103		GC	GC-FID		Anasorb 747 (SKC 226-81A)					
Sampling Rate† Sampling Volu			olumett/	LOQ		LOD	<b>Compatibility Code</b>				
0.05	5	12	-								
I	Interferenc	es		Comments							
			See indi	Analyzes enflurane, halothane and isoflurane. See individual anesthetic gases. Please call lab for additional anesthetic gases.							

Scan for A	can for Aromatic Amines									
CAS#	Analytical Method		Analytical	Technique	Sampling Media					
	NIOSH 2002		GC	-FID	SGT (	SKC 226-10)				
Sampling	Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code				
0.02-0	0.5	5-30	0			Amine3				
I	Interferences			Comments						
				Analyze for aniline, methyl aniline and o-toluidine. Please call Lab for other types of amines.						

Scan for I	can for Inorganic Acids									
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media					
	NIOSH 7903			IC	MCE2, SGT** (SKC 225-19, SKC 226-10-03)					
Sampling	Sampling Rate† Sampling Vo		olumett/	LOQ	LOD	Compatibility Code				
0.2-0	.5	50-1	00							
ı	nterferenc	es		Comments						
See List of Scans for individual inorganic acids/anions.						c acids/anions.				

CAS#	Analytical Method A		Analytica	Technique	Samı	oling Media		
	OSHA 42		Н	PLC	GFF, 1-2PP			
Sampling Rate† Sampling Vol			/olumett	LOQ	LOD	Compatibility Code		
	Interferenc	es		Comments				
			Sample for 6 mc	Keep media refrigerated before and after sampling. Sample open-faced. Ship cold overnight. Filter is stable for 6 months if kept cold. See List of Scans at the back of the guide for list of individual isocyanate.				

Scan for C	can for Organic Solvents									
CAS#	Analytic	Analytical Method		l Technique	Sampling Media					
	LM-G	LM-GCMS-13		:-FID :-MS						
Sampling	Sampling Rate† Sampling Vo		/olumett	LOQ	LOD	Compatibility Code				
ı	nterferenc	es		Comments						
	See List of Scans for individual organic solvents.									

Scan for F	PNAs (N	OSH 5506	5)					
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media			
	NIOSH 5506		HI	PLC	PTFE2/XAD-2 (SKC PALL P5PJ037, SKC 226-30-04)			
Sampling	Sampling Rate† Sampling Vol			LOQ	LOD	Compatibility Code		
2		200-1	000					
	Interferenc	es		Comments				
Asphalt fumes will interfere.			wrap ind	After sampling, separate filter from sorbent tube. Cap and wrap individually in aluminum foil. Ship and store cold. Price is for the analysis of filter and tube together.				

Scan for I	Scan for PNAs (OSHA 58)									
CAS#	Analytic	Analytical Method A		l Technique	Sampling Media					
	OSHA 58		HI	PLC	GFF (SKC 225-7)					
Sampling Rate† Sampling Vol		olumett/	LOQ	LOD	Compatibility Code					
2		960	0							
	Interferenc	es		Comments						
				After sampling, cap and wrap in aluminum foil. Ship and store cold.						

Selenium a	Selenium and Compounds as Se									
CAS#	Analytical Method A		Analytica	l Technique	Samı	oling Media				
7782-49-2	NIOSH 7301 NIOSH 7303 OSHA ID-125G		ļ	СР	MCE or PVC (SKC 225-5 or SKC 225-5-37-P)					
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code				
1-4		120-1	000	00 1.0 μg 0.50 μg Me		Metals				
li	nterferenc	es		Comments						
Spectral interferences are the primary interferences encountered in ICP-AES analysis.			internal in your	As part of the Lab's QC protocol, yttrium is used as internal standard in metal analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples.						

Selenium and Compounds as Se									
CAS#	Analytic	cal Method	Analytica	l Technique	Sampling Media				
7782-49-2		SH 7301 SH 7303	ICF	P-MS	MCE or PVC (SKC 225-5 or SKC 225-5-37-P)				
Sampling Rate† Sampling Vol			/olumett	LOQ	LOD	<b>Compatibility Code</b>			
1-4		75-2	40	0.75 µg	0.38 μg	Metals			
I	nterferenc	es		Comments					
			and lute analysis form if y	tium are used s. Please indic /ttrium, rhodi	C protocol, yttriun l as internal standa ate in your samplo um, and/or lutetiun collected your sa	ards in ICP-MS e submission m are present			

Sevoflurane (Sevofrane)									
CAS#	Analytical Method A		Analytica	l Technique	Sam	pling Media			
28523-86-6	OSHA 106		GC	-FID	CT (SK	C 226-01, -09)			
Sampling	Sampling Rate† Sampling Vol		olumett	LOQ	LOD	<b>Compatibility Code</b>			
0.05		3		2.9 µg	1.5 µg	CS <sub>2</sub>			
li	nterferenc	es		Comments					
Store and ship cold overnight.									

Sevoflurane (Sevofrane)									
CAS#	Analytic	Analytical Method A		l Technique	Samı	oling Media			
28523-86-6	28523-86-6 3M Method			-FID	OVM	(3M 3500)			
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code				
27.3		15-48	80	4.4 µg	2.2 μg	CS <sub>2</sub>			
Interferences Comments									
	Store and ship cold overnight.								

Silica Cristobalite									
CAS#	Analytic	cal Method	Analytica	l Technique		Samp	oling Media		
14464-46-1	NIOS	SH 7500	X	RD	PV	C (SK	(C 225-5-37-P)		
Sampling	Sampling Rate† Sampling Vol		/olumett	LOQ	LOD		Compatibility Code		
see comn	comments 600-120		200	7.5 µg	5.0 μς	g	Silica		
I	nterferenc	es		Comments					
Mica, potash, graphite and a will interfere. required for in	aluminosili Bulk samp	icates le is	cyclone at 2.5 lp require optimur (0.013 n	s at 1.7 lpm; 3 om and for BG much smaller n dust loading ng/cu m) of TI	-piece casse -4L at 2.2 lpr sample volu of 2 mg on f V and 900-L	tte for m. Dus mes ( filter. ( for 33	for MSA (Dorr-Oliver) r BMRC (SKC) cyclones sty atmospheres <600 L) to obtain 600-L will give you 52% 3% (0.0083 mg/cu m) of the new OSHA PEL.		

Silica Quartz									
CAS#	Analytic	cal Method	Analytica	l Technique	Samı	oling Media			
14808-60-7	NIOS	SH 7500	X	RD	PVC (Sk	(C 225-5-37-P)			
Sampling	Sampling Rate† Sampling Vol		/olumett	LOQ	LOD	Compatibility Code			
see comn	nents	600-1	200	7.5 µg	5.0 µg	Silica			
lı	nterferenc	es		Comments					
Mica, potash, feldspars, zircon, graphite and aluminosilicates will interfere. Bulk sample is required for interference check.			cyclone at 2.5 lp much si dust loa mg/cu r	s at 1.7 lpm; 3- om and for BGI- maller sample ading of 2 mg o n) of the TLV a	piece cassette fo 4L at 2.2 lpm. Du volumes (<600 L) n filter. Sample 6 nd 900-L for 33%	for MSA (Dorr-Oliver) r BMRC (SKC) cyclones sty atmospheres require to obtain optimum 00-L for 52% (0.013 (0.0083 mg/cu m) of f the new OSHA PEL.			

Silver Metal and Soluble Compounds as Ag								
CAS#	Analytic	cal Method	Analytica	l Technique	Samı	oling Media		
7440-22-4	NIOS	NIOSH 7300		СР	MCE or PVC (SKC 225-5 or SKC 225-5-37-P)			
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code		
1-4		250-10	000	0 0.50 μg 0.25 μg Metals1		Metals1		
lı	nterferenc	es		Comments				
Spectral interferences are the primary interferences encountered in ICP-AES analysis.			internal in your	As part of the Lab's QC protocol, yttrium is used as internal standard in metal analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples.				

Soapstone	e						
CAS#	Analytical Method A		Analytica	l Technique	Samı	oling Media	
	NIOSH 0500		GI	RAV	Pre-weighed P	VC (SKC 225-5-37-P)	
Sampling	Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code	
1-15	5	34-72	00	10 µg	5.0 µg		
	nterferenc	es		Comments			
All other dusts will interfere.				For personal sampling use a flow rate of 1-2 lpm, for area sampling up to 15 lpm.			

Soapstone	9						
CAS#	Analytic	cal Method	Analytical	Technique	Sam	pling Media	
	NIOS	SH 0600	GF	RAV	PVC (S	KC 225-5-37-P)	
Sampling	Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code	
1.7		67-8	16	50 μg	25 µg		
	nterferenc	es		Comments			
All other respirable dusts will interfere.			Oliver) c	Use pre-weighed PVC 2-piece cassette for MSA (Dorr-Oliver) cyclones at 1.7 lpm and 3-piece cassette for BMRC (British Medical Research Council-SKC) cyclones at 2.5 lpm and for BGI-4L at 2.2 lpm.			

Sodium							
CAS#	Analytic	Analytical Method A		l Technique	Samı	oling Media	
7440-23-5	NIOSH 7301 NIOSH 7303 OSHA ID-125G		ICP		MCE or PVC (SKC 225-5 or SKC 225-5-37-P)		
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code		
1-4		60-10	00	7.5 µg	3.8 µg	Metals	
li	nterferenc	es		Comments			
Spectral inter primary interf in ICP-AES an	erences e		internal in your	As part of the Lab's QC protocol, yttrium is used as internal standard in metal analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples.			

Sodium Hy	/droxide	<b>!</b>						
CAS#	Analytic	cal Method	Analytica	l Technique	Samı	pling Media		
1310-73-2	NIOSH 7301 NIOSH 7303 OSHA ID-125G		ICP		MCE or PVC (SKC 225-5 or SKC 225-5-37-P)			
Sampling Rate† Sampling Vol			lumett	LOQ	LOD	Compatibility Code		
1-4		60-100	00	13 µg	6.5 µg	Metals		
I	nterferenc	es		Comments				
Spectral inter primary interf in ICP-AES an	erences ei		Ipm for is used indicate	All forms of sodium are quantified. Use a flow rate of 2 lpm for STEL. As part of the Lab's QC protocol, yttrium is used as internal standard in metal analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples.				

Starch							
CAS#	Analytical Method A		Analytica	l Technique	Samp	oling Media	
9005-25-8	NIOSH 0500		GI	RAV	Pre-weighed P	VC (SKC 225-5-37-P)	
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code		
1-15		20-72	00	) 50 μg 10 μg			
li	nterferenc	es		Comments			
All other dusts will interfere.				For personal sampling use a flow rate of 1-2 LPM, for area sampling up to 15 LPM.			

Stoddard Solvent									
CAS#	6 # Analytical Method A		Analytica	l Technique	Sampling Media				
8052-41-3	NIOSH 1550		GC	:-FID	CT (SK	C 226-01, -09)			
Sampling	Sampling Rate† Sampling Vol			LOQ	LOD	Compatibility Code			
0.01-0	.2	1.3-2	20	2.3 µg	1.1 µg	CS <sub>2</sub>			
li	nterferenc	es		Comments					
				Please send bulk sample. Ship bulk sample separately from air samples.					

Stoddard S	Solvent						
CAS#	Analytical Method A		Analytica	l Technique	Samı	oling Media	
8052-41-3	8052-41-3 3M Method		GC	:-FID	OVM	(3M 3500)	
Sampling Rate† Sampling Vol		olumett/	LOQ	LOD	Compatibility Code		
24.3	}	15-4	80	3.4 µg 1.7 µg		CS <sub>2</sub>	
I	nterferenc	es		Comments			
-				Please send bulk sample. Ship bulk sample separately from air samples.			

Strontium							
CAS#	Analytic	cal Method	Analytica	l Technique	Samı	oling Media	
7440-24-6	4-6 NIOSH 7301 NIOSH 7303		ļ	СР	MCE or PVC (SKC 225-5 or SKC 225-5-37-P)		
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code	
1-4		620-10	000	0 0.052 μg 0.026 μg Metals		Metals	
li	nterferenc	es		Comments			
Spectral interferences are the primary interferences encountered in ICP-AES analysis.			internal in your	As part of the Lab's QC protocol, yttrium is used as internal standard in metal analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples.			

Strontium Chromate as Cr								
CAS#	Analytic	cal Method	Analytica	l Technique	Sampling Media			
7789-06-2		SH 7301 SH 7303	[(	СР	MCE or PVC (SKC 225-5 or SKC 225-5-37-P)			
Sampling	Sampling Rate† Sampling Volu		olumett	LOQ	LOD	Compatibility Code		
1-4	1-4 620-100		000	0.031 µg	0.016 µg	Metals		
lı	nterferenc	es		Comments				
Spectral interferences are the primary interferences encountered in ICP-AES analysis.			strontiu will inte is used indicate	Samples are analyzed as strontium and calculated as strontium chromate as Cr. Other forms of strontium will interfere. As part of the Lab's QC protocol, yttrium is used as internal standard in metal analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples.				

Styrene (\	inyl ber	nzene)					
CAS#	Analytic	cal Method	Analytica	Technique		Samp	oling Media
100-42-5	<b>42-5</b> NIOSH 1501		GC	-FID		CT (SK	C 226-01, -09)
Sampling Rate† Sampling Vol		olumett/	LOQ		LOD	Compatibility Code	
0.02-	0.02-1 1-10		0	0.43 μg		0.22 μg	CS <sub>2</sub>
ı	nterferenc	es		Comments			
Under condition volumes may be and ship cold ov STEL = 20 ppm,					ced by	y as much as 119 NIC, TWA	50%. Store = 10ppm,

Styrene (V	inyl ber	nzene)					
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media		
100-42-5	3M I	Method	GC-FID		OVM (3M 3500) SKC 575-006		
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code	
	28.9 15-480 13.55 15-240			0.65 μg	0.33 μg	CS <sub>2</sub> Tol	
li I	nterferenc	es		Comments			
				Store and ship cold overnight. 2019 NIC, TWA = 10ppm, STEL = 20 ppm, OTO, A3 , BEI adopted in 2020.			

Sulfur Diox	kide						
CAS#	Analytic	Analytical Method A		l Technique	Sar	npling Media	
7446-09-5	OSH	OSHA ID-200		IC	IABC	C (SKC 226-80)	
Sampling Rate† Sampling Volu		/olumett	LOQ	LOD	Compatibility Code		
0.1	0.1 10-50		50	3.1 µg	1.6 µg		
li	nterferenc	es		Comments			
Particulate salts of sulfate, sulfur trioxide and sulfuric acid may give positive interferences for sulfur dioxide.							

Sulfuric Acid									
CAS#	Analytic	cal Method	Analytica	l Technique	Sam	pling Media			
7664-93-9	OSH	A ID-113		IC	PPI Thoraci	ic-MCE (225-3861)			
Sampling	Sampling Rate† Sampling Volu		olumett	LOQ	LOD	<b>Compatibility Code</b>			
2.0	2.0 90-230		30	4.6 µg	2.3 µg	Acid1			
I	nterferenc	es		Comments					
Particulate salts of sulfate will give a positive interference.			mass. U cyclone	The TLV for sulfuric acid is as thoracic particulate mass. Use 37-mm MCE 3 piece cassette for BGI GK2.69 cyclone at 1.6 lpm or request thoracic PPI pre-loaded with 0.8um MCE filter. Media charge applies.					

Sulfuric Acid									
CAS#	Analytical Method A		Analytica	l Technique	Sam	pling Media			
7664-93-9	NIOS	SH 7903		IC	MCE2,	SKC 226-10-03			
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code				
0.2-0.	.5	50-15	50	4.6 µg 2.3 µg					
li	Interferences			Comments					
Particulate salts of sulfate will give a positive interference.				If using 226-10-03 in a very humid environment, use two sorbent tubes in series.					

Sulfuric A	cid						
CAS#	Analytical Method A		Analytica	l Technique	Samı	oling Media	
7664-93-9	NIOS	SH 7908		IC	SKC	225-9033	
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code	
1-5		50-5	00	4.6 µg	2.3 μg		
li	nterferenc	es		Comments			
Particulate salts of sulfate or phosphate will give positive interference.			Ship and	Ship and store cold. Specialty filter. Media charge applies.			

Synthetic Vitreous Fibers									
CAS#	Analytic	cal Method Analytic		l Technique	Sampling Media		oling Media		
	NIOS	SH 7400	Р	CM		MCE, 25 mm	(ZEFON Z008BA)		
Sampling	Sampling Rate† Sampling Vol		olumett	LOQ		LOD	Compatibility Code		
0.5-1	0.5-16 50-720		20	0.050 fiber/fld 0.01 fib/fld					
- In	nterferenc	es		Comments					
Chain-like particles may appear fibrous and high levels of non-fibrous dust particles may obscure fibers.			loading When s	on the filter. Dehipping your sa	o not ample	overload filte es, do not pac	otain optimum fiber er. Sample open faced. ck with untreated m electrostatic effect.		

Talc							
CAS#	Analytic	cal Method	Analytica	l Technique	Sam	pling Media	
14807-96-6	NIOS	SH 0600	GI	RAV	PVC (Sk	(C 225-5-37-P)	
Sampling	Sampling Rate† Sampling Volu		olumett/	LOQ	LOD	<b>Compatibility Code</b>	
1.7	.7 100-81		316	50 μg	10 µg		
li	nterferenc	es		Comments			
All other respirable dusts will interfere.			Oliver) of BMRC (l at 2.5 lp cu m as	Use pre-weighed PVC 2-piece cassette for MSA (Dorr-Oliver) cyclones at 1.7 lpm and 3-piece cassette for BMRC (British Medical Research Council-SKC) cyclones at 2.5 lpm and for BGI-4L at 2.2 lpm. TWA of 2 mg/cu m as respirable fraction is for particulate matter containing no asbestos and <1% crystalline silica.			

Tantalum and Tantalum Oxide Dust as Ta									
CAS#	Analytical Method A		Analytica	l Technique	Samp	oling Media			
7440-25-7	NIOS	SH 0500	GRAV		Pre-weighed P	VC (SKC 225-5-37-P)			
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code			
1-4		100-10	000	50 μg	25 µg				
Į.	nterferenc	es		Comments					
All other dust	s will inter	fere.							

Tellurium and Compounds as Te									
CAS#	Analyti	Analytical Method A		l Technique	Samp	oling Media			
13494-80-9	NIOSH 7301 NIOSH 7303 OSHA ID-125G		ICP		MCE or PVC (SKC 225-5 or SKC 225-5-37-P)				
Sampling Rate† Sampling Vo			olumett	LOQ	LOD	<b>Compatibility Code</b>			
1-4		160-10	00	0.54 μg	0.27 μg	Metals			
lı	nterferenc	es		Comments					
Spectral interferences are the primary interferences encountered in ICP-AES analysis.			yttrium Please i	Excludes hydrogen telluride. As part of the Lab's QC protocol, yttrium is used as internal standard in metal analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples.					

Tetrachloroethylene (Perchloroethylene)									
CAS#	Analytical Method A		Analytica	l Technique	Samı	oling Media			
127-18-4	NIOS	NIOSH 1003		-FID	CT (SK	C 226-01, -09)			
Sampling	Sampling Rate† Sampling Vol			LOQ	LOD	Compatibility Code			
0.01-0	).2	1-40	0	1.8 µg	0.90 µg	CS <sub>2</sub>			
	nterferenc	es		Comments					

Tetrachlor	Tetrachloroethylene (Perchloroethylene)									
CAS#	Analytical Method A		Analytical Technique		Sampling Media					
127-18-4	3M I	3M Method		GC-FID		(3M 3500)				
Sampling	Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code				
28.3	}	15-48	80	2.7 µg	1.4 µg	CS <sub>2</sub>				
	Interferences			Comments						

Tetrahydro	Tetrahydrofuran [THF]									
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media					
109-99-9	NIOS	NIOSH 1609		-FID	CT (SKC 226-01, -09)					
Sampling	Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code				
0.01-0	.2	1-9	)	0.83 µg	0.42 μg	CS <sub>2</sub>				
	nterferenc	es		Comments						
				Preferred for STEL sampling. Sample at a flow rate of 0.2 lpm. High humidity may greatly decrease breakthrough volume.						

CAS#	Analytical Method		Analytica	l Technique	Sampling Media		
109-99-9	3M I	3M Method		-FID	OVM (3M 3500)		
Sampling Rate† Sampling V		/olumett	LOQ	LOD	Compatibility Code		
37.2		15-4	.80	1.2 µg	0.62 μg	CS <sub>2</sub>	
Interferences				Comments			

Thallium a	Thallium and Compounds, as TI							
CAS#	Analytic	cal Method	Analytica	l Technique	Sampling Media			
7440-28-0	NIOS	SH 7301 SH 7303 A ID-125G	<b>]</b> (	СР	PVC, IOM MCE, IOM			
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code		
1-4	1-4 500-100		000	1.0 µg	0.50 μg	Metals		
	nterferenc	es		Comments				
Spectral interferences are the primary interferences encountered in ICP-AES analysis.			internal sample where y before i	As part of the Lab's QC protocol, yttrium is used as internal standard in metal analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples. Contact Lab 1 week before intended use. The availability of IOM samplers is limited, rental charge for IOM samplers applies.				

Thallium a	nd Com	pounds, a	s TI				
CAS#	Analytic	cal Method	Analytica	l Technique	Sampling Media		
7440-28-0		SH 7301 SH 7303	ICF	P-MS	PVC, IOM MCE, IOM		
Sampling	Sampling Rate† Sampling Volume			LOQ	LOD	Compatibility Code	
1-4	750-100		000	1.3 µg	0.65 μg	Metals	
I	Interferences			Comments			
			lutetium Please i rhodium you coll before i	n are used as in indicate in you n, and/or luteti ected your san ntended use. <sup>1</sup>		in ICP-MS analysis. sion form if yttrium, the area where ib one week IOM samplers	

Thiram							
CAS#	Analytical Method A		Analytica	Analytical Technique		Sampling Media	
137-26-8	NIOS	SH 5005	HI	HPLC		PTFE1 (SKC 225-1705)	
Sampling	Sampling Rate† Sampling Volu		olumett	umett LOQ		LOD	Compatibility Code
1-4		20-4	00	0.79 µg	0.	.40 µg	
ı	nterferenc		Comments				
			Return to Lab immediately after sampling.				

Tin and Co	Tin and Compounds as Sn									
CAS#	Analytic	nalytical Method A		l Technique	Sampling Media					
7440-31-5	NIOSH 7301 NIOSH 7303 OSHA ID-125G		I	СР	MCE or PVC (SKC 225-5 or SKC 225-5-37-P)					
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code				
1-4		25-10	00	0.52 μg	0.26 μg	Metals				
lı	nterferenc	es		Comments						
Spectral interferences are the primary interferences encountered in ICP-AES analysis.			tin hydri protoco Please i	Includes metal, metal oxide, inorganic tin compounds (except tin hydride) and organic compounds. As part of the Lab's QC protocol, yttrium is used as internal standard in metal analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples.						

Tin and Co	mpoun	ds as Sn					
CAS#	Analytical Method A		Analytica	l Technique	Sam	pling Media	
7440-31-5	NIOSH 7301 NIOSH 7303		ICP-MS			CE or PVC or SKC 225-5-37-P)	
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	<b>Compatibility Code</b>	
1-4	40-240		10	0.025 µg	0.013 μg	Metals	
I	nterferenc	es		Comments			
and for			and lute analysis form if y	As part of the Lab's QC protocol, yttrium, rhodium, and lutetium are used as internal standards in ICP-MS analysis. Please indicate in your sample submission form if yttrium, rhodium, and/or lutetium are present in the area where you collected your samples			

CAS#	Analytical Method A		Analytical	Technique	Sampling Media		
7440-31-5	NIOS	NIOSH 5504		FAA	GFF/XAD-2 (SKC 225-7) (SKC 226-30)		
Sampling Rate† Sampling Vol		olumett/	LOQ	LOD	Compatibility Code		
1-1.5	1	50-5	00	0.050 μg	0.025 μg	Metals	
li	nterferenc	es		Comments			
All forms of tin organic compounds are quantified.				Ship assembled sampler in dry ice overnight. This method is not covered under our AIHA-LAP, LLC scope of accreditation.			

Titanium							
CAS#	Analytic	Analytical Method Ar		l Technique	Sampling Media		
7440-32-6	NIOSH 7301 NIOSH 7303 OSHA ID-125G		<b> </b>	СР	MCE or PVC (SKC 225-5 or SKC 225-5-37-P)		
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code		
1-4		25-10	00	0.25 µg	0.13 µg	Metals	
Į.	nterferenc	es		Comments			
Spectral interferences are the primary interferences encountered in ICP-AES analysis.			internal in your	As part of the Lab's QC protocol, yttrium is used as internal standard in metal analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples.			

Titanium							
CAS#	Analytic	Analytical Method A		l Technique	Samp	oling Media	
7440-32-6	NIOS	NIOSH 7301		P-MS	MCE or PVC (SKC 225-5 or SKC 225-5-37-P)		
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code	
1-4	1-4 25-500		00	0.15 µg	0.075 μg	Metals	
Į:	nterferenc	es		Comments			
a a f			and lute analysis form if y	As part of the Lab's QC protocol, yttrium, rhodium, and lutetium are used as internal standards in ICP-MS analysis. Please indicate in your sample submission form if yttrium, rhodium, and/or lutetium are present in the area where you collected your samples.			

Titanium D	oioxide						
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media		
13463-67-7	OSHA ID-125G		ļ	СР	MCE or PVC (SKC 225-5 or SKC 225-5-37-P)		
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	<b>Compatibility Code</b>	
1-4		25-10	00	0.42 μg	0.21 μg	Metals	
lr	nterferenc	es		Comments			
Spectral interferences are the primary interferences encountered in ICP-AES analysis.			protoco Please i	All forms of titanium are quantified. As part of the Lab's QC protocol, yttrium is used as internal standard in metal analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples.			

Toluene							
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media		
108-88-3	NIOS	NIOSH 1501		-FID	CT (SKC 226-01, -09)		
Sampling Ratet Sampling Vol			olumett/	LOQ	LOD	Compatibility Code	
0.01-0	).2	1-1	0	0.44 μg	0.22 μg	CS <sub>2</sub>	
ı	nterferenc	es		Comments			
			volumes	Under conditions of high humidity, the breakthrough volumes may be reduced by as much as 50%." 2020 NIC, TWA = 20ppm, OTO;A4;BEi.			

Toluene							
CAS#	Analytical Method A		Analytical Technique		Sampling Media		
108-88-3	3M I	3M Method		-FID	OVM (3M 3500)		
Sampling	Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code	
31.4		15-48	80 0.67 μg		0.33 μg	CS <sub>2</sub>	
	nterferenc	es		Comments			
2020 NIC, TWA = 20ppm, OTO;A4;BEi.							

Toluene-2,4-diioscyanate (2,4-TDI)								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media			
584-84-9	OSHA 42		Н	PLC	GF	F, 1-2PP		
Sampling Rate† Sampling Vol			/olumett	LOQ	LOD	Compatibility Code		
1		15-2	40	0.010 μg 0.0050 μg Isocyanat		Isocyanate		
I	nterferenc	es		Comments				
Potential interferences include anhydrides, amines, alcohols and carboxylic acids.			Sample	Keep media refrigerated before and after sampling. Sample open-faced. Ship cold overnight. Filter is stable for 6 months if kept cold.				

Toluene-2	,4- diiso	cyanate (2	2,4-TDI)				
CAS#	Analytic	Analytical Method A		l Technique	Sampling Media		
584-84-9	OS	OSHA 42		PLC	GFF Wipes		
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code		
N/A N/A		Ą	0.010 µg	0.0050 µg	Isocyanate		
ı	nterferenc	es		Comments			
Potential interferences include anhydrides, amines, alcohols and carboxylic acids.			after sa vial con week ah	Follow "Isocyanate Wipe Sampling Procedure". Immediately after sampling, glass fiber filters must be placed in a vial containing derivatizing solution. Order media one week ahead of survey. Media are prepared when ordered. Derivatizing solution has a shelf life of 1 month if kept cold.			

Toluene-2	,6-diiso	cyanate (2	,6-TDI)				
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media		
91-08-7	OS	OSHA 42		PLC	GFF, 1-2PP		
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code	
1		15-2	40	0.010 µg	0.0050 μg	Isocyanate	
ı	nterferenc	es		Comments			
anhydrides, amines, alcohols			Sample	Keep media refrigerated before and after sampling. Sample open-faced. Ship cold overnight. Filter is stable for 6 months if kept cold.			

Toluene-2,6- diisocyanate (2,6-TDI)								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media			
91-08-7	OS	OSHA 42		PLC	GFF Wipes			
Sampling Rate† Sampling Volu			olumett	LOQ	LOD	Compatibility Code		
N/A	N/A N/A			0.010 µg	0.0050 μg	Isocyanate		
I	nterferenc	es		Comments				
Potential interferences include anhydrides, amines, alcohols and carboxylic acids.			after sa containi ahead, r	Follow "Isocyanate Wipe Sampling Procedure". Immediately after sampling, glass fiber filters must be placed in a vial containing derivatizing solution. Order media one week ahead, media is prepared when ordered. Derivatizing solution has a shelf life of 1 month if kept cold.				

Toluidine(o-)								
CAS#	Analytical Method		<b>Analytical Technique</b>		Sampling Media			
95-53-4	<b>95-53-4</b> NIOSH 2002		GC-FID		SGT (SKC 226-10)			
Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code			
0.02-0	).5	5-3	0	1.4 µg	0.70 μg	Amine3		
	Interferences			Comments				
Nitrogen compounds that co-elute will interfere.								

Tributyl Phosphate								
CAS#	Analytical Method		Analytical	Technique	Sampling Media			
126-73-8	NIOS	SH 5034	GC	-FID	MCE (SKC 225-5)			
Sampling	Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code		
1-3		2-10	00	0.41 µg	0.20 μg	Ethyl Ether		
I	Interferences			Comments				
Sample separately from CS <sub>2</sub> compatible solvents.						e solvents.		

Trichloro(1,1,2-)-1,2,2-trifluoroethane								
CAS#	Analytical Method		Analytical Technique		Sampling Media			
76-13-1	NIOS	SH 1020	GC-FID		CT (SK	C 226-01, -09)		
Sampling	Sampling Rate† Sampling Vo		olumett/	LOQ	LOD	Compatibility Code		
0.01-0	.05	1-1	0	2.9 µg	1.5 µg	CS <sub>2</sub>		
I	Interferences			Comments				

CAS#	pro(1,1,2-)-1,2,2-trifluoro  # Analytical Method A		Analytica	l Technique	Compling Modio		
CAS # Analytical Method		Allalytica	recinique	Sampling Media			
76-13-1	3M I	Method	GC-FID		OVM (3M 3520)		
Sampling Rate† Sampling V		/olumett	LOQ	LOD	Compatibility Code		
29.1		15-4	80 4.4 μg		2.2 μg	CS <sub>2</sub>	
Interferences				Comments			

Trichlorobenzene(1,2,4-)								
CAS#	Analytical Method		Analytical Technique		Sampling Media			
120-82-1	NIOS	SH 1003	GC-FID		CT (SK	C 226-01, -09)		
Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code			
0.01-0	0.2	1-10	0.29 μg		0.15 μg	CS <sub>2</sub>		
I	nterferenc	es		Comments				
Preferred for STEL sampling. Sample at a flow rate of 0.2 lpm.						t a flow rate of 0.2 lpm.		

Trichlorobenzene(1,2,4-)								
CAS#	Analytical Method		Analytica	l Technique	Sampling Media			
120-82-1	3M	3M Method		:-FID	OVM (3M 3500)			
Sampling Ratet Sampling Vol		olumett	LOQ	LOD	Compatibility Code			
24.8	3	15-4	80	0.44 µg	0.22 μg	CS <sub>2</sub>		
I	nterferenc	es		Comments				
				Use 3M 3520. Separate the front section of the monitor from the back section and cap immediately after sampling.				

Trichloroethane(1,1,1-) (Methyl Chloroform)								
CAS#	Analytical Method A		Analytical Technique		Sampling Media			
71-55-6	NIOS	NIOSH 1003		:-FID	CT (SK	C 226-01, -09)		
Sampling	Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code		
0.01-0	.2	1-10		2.2 μg	1.1 µg	CS <sub>2</sub>		
I	nterferenc	es		Comments				
	Preferred for STEL sampling. Sample at a flow rate of 0.2 lpm.							

Trichloroethane(1,1,1-) (Methyl Chloroform)								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media			
71-55-6	3M I	Method	GC-FID		OVM (3M 3500)			
Sampling Rate† Sampling Vo		olumett/	LOQ	LOD	Compatibility Code			
30.9		15-4	80 3.3 μg		1.7 µg	CS <sub>2</sub>		
Interferences				Comments				

Trichloroethane(1,1,2-)								
CAS#	Analytic	Analytical Method A		l Technique	Sampling Media			
79-00-5	NIOSH 1003		GC-FID		CT (SK	C 226-01, -09)		
Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code			
0.01-0	).2	2-6	0	1.6 µg	0.80 µg	CS <sub>2</sub>		
Interferences				Comments				

Trichloroethane(1,1,2-)								
CAS#	Analytical Method		Analytical Technique		Sampling Media			
79-00-5	3M I	3M Method		-FID	OVM (3M 3500)			
Sampling	Sampling Rate† Sampling Vo		olumett	LOQ	LOD	<b>Compatibility Code</b>		
29.7	,	15-4	80 2.9 μ		1.4 µg	CS <sub>2</sub>		
I	nterferenc	es		Comments				

Trichloroethylene								
CAS#	Analytical Method A		Analytical Technique		Sampling Media			
79-01-6	NIOS	NIOSH 1022		C-FID	CT (SK	(C 226-01, -09)		
Sampling	Sampling Rate† Sampling Vol		olumett	LOQ	LOD	<b>Compatibility Code</b>		
0.01-0	).2	1-10	0	2.0 µg	1.0 µg	CS <sub>2</sub>		
ı	Interferences			Comments				

Trichloroethylene								
CAS#	Analytical Method A		Analytica	l Technique	Samı	oling Media		
79-01-6	3M Method		GC-FID		OVM	(3M 3500)		
Sampling	Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code		
31.1		15-4	80 3.0 μg		1.5 µg	CS <sub>2</sub>		
ı	Interferences			Comments				

riethanol	amine							
CAS#	Analytic	Analytical Method A		l Technique	Sam	pling Media		
102-71-6	NIOS	SH 2007		IC	ORBO 53 or SGT** (SUPELCO 20265) (SKC 226-10			
Sampling	Sampling Rate† Sampling Vo		olumett/	LOQ	LOD	Compatibility Code		
0.01-0	.5	15-2	25	7.5 µg	3.8 µg	EA		
Interferences				Comments				
			Store in	Store in freezer after sampling. Ship and store cold.				

Triethylamine								
CAS#	Analytic	Analytical Method A		Technique	Sampling Media			
121-44-8	NIOS	SH 2010	GC-FID		SGT (	SKC 226-10)		
Sampling Rate† Sampling Vol		/olumett	LOQ	LOD	Compatibility Code			
0.01-	1	5-3	0	0.29 μg 0.15 μg Amin		Amine1		
I	nterferenc	es		Comments				
Nitrogen compounds that co-elute will interfere.								

Triethylamine								
CAS#	Analytical Method		Analytical Technique		Sampling Media			
121-44-8	OSHA PV2060		GC-FID		XAD-7, A	cid (SKC 226-98)		
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code			
0.1		10		4.0 μg 2.0 μg				
I	nterferenc	es		Comments				
Nitrogen compounds that co-elute will interfere.								

Triethylenetetramine								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media			
112-24-3	OS	OSHA 60		PLC	XAD-2, NITC (SKC 226-30-18)			
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	<b>Compatibility Code</b>		
0.1		10		0.24 µg	0.12 μg	Amine2		
	Interferences			Comments				
Nitrogen compounds that co-elute will interfere.								

Triglycidyl Isocyanurate(1,3,5)									
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media				
2451-62-9	Ciba-Ge	eigy C321A	GC	-MS	PTFE	1 or PTFE5			
Sampling	Sampling Rate† Sampling Vol		olumett/	LOQ	LOD	Compatibility Code			
1		100-2	240	4.0 µg	2.0 µg	Acetone			
I	nterferenc	es		Comments					
Samples can be collected using either 25mm or 37mm filters.									

Trimellitic	Trimellitic Anhydride								
CAS#	Analytical Method		Analytica	l Technique	Sampling Media				
552-30-7	<b>552-30-7</b> OSHA 98		HI	PLC	GFI	F, Vamine			
Sampling	Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code			
2		480	0	0.050 μg					
I	nterferenc	es		Comments					
				Order media one week ahead of survey. Media are prepared when ordered. Sample open-faced.					

Trimethylbenzene(1,2,4-)								
CAS#	S # Analytical Method		Analytical Technique		Sampling Media			
95-63-6	<b>95-63-6</b> NIOSH 1501		GC-FID		CT (SKC 226-01, -09)			
Sampling	Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code		
0.01-0	).2	1-10	0	0.44 µg	0.22 μg	CS <sub>2</sub>		
I	Interferences			Comments				

Trimethylbenzene(1,2,4-)								
CAS#	Analytical Method		Analytical Technique		Sampling Media			
95-63-6	3M	3M Method		:-FID	OVM (3M 3500)			
Sampling	Sampling Rate† Sampling Vo		/olumett	LOQ	LOD	Compatibility Code		
24.4	24.4 15-480		80	0.66 µg	0.33 µg	CS <sub>2</sub>		
I	Interferences			Comments				

Trimethylbenzene(1,3,5-)								
CAS#	Analytical Method		Analytical Technique		Sampling Media			
108-67-8	108-67-8 NIOSH 1501		GC-FID		CT (SKC 226-01, -09)			
Sampling	Sampling Rate† Sampling Vo		olumett/	LOQ	LOD	Compatibility Code		
0.01-0	.2	1-10	0	0.45 μg	0.23 μg	CS <sub>2</sub>		
I	Interferences			Comments				

Trimethylbenzene(1,3,5-)								
CAS#	Analytical Method		Analytical Technique		Sampling Media			
108-67-8	3M	3M Method		:-FID	OVM (3M 3500)			
Sampling Rate† Sampling Vo		/olumett	LOQ	LOD	Compatibility Code			
26.3	3	15-4	80	0.68 µg	0.34 μg	CS <sub>2</sub>		
Interferences				Comments				

Tungsten a	Tungsten and Compounds as W (in the absence of Cobalt)								
CAS#	Analytic	Analytical Method A		l Technique	Sampling Media				
7440-33-7	OSH	A ID-213	I	СР	MCE (SKC 225-5)				
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code			
2	2 30-480		30	0.25 µg	0.12 μg				
I	nterferenc	es		Comments					
primary interf	Spectral interferences are the primary interferences encountered in ICP-AES analysis.			Recommended air volume for STEL is 30L. As part of the Lab's QC protocol, yttrium is used as internal standard in metal analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples.					

Tungsten,	Tungsten, as W Soluble Compounds								
CAS#	Analytic	cal Method	Analytica	I Technique	Sampling Media				
7440-33-7	OSH	A ID-213	I	СР	MCE or PVC (SKC 225-5 or SKC 225-5-37-P)				
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	<b>Compatibility Code</b>			
2	2 30-480		30	0.25 μg	0.12 μg				
I	nterferenc	es		Comments					
Spectral interferences are the primary interferences encountered in ICP-AES analysis.			of the L standar sample	Recommended air volume for STEL is 30L. As part of the Lab's QC protocol, yttrium is used as internal standard in metal analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples.					

CAS#	Analytical Method		Analytical Technique		Sampling Media		
	NIOSH 1500		GC-FID		CT (SKC 226-01, -09)		
Sampling Rate† Sampling V		olumett/	LOQ	LOD	Compatibility Code		
0.01-0.2 1-1		0	0.40 μg	0.20 μg	CS <sub>2</sub>		
Interferences				Comments			
			formald Tubes a the DNP	ehyde are colle nd DNPH tubes 'H tubes may of	oling where TVOC cted, do not sam in tandem. The s f-gas acetonitrile rence in the TVO	ple with Charcoal sorbent in e which can	

CAS#	Analytic	Analytical Method		Technique	Sampling Media		
	3M Method		GC	-FID	OVM (3M 3500)		
Sampling Rate† Sampling V		/olumett	LOQ	LOD	Compatibility Code		
32.0	)	15-4	80 0.60 μg		0.30 µg	CS <sub>2</sub>	
Interferences				Comments			

Valeraldeh	Valeraldehyde								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media				
110-62-3	NIOSH 2016		Н	PLC	AT Mon	itor (N571AT)			
Sampling Rate† Sampling Vol			olumett/	LOQ	LOD	Compatibility Code			
7.21	7.21 15-480		80	0.043 μg 0.022 μg Aldehyd		Aldehyde			
I	nterferenc	es		Comments					
Other aldehydes and ketones will react with the 2,4-DNPH but can be chromatographically resolved.				Keep media refrigerated before and after sampling. Ship cold overnight.					

Valeraldeh	Valeraldehyde								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media				
110-62-3	NIOSH 2016		Н	PLC	Sep-Pak (WAT047205)				
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code			
0.1-1.	0.1-1.5 10-100		00	0.22 μg	0.11 µg	Aldehyde			
I	nterferenc	es		Comments					
Other aldehydes and ketones will react with the 2,4-DNPH but can be chromatographically resolved.			samplin	Keep media refrigerated before and after sampling. Ship cold overnight. Preferred for STEL sampling. Sample at 1.5 lpm for STEL.					

Valeraldeh	Valeraldehyde								
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media				
110-62-3	NIOSH 2016		Н	PLC	SGT, DNPH (SKC 226-119)				
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code			
0.1-1.	5	1-1	5	0.087 μg	0.044 μg	Aldehyde			
I	nterferenc	es		Comments					
Other aldehydes and ketones will react with the 2,4-DNPH but can be chromatographically resolved.			samplin	Keep media refrigerated before and after sampling. Ship cold overnight. Preferred for STEL sampling. Sample at 1.5 lpm for STEL.					

Vanadium	Pentoxi	de as V					
CAS#	Analytic	Analytical Method A		l Technique	Sampling Media		
7440-62-2		NIOSH 7301 NIOSH 7303		P-MS	MCE or PVC (SKC 225-5 or SKC 225-5-37-P)		
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code	
1-4	1-4 40-480		80	0.20 µg	0.10 µg	Metals	
ı	nterferenc	es		Comments			
			and lute analysis form if y	As part of the Lab's QC protocol, yttrium, rhodium, and lutetium are used as internal standards in ICP-MS analysis. Please indicate in your sample submission form if yttrium, rhodium, and/or lutetium are present in the area where you collected your samples.			

Vanadium	Pentoxi	de as V					
CAS#	Analytical Method A		Analytica	l Technique	Samı	oling Media	
7440-62-2	NIOS	NIOSH 7301 NIOSH 7303 OSHA ID-125G		СР	MCE or PVC (SKC 225-5 or SKC 225-5-37-P)		
Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code		
1-4		120-10	000	0.10 µg	0.050 µg	Metals	
lı	nterferenc	es		Comments			
Spectral interferences are the primary interferences encountered in ICP-AES analysis.			protoco Please i	All forms of vanadium are quantified. As part of the Lab's QC protocol, yttrium is used as internal standard in metal analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples.			

Vanadium							
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media		
7440-62-2	OSH	4 ID-121	1	СР	Ghost w	ripe ( 225-2414)	
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code	
NA		NA		0.22 µg	0.11 µg	Metals 2	
I	nterferenc	es		Comments			
Spectral inter primary interf in the ICP-AES	erences er	ncountered	internal your sar	As part of the Lab's QC protocol, yttrium is used as internal standard in ICP analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples.			

Vegetable	Oil Mist	t					
CAS#	Analytical Method A		Analytica	l Technique	Sampling Media		
	NIOSH 0500		GI	RAV	Pre-weighed P	VC (SKC 225-5-37-P)	
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code	
1-15		20-72	00	50 µg	10 µg		
lı	nterferenc	es		Comments			
All other dusts will interfere.				For personal sampling use a flow rate of 1-2 lpm, for area sampling up to 15 lpm. TLV withdrawn.			

Vinyl Acet	ate						
CAS#	Analytic	cal Method	Analytica	l Technique	Sampling Media		
108-05-4	<b>05-4</b> NIOSH 1453		GC	:-FID	CT(SK	226-01,-09)	
Sampling	Ratet	Sampling V	olumett	LOQ	LOD	Compatibility Code	
0.1-0.2 0.75-24			24	1.2 µg	0.60 μg	5%MeOH/MC CS <sub>2</sub>	
II.	nterferenc	es			Comments		
			Preferre	ed for STEL sa	mpling. Sample at	a flow rate of 0.2 lpm.	

Vinyl Acet	ate						
CAS # Analytical Method A			Analytica	l Technique	Sampling Media		
108-05-4	108-05-4 3M Method		GC	-FID	OVM	(3M 3500)	
Sampling Rate† Sampling Vo		/olumett	LOQ	LOD	Compatibility Code		
35.8	}	15-4	80	1.8 µg	0.90 µg	CS <sub>2</sub>	
I	nterferenc	es			Comments		

Vinyl Chlo	ride (Ch	loroethyle	ne)					
CAS#	Analytic	Analytical Method A		Analytical Technique		Sampling Media		
75-01-4	NIOS	SH 1007	GC-FI	GC-FID GC-MS		CT-CT	(SKC 226-01)	
Sampling	Sampling Rate† Sampling Volu			LOQ		LOD	Compatibility Code	
0.05	j	0.7-	5	0.29 µg		0.14 μg	CS <sub>2</sub>	
I	nterferenc	es			Comments			
and ca sample				tubes before after 2 or mo	shi re w	tubes in series ipping. Possible veeks of storage core cold immed	loss of e at room	

Vinyl Chlo	ride (Ch	loroethyle	ne)				
CAS#	Analytic	Analytical Method A		l Technique	Sampling Media		
75-01-4	3M	Method	GC-FIE	GC-MS	OVM (3M 3520)		
Sampling Rate† Sampling Vol			/olumett	LOQ	LOD	Compatibility Code	
40.8	3	15-4	80	0.43 µg	0.22 μg	CS <sub>2</sub>	
	nterferenc	es		Comments			
					ate front and back fter sampling. Sh	section of the ip cold immediately.	

Vinyl(1-)-2	-pyrroli	dinone				
CAS#	Analytic	cal Method	Analytical	Technique	Sam	pling Media
88-12-0	NIOS	SH 1302	GC	-FID	CT (SKC 226-01, -09)	
Sampling	Ratet	Sampling V	olumett	LOQ	LOD	Compatibility Code
0.05-0	).2	3-12	.5	0.39 µg	0.20 μg	5%MeOH/MC
ı	nterferenc	es			Comments	
			Sample	separately fro	om CS <sub>2</sub> compatible	e solvents.

Vinyl(1-)-2	2-pyrroli	dinone					
CAS#	AS # Analytical Method		Analytica	l Technique	Sampling Media		
88-12-0	3M I	3M Method		-FID	OVM	(3M 3500)	
Sampling	Ratet	Sampling V	olumett	LOQ	LOD	Compatibility Code	
26.7	,	120-4	180	0.59 μg 0.30 μg MC		MC	
I	nterferenc	es		Comments			
					om CS <sub>2</sub> compatible s quantification at	e solvents. Sampling 40% of the TLV.	

Vinylidene	Vinylidene Chloride (1,1-Dichloroethylene)								
CAS#	CAS # Analytical Method A			l Technique	Sampling Media				
75-35-4	3M I	Method	GC	C-FID	OVM	(3M 3500)			
Sampling	Ratet	Sampling V	olumett	LOQ	LOD	Compatibility Code			
35.1		15-48	80	0.60 µg		CS <sub>2</sub>			
	Interferences Comments								
	Store and ship cold.								

VM & P Na	phtha					
CAS#	Analytical Method A		Analytica	l Technique	Sam	oling Media
8032-32-4	NIOS	NIOSH 1550		-FID	CT (SK	C 226-01, -09)
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code
0.01-0	.2	1.3-2	28	1.8 µg	0.90 µg	CS <sub>2</sub>
lı	nterferenc	es			Comments	
				send bulk san ely from air sa	nple. Ship bulk sar amples.	nple

CAS#	Analytical Method		Analytica	l Technique	Samı	oling Media		
8032-32-4	3M	Method	GC-FID		OVM (3M 3500)		OVM (3M 3500)	
Sampling	Ratet	Sampling V	olumett/	LOQ	LOD	Compatibility Code		
33.2		15-4	80	2.7 μg 1.4 μg		CS <sub>2</sub>		
li	nterferenc	es			Comments			
				send bulk sam ely from air sa	ple. Ship bulk san	nple		

Welding Fu	Welding Fume Scan								
CAS#	Analytical Method A		Analytica	l Technique	Samı	pling Media			
	NIOSH 7301 NIOSH 7303		[1	СР		CE or PVC or SKC 225-5-37-P)			
Sampling	Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code			
1-4		400-10	00						
li	nterferenc	es		Comments					
Spectral interferences are the primary interferences encountered in ICP-AES analysis.		protoco Please i	See List of Scans for individual metals. As part of the Lab's QC protocol, yttrium is used as internal standard in metal analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples.						

Welding Fu	Welding Fumes, Total									
CAS#	Analytical Method A		Analytica	l Technique	Samı	pling Media				
	NIOSH 0500		GI	RAV	Pre-weighed P	VC (SKC 225-5-37-P)				
Sampling	Sampling Rate† Sampling Vol			LOQ	LOD	Compatibility Code				
1-15		40-72	.00	D 50 μg 10 μg						
I	nterferenc	es		Comments						
All other dusts will interfere.				For personal sampling use a flow rate of 1-2 lpm, for area sampling up to 15 lpm.						

<b>Wood Dus</b>	t						
CAS#	Analytical Method A		Analytica	l Technique	Samp	oling Media	
	NIOSH 0500		GI	RAV	Pre-weighed P	VC (SKC 225-5-37-P)	
Sampling	Sampling Rate† Sampling Vol		olumett	LOQ	LOD	<b>Compatibility Code</b>	
1-15	5	40-72	00	50 μg	10 µg		
	nterferenc	es		Comments			
All other dusts will interfere.				For personal sampling use a flow rate of 1-2 lpm, for area sampling up to 15 lpm.			

<b>Wood Dus</b>	t						
CAS#	Analytical Method A		Analytica	l Technique	Sam	pling Media	
	HSE MDHS-14		GI	RAV	F	PVC, IOM	
Sampling Rate† Sampling Vol			olumett/	LOQ	LOQ	Compatibility Code	
2		96	0	100 μg 10 μg			
I	nterferenc	es		Comments			
All other dusts will interfere.			week be	Use IOM sampler with pre-weighed PVC. Contact Lab one week before intended use. The availability of IOM samplers is limited. Rental charge for the IOM samplers applies.			

Xylene (Di	Xylene (Dimethyl benzene)									
CAS#	Analytical Method		Analytica	l Technique	Samp	oling Media				
1330-20-7	0-20-7 NIOSH 1501		GC	:-FID	CT (SK	C 226-01, -09)				
Sampling	Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code				
0.01-0	.2	1-30	)	1.0 µg	0.50 μg	CS <sub>2</sub>				
li	nterferenc	es		Comments						
				Under conditions of high humidity, the breakthrough volumes may be reduced by as much as 50%.						

Xylene (Dimethyl benzene)								
CAS#	Analytical Method		Analytical Technique		Samı	oling Media		
1330-20-7	3M I	3M Method		-FID	OVM	(3M 3500)		
Sampling	Sampling Rate† Sampling Vo		olumett	LOQ	LOD	Compatibility Code		
27.3		15-48	80	1.5 µg	0.75 μg	CS <sub>2</sub>		
li	Interferences			Comments				

Yttrium an	Yttrium and compounds, as Y								
CAS#	Analytical Method		Analytica	l Technique	Samı	oling Media			
7440-65-5		NIOSH 7301 NIOSH 7303		СР		CE or PVC or SKC 225-5-37-P)			
Sampling	Sampling Rate† Sampling Vol		olumett	LOQ	LOD	Compatibility Code			
1-4		25-10	000	0.025 μg	0.013 µg	Metals			
lı	Interferences			Comments					
				Spectral interferences are the primary interferences encountered in ICP-AES analysis.					

Zinc							
CAS#	Analytical Method A		Analytica	l Technique	Samı	oling Media	
7440-66-6	NIOSH 7301 NIOSH 7303 OSHA ID-125G		ICP		MCE or PVC (SKC 225-5 or SKC 225-5-37-P)		
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code	
1-4		120-10	00	3.0 µg	1.5 µg	Metals	
lı	nterferenc	es		Comments			
Spectral interferences are the primary interferences encountered in ICP-AES analysis.			internal in your	As part of the Lab's QC protocol, yttrium is used as internal standard in metal analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples.			

Zinc							
CAS#	Analytic	Analytical Method A		l Technique		Samp	oling Media
7440-66-6		NIOSH 7301 NIOSH 7303		ICP-MS		MCE or PVC (SKC 225-5 or SKC 225-5-37-P)	
Sampling	Sampling Rate† Sampling Vol			LOQ		LOD	Compatibility Code
1-4		40-2	40	0.75 µд 0.38 µд		Metals	
I	nterferenc	es		Comments			
			and lute analysis form if y	tium are used a. Please indic attrium, rhodi	d as cate um,	rotocol, yttrium internal standa in your sample , and/or lutetiun llected your sar	ords in ICP-MS e submission n are present

Zinc							
CAS#	Analytic	cal Method	Analytica	l Technique		Samp	oling Media
7440-66-6	OSH	A ID-121	I	СР		Ghost wi	pe ( 225-2414)
Sampling Rate† Sampling Volu			olumett	LOQ		LOD	<b>Compatibility Code</b>
NA		NA		160 ug		80 ug	Metals 2
I	nterferenc	es		Comments			
Spectral interferences are the primary interferences encountered in the ICP-AES analysis.			internal your sar	standard in IO	CP a sion	rotocol, yttrium malysis. Please form if yttrium lected your san	indicate in is present

Zinc Chlor	ide Fum	ie					
CAS#	Analytic	cal Method	Analytica	l Technique	Samı	oling Media	
7646-85-7	NIOSH 7301 NIOSH 7303 OSHA ID-125G		I	СР	MCE or PVC (SKC 225-5 or SKC 225-5-37-P)		
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	Compatibility Code	
1-4		120-10	00	6.3 µg	3.1 µg	Metals	
li	nterferenc	es		Comments			
Spectral interferences are the primary interferences encountered in ICP-AES analysis.			part of t internal in your	Analysis is for water soluble zinc compounds. As part of the Lab's QC protocol, yttrium is used as internal standard in metal analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples.			

Zinc Oxide	<u> </u>						
CAS#	Analytical Method A		Analytica	I Technique	Sam	oling Media	
1314-13-2	NIOSH 7301 NIOSH 7303 OSHA ID-125G		ļ	СР	MCE or PVC (SKC 225-5 or SKC 225-5-37-P)		
Sampling Rate† Sampling Vol			olumett	LOQ	LOD	<b>Compatibility Code</b>	
1-4		120-10	00	0 3.7 μg 1.9 μg Metals		Metals	
I	nterferenc	es		Comments			
Spectral interferences are the primary interferences encountered in ICP-AES analysis.			Current protoco Please i	Samples are analyzed for zinc and calculated as zinc oxide. Current TLV is for respirable sampling. As part of the Lab's QC protocol, yttrium is used as internal standard in metal analysis. Please indicate in your sample submission form if yttrium is present in the area where you collected your samples.			

CAS#	Analytic	cal Method	Analytica	l Technique	Sam	pling Media	
1314-13-2		SH 7301 SH 7303	ICF	P-MS	MCE or PVC (SKC 225-5 or SKC 225-5-37-P)		
Sampling	Ratet	Sampling \	/olumett	LOQ	LOD	<b>Compatibility Code</b>	
1-4	1-4 40-240		240	0.93 µg	0.46 µg	Metals	
Interferences				Comments			
			Current protoco standar submiss	Samples are analyzed for zinc and calculated as zinc oxide. Current TLV is for respirable sampling. As part of the Lab's QC protocol, yttrium, rhodium, and lutetium are used as internal standards in ICP-MS analysis. Please indicate in your sample submission form if yttrium, rhodium, and/or lutetium are present in the area where you collected your samples.			

## List of Analytes by CAS #

50-00-0	Formaldehyde	75-35-4	Vinylidene chloride (1,1-Dichloroethylene)
50-21-5	Lactic acid	75-52-5	Nitromethane
50-32-8	Benzo[a]pyrene	75-56-9	
53-70-3	Dibenzo[ah]anthracene	75-56-9 75-65-0	Propylene oxide
54-11-5	(see PNA scan)	76-13-1	Butyl(tert-) alcohol
56-23-5	Nicotine  Carbon totrophlarida	70-13-1	Trichloro(1,1,2-)-1,2,2- trifluoroethane
56-55-3	Carbon tetrachloride  Benz[a]anthracene	76-22-2	Camphor
57-55-6	Propylene glycol (1,2-Propanediol)	77-73-6	Dicyclopentadiene
60-29-7		78-59-1	Isophorone
62-53-3	Ethyl ether Aniline	78-83-1	Isobutyl alcohol
63-25-2		78-92-2	Butyl(sec-) alcohol
64-17-5	Carbaryl (SEVIN)	78-93-3	Butanone(2-) (Methyl ethyl ketone)
64-18-6	Ethyl alcohol (Ethanol) Formic acid	78-94-4	Methyl vinyl ketone
64-19-7	Acetic acid	79-00-5	Trichloroethane(1,1,2-)
67-56-1	Methyl alcohol (Methanol)	79-01-6	Trichloroethylene
67-63-0	Isopropyl alcohol	79-06-1	Acrylamide
67-64-1	,	79-08-3	Bromoacetic acid
67-66-3	Acetone Chloroform	79-09-4	Propionic acid
68-12-2	Dimethylformamide	79-10-7	Acrylic Acid
71-23-8	Propyl(n-) alcohol	79-11-8	Chloroacetic acid
71-36-3	Butyl(n-) alcohol	79-20-9	Methyl acetate
71-43-2	Benzene	79-21-0	Peracetic Acid
71-45-2		79-24-3	Nitroethane
71-33-0	Trichloroethane(1,1,1-) (Methyl Chloroform)	79-43-6	Dichloroacetic acid
74-90-8	Hydrogen cyanide	80-05-7	Bisphenol A
75-01-4	Vinyl chloride	80-62-6	Methyl methacrylate
75-04-7	Ethyl amine	83-32-9	Acenaphthene
75-05-8	Acetonitrile	84-66-2	Diethyl phthalate
75-07-0	Acetaldehyde	84-74-2	Dibutyl phthalate
75-09-2	Methylene chloride	85-01-8	Phenanthrene
	(Dichloromethane)	85-44-9	Phthalic anhydride
75-12-7	Formamide	86-73-7	Fluorene
75-15-0	Carbon disulfide	88-12-0	Vinyl(1-)-2-pyrrolidinone
75-18-3	Dimethyl sulfide	91-08-7	Toluene-2,6-diisocyanate (2,6-TDI)
75-21-8	Ethylene oxide	91-20-3	Naphthalene
75-25-2	Bromoform	91-57-6	Methylnaphthalene(2-)
75-34-3	Dichloroethane(1,1-)	91-58-7	Chloro(2-)naphthalene

92-52-4	Biphenyl	107-06-2	Ethylene dichloride (1,2-Dichloroethane)
95-49-8	Chlorotoluene(o-)	107-07-3	Ethylene chlorohydrin
95-50-1	Dichlorobenzene(o-)	107-13-1	Acrylonitrile
95-53-4	Toluidine(o-)	107-15-3	Ethylenediamine
95-63-6	Trimethylbenzene(1,2,4-)	107-13-3	,
96-12-8	Dibromochloropropane	107-18-0	Allyl alcohol
96-22-0	Diethyl ketone	107-21-1	Ethylene glycol
96-33-3	Methyl acrylate	107-41-3	Hexylene glycol (2-Methyl- 2,4-pantanediol)
96-37-7	Methyl cyclopentane	107-87-9	Pentanone(2-) (Methyl
97-63-2	Ethyl methacrylate		propyl ketone)
98-00-0	Furfuryl alcohol	107-98-2	Propylene glycol monomethyl ether
98-01-1	Furfural	108-05-4	Vinyl acetate
98-82-8	Cumene	108-10-1	•
98-83-9	Methyl styrene(a-)	108-10-1	Methyl isobutyl ketone
98-86-2	Acetophenone		Isopropyl acetate
100-41-4	Ethyl benzene	108-24-7	Acetic anhydride
100-42-5	Styrene	108-45-2	Phenylene(1,3-) diamine
100-44-7	Benzyl chloride	108-46-3	Resorcinol
100-51-6	Benzyl alcohol	108-65-6	Propylene glycol monomethyl ether acetate
100-52-7	Benzaldehyde	108-67-8	Trimethylbenzene(1,3,5-)
100-61-8	Methyl aniline	108-83-8	Dimethyl(2,6-)-4-heptanone
101-14-4	Methylene(4,4'-)-bis(2 chloroaniline) (MOCA)	108-87-2	Methylcyclohexane
101-68-8	Methylene bisphenyl	108-88-3	Toluene
101-00-0	isocyanate (MDI)	108-90-7	Chlorobenzene
101-77-9	Methylene(4,4'-) dianiline (MDA)	108-91-8	Cyclohexylamine
102-71-6	Triethanolamine	108-93-0	Cyclohexanol
105-46-4	Butyl(sec-) acetate	108-94-1	Cyclohexanone
105-60-2	Caprolactam	108-95-2	Phenol
106-46-7	Dichlorobenzene(p-)	109-60-4	Propyl(n-) acetate
106-48-9	Chlorophenol(p-)	109-66-0	Pentane(n-)
106-89-8	Epichlorohydrin	109-86-4	Methoxyethanol(2-)
106-94-5	Bromopropane(1-)	100 00 7	(Methyl cellosolve)
106-95-6	Allyl bromide	109-89-7	Diethylamine
106-99-0	Butadiene(1,3-)	109-99-9	Tetrahydrofuran
107-02-8	Acrolein	110-12-3	Methyl isoamyl ketone
107-04-0	Bromo(1-)-2-chloroethane	110-19-0	Isobutyl acetate
107-05-1	Allyl chloride	110-43-0	Heptanone(2-)
		110-49-6	Methoxyethyl(2-) acetate (Methyl cellosolve acetate)

Hexane(n-)	141-32-3	Butyl acrylate
Valeraldehyde	141-43-5	Ethanolamine (2-Aminoethanol)
Ethoxyethanol(2-) (Cellosolve)	141-78-6	Ethyl acetate
Cyclohexane	141-79-7	Mesityl oxide
Piperazine	142-82-5	Heptane
Pyridine	142-96-1	Dibutyl ether
Morpholine	151-67-7	Halothane (Fluothane)
Ethoxyethyl(2-) acetate	191-24-2	Benzo[ghi]perylene
Glutaraldehyde	192-97-2	Benzo[e]pyrene
Diethylene triamine	193-39-5	Indeno[1,2,3-cd]pyrene
Diethanolamine	205-99-2	Benzo[b]fluoranthene
Butoxyethanol(2-) (Butyl cellosolve)	206-44-0	Fluoranthene
	207-08-9	Benzo[k]fluoranthene
	208-96-8	Acenaphthylene
	218-01-9	Chrysene
Butoxyethyl(2-) acetate	287-92-3	Cyclopentane
Triethylenetetramine	302-01-2	Hydrazine
Butoxyethoxy(2-(2-)) ethanol	335-67-1	Perfluorooctanoic acid
Dioctyl phthalate	431-03-8	Diacetyl
Anthracene	540-59-0	Dichloroethylene(1,2-)
Trichlorobenzene(1,2,4-)	540-84-1	Isooctane
Trimethylamine	540-88-5	Butyl(tert-) acetate
Hydroquinone	552-30-7	Trimellitic anhydride
Propionaldehyde	563-80-4	Methyl isopropyl ketone
Diacetone alcohol	584-84-9	Toluene-2,4-diioscyanate (2,4-TDI)
Pentanedione(2,4-)	624-92-0	Dimethyl disulfide
n-Butyraldehyde	628-63-7	Amyl acetate
Butyl(n-) acetate	631-64-1	Dibromoacetic acid
Dioxane(p-)	687-47-8	Ethyl lactate
Butoxyethoxy(2-(2-)) ethyl acetate	763-69-9	Ethyl 3-ethoxypropionate
Tributyl phosphate	822-06-0	Hexamethylene diisocyanate (HDI)
Methylacrylonitrile	872-50-4	Methyl(1-)-2-pyrrolidinone
Chloroprene(b-)		Bismuth telluride
Perchloroethylene		Calcium hydroxide
Dimethyl acetamide		Calcium oxide
Pyrene		Iron oxide
Thiram	1309-48-4	Magnesium oxide (fume)
Limonene(d-)		Potassium hydroxide
Ethyl acrylate		
	Ethoxyethanol(2-) (Cellosolve) Cyclohexane Piperazine Pyridine Morpholine Ethoxyethyl(2-) acetate Glutaraldehyde Diethylene triamine Diethanolamine Butoxyethanol(2-) (Butyl cellosolve) Methoxyethoxy(2-(2-)) ethanol Methoxyethyl(2-) acetate Triethylenetetramine Butoxyethoxy(2-(2-)) ethanol Dioctyl phthalate Anthracene Trichlorobenzene(1,2,4-) Trimethylamine Hydroquinone Propionaldehyde Diacetone alcohol Pentanedione(2,4-) n-Butyraldehyde Butyl(n-) acetate Dioxane(p-) Butoxyethoxy(2-(2-)) ethyl acetate Tributyl phosphate Methylacrylonitrile Chloroprene(b-) Perchloroethylene Dimethyl acetamide Pyrene Thiram Limonene(d-)	Valeraldehyde       141-43-5         Ethoxyethanol(2-) (Cellosolve)       141-78-6         Cyclohexane       141-79-7         Piperazine       142-82-5         Pyridine       142-96-1         Morpholine       151-67-7         Ethoxyethyl(2-) acetate       191-24-2         Glutaraldehyde       192-97-2         Diethylene triamine       193-39-5         Diethylene triamine       205-99-2         Butoxyethanol(2-)       (Butyl cellosolve)         (Butyl cellosolve)       207-08-9         Methoxyethoxy(2-(2-)) ethanol       208-96-8         Methoxyethyl(2-) acetate       287-92-3         Triethylenetetramine       302-01-2         Butoxyethoxy(2-(2-)) ethanol       335-67-1         Dioctyl phthalate       431-03-8         Anthracene       540-59-0         Trichlorobenzene(1,2,4-)       540-84-1         Trimethylamine       540-88-5         Hydroquinone       552-30-7         Propionaldehyde       563-80-4         Diacetone alcohol       584-84-9         Pentanedione(2,4-)       624-92-0         n-Butyraldehyde       628-63-7         Butoxyethoxy(2-(2-)) ethyl acetate       763-69-9         Tr

1310-73-2	Sodium hydroxide	7440-06-4	Platinum
1314-13-2	Zinc oxide	7440-16-6	Rhodium as Rh
1314-62-1	Vanadium pentoxide	7440-22-4	Silver
1317-65-3	Calcium carbonate	7440-23-5	Sodium
1319-77-3	Cresol, all isomers	7440-24-6	Strontium
1321-74-0	Divinyl benzene	7440-28-0	Thallium
1327-53-3	Arsenic Trioxide as As	7440-31-5	Tin
1330-20-7	Xylene	7440-32-6	Titanium
1332-21-4	Asbestos	7440-33-7	Tungsten and Compounds as
1332-58-7	Kaolin		W (in the absence of Cobalt)
1333-86-4	Carbon black	7440-36-0	Antimony
1344-28-1	Aluminum oxide	7440-38-2	Arsenic and inorganic compounds, as As
1344-95-2	Calcium silicates synthetic nonfibrous	7440-39-3	Barium and soluble compounds as Ba
1634-04-4	Methyl tert-butyl ether (MTBE)	7440-41-7	Beryllium and compounds as Be
1675-54-3	Diglycidyl Ether of Bisphenol A	7440-42-8	Boron, sodium salts
2426-08-6	Butyl(n-) glycidyl ether	7440-43-9	Cadmium
2451-62-9	Triglycidyl isocyanurate	7440-47-3	Chromium
2499-95-8	Hexyl acrylate	7440-48-4	Cobalt and inorganic compounds as Co
2807-30-9	Propoxyethanol(2-)		
2921-88-2	Chlorpyrifos (Dursban)	7440-50-8	Copper (Fume, Dusts and Mists) as Cu
4098-71-9	Isophorone diisocyanate (IPDI)	7440-56-4	Germanium
4994-16-5	Phenylcyclohexene(4-)	7440-57-5	Gold
5124-30-1	Methylene bis(4- cyclohexylisocyanate)	7440-62-2	Vanadium
7085-85-0	Ethyl 2-cyanoacrylate	7440-65-5	Yttrium and compounds, as Y
7429-90-5	Aluminum Metal and	7440-66-6	Zinc
7427 70 0	insoluble compounds	7440-67-7	Zirconium
7439-91-0	Lanthanum	7440-69-9	Bismuth
7439-92-1	Lead and inorganic	7440-70-2	Calcium
7439-93-1	compounds as Pb	7440-74-6	Indium
	Lithium	7440-09-5	Sulfur dioxide
7439-95-4 7439-96-5	Magnesium	7553-56-2	lodine
7439-90-3	Manganese, elemental and Inorganic compounds as Mn	7646-85-7	Zinc chloride fume
7439-97-6	Mercury as Hg (Elemental	7647-01-0	Hydrogen chloride
7400 00 7	and inorganic forms)	7664-38-2	Phosphoric acid
7439-98-7	Molybdenum	7664-39-3	Hydrogen fluoride or fluorides as F
7440-02-0	Nickel and inorganic compounds as Ni	7664-41-7	Ammonia
7440-05-3	Palladium	7664-93-9	Sulfuric acid

7697-37-2	Nitric Acid	10035-10-6	Hydrogen bromide
7722-84-1	Hydrogen peroxide	10049-04-4	Chlorine dioxide
7723-14-0	Phosphorus	10102-43-9	Nitric oxide
7726-95-6	Bromine	10102-44-0	Nitrogen dioxide
7758-97-6	Lead chromate as Cr	11097-69-1	Chlorodiphenyl (54% chlorine)
7778-18-9	Calcium sulfate	12001-26-2	Mica
7782-42-5	Graphite	12125-02-9	Ammonium chloride
7782-49-2	Selenium and compounds as Se	13463-67-7	Titanium dioxide
7782-50-5	Chlorine	13494-80-9	Tellurium
7782-65-2	Germanium tetrahydride	13765-19-0	Calcium chromate as Cr
7783-06-4	Hydrogen sulfide	13838-16-9	Enflurane (Ethrane)
7784-42-1	Arsine	14464-46-1	Silica cristobalite
7789-06-2	Strontium chromate as Cr	14807-96-6	Talc
7803-51-2	Phosphine	14808-60-7	Silica quartz
8002-74-2	Paraffin wax fume	22204-53-1	Naproxen sodium
8003-34-7	Pyrethrum	26675-46-7	Forane (Isoflurane)
8006-61-9	Gasoline	28182-81-2	Hexamethylene diisocyanate(1,6-)
8008-20-6	Kerosene	00500 06 6	Homopolymer (HDI Polymer)
8012-95-1	Mineral Oil	28523-86-6	Sevoflurane (Sevofrane)
8032-32-4	VM&P Naphtha	34590-94-8	Dipropylene glycol methyl ether
8050-09-7	Resin Acids	53469-21-9	Chlorodiphenyl (42% chlorine)
8052-41-3	Stoddard solvent	57041-67-5	Desflurane (Suprene)
8052-42-4	Asphalt fume	64742-95-6	Aromatic 100
9002-86-2	Polyvinyl chloride (PVC)	65996-93-2	Coal tar pitch volatiles
9005-25-8	Starch	65997-15-1	Portland cement
10024-97-2	Nitrous oxide	88917-22-0	Dipropylene glycol methyl ether acetate (DPGMEA)
10028-15-6	Ozone		Circi acetate (Di Givila)



The illustrations, instructions, and principles contained in the material are general in scope and, to the best of our knowledge, current at the time of publication. Our risk control services are advisory only. We assume no responsibility for: managing or controlling customer safety activities, implementing any recommended corrective measures, or identifying all potential hazards.

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