



TRAVELERS 

Travelers Industrial Hygiene Laboratory

AIR SAMPLING GUIDELINES
EFFECTIVE 12.7.22

REDUCE RISK | PREVENT LOSS | SAVE LIVES

Travelers Laboratory

Developing an ongoing strategy for assessing workplace exposures, determining appropriate personal protective equipment, and developing and validating appropriate controls can be an intimidating process. In an effort to simplify this process, the Travelers Lab has developed a variety of products and services to help make your exposure assessment projects as simple as possible.

For example, many clients have limited or no access to air sampling equipment. This can have a negative impact on their ability to evaluate employee workplace exposures. In addition, resources needed for purchasing, repairing, maintaining, and calibrating this equipment can be significant. Travelers PUMP LOAN program can help.

Travelers Pump Loan program provides air sampling pumps along with all the necessary accessories like chargers, a calibrator, connecting tubing, cyclones and tube holders – essentially everything you need for collecting valid samples – and it's free of charge for 10 days, as long as the samples that are collected are returned to Travelers for analysis. Equipment shipping is charged at prevailing rates.

We also provide an IH Helpline: 800.842.0355 (7:00 am to 5:00 pm Eastern Time). When you contact the Travelers Lab, you will be working with people specializing in the field of IH sampling and analysis, experienced in proper sampling parameters, the review of analytical results, and the use of IH media and equipment.

Primary Laboratory Contacts:

Marcel Baril
mbaril@travelers.com
860.687.7410
Assistant Vice President, Analytical Laboratory

Jennifer Fries
jfries@travelers.com
860.687.7434
IH Laboratory Director, Quality Assurance

Christine Lopol
clopol@travelers.com
860.687.7447
IH Laboratory Director, Production

Shari Wood
swood2@travelers.com
860.687.7416
Senior Operations Manager

Ship all submissions to:

**TRAVELERS RISK CONTROL LABORATORY
99 LAMBERTON RD.
WINDSOR, CT 06095-2127
Attention: Sample Submission**

For more information, please call 800.842.0355 or visit travelerslab.com.

Travelers Laboratory

Advantages

A number of valuable advantages are **automatically available** to you when you choose the Travelers Lab for your analytical needs.

Sampling Media

In most cases, **media is provided at no extra charge** (with the exception of passive badges).

Media shipment to our customers is provided free, except for overnight delivery. Media requiring cold shipment can not be delivered over a weekend. **To order media or equipment:**

- **Call the IH Helpline: 800.842.0355 (option 1):** (Monday –Friday, 7:00 a.m. to 5:00 p.m. Eastern Time)

OR

- Visit travelerslab.com and click on the link for the “Industrial Hygiene Lab Order Form”

Comprehensive Analytical Scan (CAS) Service

Our CAS service may identify the presence of unexpected volatile organic hydrocarbons or metals present in your sampling environment **in addition** to those that you have requested – **and what’s better? IT’S FREE!** This unique and valuable service provides you with as clear a picture of the exposure situation as possible.

Single Submission Discounts

A discount of 10% off the analytical fee is automatically applied when 15 or more samples are submitted at the same time for the same analyte(s) on the same type of media. (Analytes requested must be identical on all 15 samples.)

Rush Sample Analysis

Rush sample analysis is available for most analytes for an additional charge. The Lab must be contacted prior to submitting samples for rush analyses. See the “Policies” section for more information.

IH Training and Education

Our seminars and webinars include topics such as air sampling, exposure evaluation and noise measurement. Please visit travelerslab.com for more information about the current class schedule or call 800.842.0355.

For more information, please call 800.842.0355 or visit travelerslab.com.

Travelers Laboratory

Data Sheet Instructions

Samples must be accompanied by completed data sheets. Electronic forms are available on travelerslab.com (or by following this link [Electronic Data Sheet](#)) and paper forms are included with every media shipment and contain instructions for completion. The instructions below are for the electronic data sheet.

- **SEND REPORT TO:** Complete the top left section with your name, company name, address, phone number and email address
- **SEND INVOICE TO:** Fully complete if the invoice should be directed to someone other than yourself.
- **Survey Date:** Fill in the date that the samples on the page were collected. This date is critical for samples that must be analyzed within a specific time period (i.e. hexavalent chromium).
- **Location Sampled:** Fill in the location where the samples were collected.
- **Shift Duration:** Fill in the length of the shift in hours.
- **Sample/Filter #:** Identify each sample with a unique identifier. If you have obtained sampling media from Travelers, the Lab recommends that you use the identifiers that have been pre-assigned to the media.
 - ✓ Filters – Each filter is pre-labeled with a unique identifier.
 - ✓ Passive badges – Each are labeled by the manufacturer with a unique identifier.
 - ✓ Other media (sorbent tubes, vials, wipes, bulks, etc.) must be labeled with a unique identifier that is assigned by you. The identifier cannot be more than 12 characters in length.
- **Sample Description:** Enter a brief description to identify where the sample was collected. For example, a person's name can be used, an employee ID number, a description of the operation or a combination. For example: J. Smith – Welder or A. Jones – Mixer. (PLEASE PRINT – 25 CHARACTERS MAX)
- **Job Task:** Select the most appropriate Job Task from the drop-down list. Leave blank if an appropriate task is not on the list.
- **Media:** Select the type of media that was used to collect the sample, such as PVC Filter – pre-weighed, 226-01 Charcoal Tube or Assay 566 OVM. Media numbers are listed in the Travelers Air Sampling Guidelines and are provided on the shipping manifest.
- **Sampling Time:** Enter the time that the sampling was Started and Stopped using military format (24-hour clock). For example: 8:25 am should be entered as **08:25** and 4:35 pm should be entered as **16:35**. The form will calculate the Total Minutes Sampled for you.
- **Flow Rates (LPM):** Enter the **Pre** sampling flow rate as determined from the calibrator measured before collecting the sample and the **Post** sampling flow rate from the calibrator measured after collecting the sample in liters per minute (LPM). The sheet will automatically calculate the **Average Flow Rate** and the **Sample Volume Liters** (if the Sampling Time has been entered). Pre and Post sampling flow rates that do not agree within 5% will be flagged.
- **Analytes Requested:** Enter the specific contaminant(s) that are to be analyzed by the laboratory for each sample. Refer to Travelers Air Sampling Guidelines for analyte names and compatibility.

For Hexavalent Chromium samples – include the type of operation that was sampled (Painting, Welding, Plating, etc.). The OSHA method requires specific processing procedures and timeframes depending on the operation being sampled.
- **Submitted by:** Print your name
- **Date:** Enter the date the samples are being shipped to the laboratory
- **Special Instructions:** Add any special instructions (if needed). Potential interferences and other chemicals present in the sampling environment should be noted in this area.

Travelers Laboratory

Blank Samples

Most analytical methods and good industrial hygiene practices recommend that a minimum of one field blank or 10% of the total number of samples, whichever is greater, be submitted for each matrix sampled. The blank serves to indicate handling contamination, moisture retention, or matrix interferences that can affect the validity of the results.

Blank samples should be treated in the same manner as the samples, except that no air is drawn through the blank. For adsorbent tubes, the ends should be cracked off and the tubes immediately capped. Filter blanks need not be “opened to the environment,” but should accompany the samples during shipping and handling. Filter blanks should be from the same lot as the sample filter.

Wipe Sampling Procedure (Metals, Metal Salts and Hexavalent Chromium)

NOTE: Wipe, swipe and smear are synonyms describing a technique for assessing surface contamination.

Each wipe sampling kit includes: a plastic petri dish containing an appropriate filter, often times moistened with distilled deionized water, and a pair of disposable gloves.

Typical filter types include a moistened Whatman 540 filter for metal wipe sampling and a “dry” PVC filter for hexavalent chromium wipe sampling. Contact the lab for filter preferences for other types of wipe sampling.

Depending on the purpose of the sample, it may be useful to determine the surface loading of the analyte(s) which can be expressed in micrograms of analyte per area. For these samples, it would be necessary to record the total surface area that has been wiped. For example if you wiped a 10 X 10 centimeter square, the total surface area wiped would be 100 cm². Recording the area wiped would **not** be necessary for samples taken to simply show the presence or absence of the contaminant.

To protect yourself and to prevent cross contamination of samples, wear a new clean pair of disposable gloves when collecting each wipe sample.

Carefully remove the filter from a petri dish. Using firm pressure, start at the outside edge and progress toward the center of the area being sampled, wiping concentric squares of decreasing size until the entire area has been wiped. Fold the filter in half with the contaminated side inward and repeat this process one or two times.

Fold the wipe sample one final time, place it back into the original petri dish, label the petri dish with a unique sample identification and tightly re-seal the petri dish.

For more information, please call 800.842.0355 or visit travelerslab.com.

Travelers Laboratory Policies

Minimum Fee:

Minimum charge per submission is \$100.

Laboratory Turnaround:

Normal laboratory turnaround time for routine analyses is five (5) working days. Rush analysis is available for most analytes for an extra charge as follows:

RUSH three-day turnaround for a 50% surcharge

RUSH two-day turnaround for a 100% surcharge

RUSH 24-hour turnaround for a 200% surcharge (not available for some analyses)

Note: All rush sample analyses must be approved by the laboratory prior to sample submission.

Sampling Media:

Media not returned to the Travelers Lab for analysis will be billed. Passive media and DRS samplers will be billed when shipped and cannot be returned or refunded.

Blanks:

Blanks will be charged at the same rate as samples. Blanks for GC/MS scans are charged at \$50 each. Overloaded samples that are prepared for analysis will be charged at normal analysis rates. This includes samples that cannot be analyzed due to the overloading (e.g., samples for fiber count – PCM).

Wipe or Bulk Samples:

Analysis of wipe or bulk samples requires significant preparation time. An additional charge of \$25 per sample will be charged for wipe or bulk samples.

Bulk samples may be returned to the submitter for disposal.

Shipping:

Media shipment is provided free except for overnight delivery. Media requiring cold shipment cannot be delivered over a weekend (if a cooler is required a shipping charge applies).

Equipment shipping is charged at prevailing rates. An additional \$100 expedition fee is charged for equipment requests that are needed within four working days.

Loaned equipment should be returned to the Travelers Lab within 10 working days of receipt, unless other arrangements have been made. A rental fee may be incurred if samples are not submitted.

Sample Retention:

All samples not consumed during the analysis will be discarded unless otherwise requested by the customer.

Analytical Data:

Analytical data will be retained for 10 years.

Terms and conditions: The services offered herein are subject to the Terms and Conditions, which are included in this document. Acceptance of the services offered herein shall constitute acceptance of said Terms and Conditions.

To Order Media or Equipment:

Call 800.842.0355 (Monday –Friday, 7:00 a.m. to 5:00 p.m. Eastern Time)

OR

Visit travelerslab.com and click on the link for the “Industrial Hygiene Lab Order Form”

Return equipment and ship samples to:

TRAVELERS RISK CONTROL LABORATORY
99 LAMBERTON RD.
WINDSOR, CT 06095-2127

Travelers Laboratory

Scans

Check the Air Sampling Guide for sampling information for the following scans:

Acid Scan, Inorganic:

\$165.00

Hydrobromic acid	Nitric acid
Hydrochloric acid	Phosphoric acid
Sulfuric acid	

Aldehyde Scan:

\$255.00

Acetaldehyde	Crotonaldehyde
Benzaldehyde	Formaldehyde
Butyraldehyde	Glutaraldehyde

Isocyanate Scan:

\$220.00

Hexamethylene diisocyanate (HDI)
 Isophorone diisocyanate (IPDI)
 Methylene bisphenyl diisocyanate (MDI)
 Toluene-2,4-diisocyanate (2,4-TDI)
 Toluene-2,6-diisocyanate (2,6-TDI)

Polynuclear Aromatic Hydrocarbons Scan: (OSHA 58, 5 compounds)

\$190.00

Anthracene
 Chrysene
 Benzo[a]pyrene
 Phenanthrene
 Pyrene

Solder Metal Scan (8 metals):

\$110.00

Antimony	Lead
Beryllium	Silver
Cadmium	Tin
Copper	Zinc oxide

Welding Fume Scan (14 metals):

\$150.00

Aluminum	Cobalt	Molybdenum
Antimony	Copper	Nickel
Beryllium	Iron oxide	Vanadium Pentoxide
Cadmium	Lead	Zinc oxide
Chromium	Manganese	

Metal Scan (20 metals):

\$200.00

Aluminum	Cobalt	Nickel
Antimony	Copper	Selenium
Barium	Iron	Silver
Beryllium	Lead	Tin
Cadmium	Magnesium	Vanadium
Calcium	Manganese	Zinc
Chromium	Molybdenum	

Polynuclear Aromatic Hydrocarbons Scan: (NIOSH 5506, 16 compounds)

\$280.00

Acenaphthene	Chrysene
Acenaphthylene	Dibenzo[a,h]anthracene
Anthracene	Fluoranthene
Benzo[a]anthracene	Fluorene
Benzo[a]pyrene	Indeno[1,2,3-cd]pyrene
Benzo[b]fluoranthene	Naphthalene
Benzo[g,h,i]perylene	Phenanthrene
Benzo[k]fluoranthene	Pyrene

Volatile Organics by GC/MS:

\$200.00

The samples are desorbed with carbon disulfide and analyzed by Gas Chromatography Mass Spectrometry (GC/MS). The spectra of the ten largest peaks that are observed are compared to both internal and NIST spectral libraries. If both a spectra and retention time match is made the actual identity of the compound is reported otherwise the class (e.g. aliphatic, aromatic) of the compound is reported.

The peak with the largest response is quantified against the response of toluene and the air concentration reported to one significant figure.

This should be considered a semi-quantitative analysis since the instrument response and desorption efficiency can vary from compound to compound. Although GC/MS can identify many common organic solvents, the identification of all organic components in a sample cannot be assured by a single analytical technique.

Total Hydrocarbons, as n-Hexane (or Toluene) by GC/FID:

\$70.00

The samples are desorbed and then analyzed by Gas Chromatography Flame Ionization (GC/FID). All chromatographed peaks are summed and quantified against the response of either hexane or toluene.

This should be considered a semi-quantitative analysis since the instrument response and desorption efficiency can vary from compound to compound.



INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM)		Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
				TWA	STEL			
Acetaldehyde	\$95.00	LC-ALD1	Sorbent Tubes: 226-119 Coated silica gel tube followed by 226-09 Charcoal tube	0.05 / 0.50	0.5	1 / 25	Sample by placing 2 tubes in holders connected together. The charcoal tube (closest to the pump) collects acetonitrile from the 226-119 tube and is disposed. Keep 226-119 tube frozen before and after sampling and ship samples cold overnight to the Lab.	TIC-LC-01: Modified EPA IP-6A/NIOSH 2018
		DNPH1	Passive Sampler: Assay 571 Aldehyde Monitor		N	15-600 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab. Call for info regarding sampling other aldehydes. Other aldehydes, ketones and ozone react with and consume the DNPH. Ozone can degrade the aldehyde-DNPH derivative.	
CAS#: 75-07-0								
Acetic acid	\$65.00	ICOA	Sorbent Tubes: ORBO 53 Specially cleaned silica gel tube	0.05 / 0.20	0.2	12 / 24	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-IC-02: Modified NIOSH 2011
							Acetate salts will interfere. Use a PTFE prefilter if acetate salts are present.	
CAS#: 64-19-7								
Acetoin	\$110.00	GC 8	Sorbent Tubes: 226-183 Silica Gel tubes - Set of two separate tubes in series	0.05 / 0.20	N	3 / 9	Sample by placing 2 tubes in holders connected together. The tube closest to the pump is the BACK. After sampling; separate, cap and label tubes FRONT and BACK. Protect samples from light during and after sampling (wrap the tubes in aluminum foil). The turnaround time for this analyte is 10 working days due to the sample processing time required by the method.	TIC-GC-84: Modified OSHA 1012
CAS#: 513-86-0								
Acetone	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	0.2	1 / 6	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1300
		GC-U	Passive Sampler: Assay 566 OVM		Y	15-240 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 67-64-1								
Acetonitrile	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	N	8 / 25	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1606
		GC-U	Passive Sampler: Assay 566 OVM		N	60-420 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 75-05-8								
Acetophenone	\$55.00	NONE	Sorbent Tubes: 226-35 Tenax tube	0.05 / 0.10	N	3 / 12	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-43: Modified OSHA PV2003
CAS#: 98-86-2								
No interferences reported.								

[1] ADDITIONAL ANALYTES: Because it is often possible to collect more than one analyte on certain sampling media, the charges for analysis of additional analytes are discounted as follows:
 Organic Solvents \$35.00 Acids/Anions \$44.00 Metals by ICP \$28.00
 Isocyanates \$60.00 Aldehydes \$60.00 Silica (see below) \$20.00
 Particulate, quartz and cristobalite on the same air sample is \$105.00 per sample. Acid treatment to remove interferences is an additional \$30 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together. NONE indicates that the analyte must be sampled alone. If sampling for two or more compounds, adhere to the flow rates/air volumes, or sampling times for EACH compound.

[3] PASSIVE MONITORS: Passive samplers will be billed when shipped from the Lab. Assay Organic Vapor Monitors (OVM) are \$16.00 each. Assay Ammonia or Aldehyde Monitors and SKC Methanol or Mercury Samplers are \$18.00 each. SKC Anesthetic Gas or Ethylene Oxide Samplers are \$20.00 each.

[4] VOLUME/TIME: Recommended Air Volume in Liters for active sampling or Sampling Time in minutes for passive sampling. NA = not applicable.

[5] HANDLING: Most NIOSH or OSHA methods indicate that samples are stable at room temperature, however, because shipping temperatures vary - Travelers IH Lab recommends shipping samples cold overnight to the Lab.

[6] REFERENCE METHOD: Analytical methods are based on the listed references, but may be modified at the discretion of Travelers.



INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM)		Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
				TWA	STEL			
Acrylamide	\$88.00	NONE	Filter & Tube: 226-57 XAD-7 OVS	0.50 / 1.0	N	140 / 480	The sampler contains a filter and sorbent material in a single tube. After sampling, cap both ends of the sampler. Refrigerate samples after collection and ship cold overnight to the Lab.	TIC-LC-05: Modified OSHA PV2004
CAS#: 79-06-1							No interferences reported.	
Acrylic acid	\$100.00	NONE	Sorbent Tubes: Tandem 226-30-08 Anasorb 708 tubes - 2 tubes in series	0.04 / 0.10	N	4 / 24	Sample by placing 2 tubes in holders connected together. The tube closest to the pump is the BACK. After sampling; separate, cap and label tubes FRONT and BACK. Refrigerate samples after collection and ship cold overnight to the Lab.	TIC-LC-04: Modified OSHA PV2005
CAS#: 79-10-7							No interferences reported.	
Acrylonitrile	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	0.2	6 / 20	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1604
		GC-U	Passive Sampler: Assay 566 OVM		N	90-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 107-13-1							No interferences reported.	
Aldehyde Scan	\$255.00	LC-ALD1	Sorbent Tubes: 226-119 Coated silica gel tube followed by 226-09 Charcoal tube	0.05	N	12 / 15	See specific aldehyde for CAS #s and instructions. Includes acetaldehyde, benzaldehyde, butyraldehyde, crotonaldehyde, formaldehyde and glutaraldehyde. Keep 226-119 tube frozen before and after sampling and ship samples cold overnight to the Lab.	TIC-LC-01: Modified EPA IP-6A/NIOSH 2016/NIOSH 2018/NIOSH 2532
		DNPH1	Passive Sampler: Assay 571 Aldehyde Monitor		N	15-600 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab. Call for info regarding sampling other aldehydes.	
CAS#: varies							Other aldehydes, ketones and ozone react with and consume the DNPH. Ozone can degrade the aldehyde-DNPH derivative.	
Allyl alcohol	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	N	10 / 20	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1402
		GC-U	Passive Sampler: Assay 566 OVM		N	480-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 107-18-6							No interferences reported.	
Allyl chloride	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.05 / 1.0	1.0	90 / 100	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1000
		GC-U	Passive Sampler: Assay 566 OVM		N	120-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 107-05-1							No interferences reported.	

[1] ADDITIONAL ANALYTES: Because it is often possible to collect more than one analyte on certain sampling media, the charges for analysis of additional analytes are discounted as follows:
 Organic Solvents \$35.00 Acids/Anions \$44.00 Metals by ICP \$28.00
 Isocyanates \$60.00 Aldehydes \$60.00 Silica (see below) \$20.00
 Particulate, quartz and cristobalite on the same air sample is \$105.00 per sample. Acid treatment to remove interferences is an additional \$30 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together. NONE indicates that the analyte must be sampled alone. If sampling for two or more compounds, adhere to the flow rates/air volumes, or sampling times for EACH compound.

[3] PASSIVE MONITORS: Passive samplers will be billed when shipped from the Lab.
 Assay Organic Vapor Monitors (OVM) are \$16.00 each.
 Assay Ammonia or Aldehyde Monitors and SKC Methanol or Mercury Samplers are \$18.00 each.
 SKC Anesthetic Gas or Ethylene Oxide Samplers are \$20.00 each.

[4] VOLUME/TIME: Recommended Air Volume in Liters for active sampling or Sampling Time in minutes for passive sampling. NA = not applicable.

[5] HANDLING: Most NIOSH or OSHA methods indicate that samples are stable at room temperature, however, because shipping temperatures vary - Travelers IH Lab recommends shipping samples cold overnight to the Lab.

[6] REFERENCE METHOD: Analytical methods are based on the listed references, but may be modified at the discretion of Travelers.

**INDUSTRIAL HYGIENE LABORATORY**

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM)		Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
				TWA	STEL			
Aluminum	\$36.00	ICP 001	Filter: MCE Filter (37 mm)	1.0 / 3.0	N	120 / 960	Routine shipping. If Total particulate is also desired, sample using a Preweighed PVC filter. Respirable samples may be collected on a Preweighed DRS filter (2.0 LPM flow rate) – see Respirable particulate instructions.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
CAS#: 7429-90-5							No interferences reported.	
Aluminum in the presence of Tungsten	\$60.00	WINSOL	Filter: MCE Filter (37 mm)	1.0 / 3.0	N	480 / 960	Routine shipping. Request IN THE PRESENCE OF TUNGSTEN on the sampling datasheet. Tungsten can also be quantified if requested.	TIC-ICP-02: Modified OSHA ID-213
CAS#: 7429-90-5							No interferences reported.	
Aluminum - Water Soluble	\$36.00	ICP H2O	Filter: PVC Filter-Preweighed in 2 piece cassette	1.0 / 3.0	N	120 / 960	Routine shipping. Request WATER SOLUBLE ALUMINUM on the sampling datasheet.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
CAS#: varies							All water soluble aluminum is included in the result.	
Ammonia	\$64.00	NONE	Sorbent Tubes: 226-29 Coated Anasorb 747 tube	0.05 / 0.10	0.5	3 / 24	Routine shipping.	TIC-IC-06: Modified OSHA ID-188
		NONE	Passive Sampler: Assay 584 Ammonia Monitor		Y	60-480 mins	Routine shipping. Large amounts of ammonium salts present in the sampling environment may interfere. Ethanolamine, propanolamine and isopropanolamine are interferences.	
CAS#: 7664-41-7								
Ammonium chloride	\$64.00	NONE	Filter: PVC Filter-Preweighed in 2 piece cassette	1.0 / 2.0	2.0	16 / 960	Routine shipping.	TIC-IC-06: Modified OSHA ID-188
CAS#: 12125-02-9							Samples can also be analyzed for Total Particulate upon request.	
n-Amyl acetate	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	0.2	1 / 10	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1450
		GC-U	Passive Sampler: Assay 566 OVM		Y	15-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 628-63-7							No interferences reported.	
tert-Amyl methyl ether	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.10 / 0.20	N	3 / 96	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1615
CAS#: 994-05-8							No interferences reported.	
Aniline	\$88.00	NONE	Sorbent Tubes: 226-98 Coated XAD-7 tube	0.20	N	30	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-44: Modified OSHA PV2079
CAS#: 62-53-3							No interferences reported.	
Antimony	\$36.00	ICP 001	Filter: MCE Filter (37 mm)	1.0 / 3.0	N	200 / 960	Routine shipping. May be sampled using a PVC filter if particulate is also desired.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
CAS#: 7440-36-0							No interferences reported.	

[1] ADDITIONAL ANALYTES: Because it is often possible to collect more than one analyte on certain sampling media, the charges for analysis of additional analytes are discounted as follows:
 Organic Solvents \$35.00 Acids/Anions \$44.00 Metals by ICP \$28.00
 Isocyanates \$60.00 Aldehydes \$60.00 Silica (see below) \$20.00
 Particulate, quartz and cristobalite on the same air sample is \$105.00 per sample. Acid treatment to remove interferences is an additional \$30 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together. NONE indicates that the analyte must be sampled alone. If sampling for two or more compounds, adhere to the flow rates/air volumes, or sampling times for EACH compound.

[3] PASSIVE MONITORS: Passive samplers will be billed when shipped from the Lab.
 Assay Organic Vapor Monitors (OVM) are \$16.00 each.
 Assay Ammonia or Aldehyde Monitors and SKC Methanol or Mercury Samplers are \$18.00 each.
 SKC Anesthetic Gas or Ethylene Oxide Samplers are \$20.00 each.

[4] VOLUME/TIME: Recommended Air Volume in Liters for active sampling or Sampling Time in minutes for passive sampling. NA = not applicable.

[5] HANDLING: Most NIOSH or OSHA methods indicate that samples are stable at room temperature, however, because shipping temperatures vary - Travelers IH Lab recommends shipping samples cold overnight to the Lab.

[6] REFERENCE METHOD: Analytical methods are based on the listed references, but may be modified at the discretion of Travelers.



INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM)		Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
				TWA	STEL			
Antimony trioxide as Sb	\$36.00	ICP 001	Filter: MCE Filter (37 mm)	1.0 / 3.0	N	200 / 960	Routine shipping. May be sampled using a PVC filter if particulate is also desired.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
CAS#: 1309-64-4							All sources of antimony are included in the result.	
Arsenic	\$55.00	ICP 001	Filter: MCE Filter (37 mm)	1.0 / 3.0	N	60 / 1260	Routine shipping. May be sampled using a PVC filter if particulate is also desired.	TIC-ICP-MS-01: Modified NIOSH 7300
CAS#: 7440-38-2							This method is not suitable for arsenic trioxide (AsO3). Analysis by ICPMS - Other metals can be analyzed by ICP or ICPMS.	
Arsenic trioxide as As	\$85.00	NONE	Filter: Arsenic Trioxide Filter	1.0 / 3.0	N	60 / 1000	Routine shipping.	TIC-ICP-MS-01: Modified NIOSH 7901
CAS#: 1327-53-3							No interferences reported.	
Arsine	\$60.00	NONE	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	N	10 / 20	Routine shipping.	TIC-ICP-MS-04: Modified NIOSH 6001
CAS#: 7784-42-1							No interferences reported.	
Asbestos in Bulk Materials	\$40.00	NONE	Small unbreakable container containing a small amount of sample	NA	N	NA	Seal in appropriate container (with double Zip Lock bag), mark container as suspect asbestos containing material, DO NOT ship with air samples.	TIC-PLM-01: EPA Interim Method for the Determination of Asbestos in Bulk Materials
CAS#: varies							None known. Floor tiles and some matrices must be analyzed by TEM using a subcontracted lab for an additional cost.	
Asphalt Fumes as Benzene Solubles	\$80.00	NONE	Filter: PTFE Filter (37 mm) - Preweighed	1.0 / 3.0	N	960 / 1400	Routine shipping. Total particulates are determined (\$27) and an extraction is done (\$53) if the particulate weight gain is above 50 micrograms.	TIC-LC-02: Modified NIOSH 5042/OSHA 58
CAS#: 8052-42-4							All benzene soluble particulates are quantified.	
Barium	\$36.00	ICP 001	Filter: MCE Filter (37 mm)	1.0 / 3.0	N	50 / 2000	Routine shipping. May be sampled using a PVC filter if particulate is also desired.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
CAS#: 7440-39-3							No interferences reported.	
Barium - Water Soluble	\$36.00	ICP H2O	Filter: PVC Filter-Preweighed in 2 piece cassette	1.0 / 3.0	N	30 / 960	Routine shipping. Request WATER SOLUBLE BARIUM on the sampling datasheet.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
CAS#: varies							All water soluble barium is included in the result.	
Benzaldehyde	\$95.00	LC-ALD1	Sorbent Tubes: 226-119 Coated silica gel tube followed by 226-09 Charcoal tube	0.05 / 0.20	0.5	1 / 25	Sample by placing 2 tubes in holders connected together. The charcoal tube (closest to the pump) collects acetonitrile from the 226-119 tube and is disposed. Keep 226-119 tube frozen before and after sampling and ship samples cold overnight to the Lab.	TIC-LC-01: Modified EPA IP-6A
		DNPH1	Passive Sampler: Assay 571 Aldehyde Monitor		N	15-600 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab. Call for info regarding sampling other aldehydes.	
CAS#: 100-52-7							Other aldehydes, ketones and ozone react with and consume the DNPH. Ozone can degrade the aldehyde-DNPH derivative.	

[1] ADDITIONAL ANALYTES: Because it is often possible to collect more than one analyte on certain sampling media, the charges for analysis of additional analytes are discounted as follows:
 Organic Solvents \$35.00 Acids/Anions \$44.00 Metals by ICP \$28.00
 Isocyanates \$60.00 Aldehydes \$60.00 Silica (see below) \$20.00
 Particulate, quartz and cristobalite on the same air sample is \$105.00 per sample. Acid treatment to remove interferences is an additional \$30 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together. NONE indicates that the analyte must be sampled alone. If sampling for two or more compounds, adhere to the flow rates/air volumes, or sampling times for EACH compound.

[3] PASSIVE MONITORS: Passive samplers will be billed when shipped from the Lab. Assay Organic Vapor Monitors (OVM) are \$16.00 each. Assay Ammonia or Aldehyde Monitors and SKC Methanol or Mercury Samplers are \$18.00 each. SKC Anesthetic Gas or Ethylene Oxide Samplers are \$20.00 each.

[4] VOLUME/TIME: Recommended Air Volume in Liters for active sampling or Sampling Time in minutes for passive sampling. NA = not applicable.

[5] HANDLING: Most NIOSH or OSHA methods indicate that samples are stable at room temperature, however, because shipping temperatures vary - Travelers IH Lab recommends shipping samples cold overnight to the Lab.

[6] REFERENCE METHOD: Analytical methods are based on the listed references, but may be modified at the discretion of Travelers.



INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM)		Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
				TWA	STEL			
Benzene	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.05 / 0.20	0.2	20 / 30	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1501
		GC-U	Passive Sampler: Assay 566 OVM		Y	240-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 71-43-2								No interferences reported.
Benzophenone	\$89.00	NONE	Sorbent Tubes: 226-110 Chromosorb 106 tube	0.20	N	25 / 48	Routine shipping.	TIC-GC-86: Modified OSHA PV2130
CAS#: 119-61-9								No interferences reported.
Benzoyl peroxide	\$92.00	NONE	Filter: MCE Filter (37 mm)	1.0 / 3.0	N	15 / 400	Refrigerate samples after collection and ship cold overnight to the Lab.	TIC-LC-13: Modified NIOSH 5009
CAS#: 94-36-0								No interferences reported.
Benzyl alcohol	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	N	7 / 10	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1402
		GC-U	Passive Sampler: Assay 566 OVM		N	120-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 100-51-6								No interferences reported.
Benzyl chloride	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.02 / 0.20	0.2	7 / 30	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1003
		GC-U	Passive Sampler: Assay 566 OVM		N	120-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 100-44-7								No interferences reported.
Beryllium and Compounds, as Be (ICP)	\$36.00	ICP001	Filter: MCE Filter (37 mm)	1.0 / 3.0	3.0	1260 / 1440	Routine shipping. Request ANALYSIS BY ICPMS for lower Reporting Limit. ICP analysis will achieve 0.00002 mg/m ³ with 1260 liter air volume.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
CAS#: 7440-41-7								No interferences reported.
Beryllium and Compounds, as Be (ICPMS)	\$55.00	ICP001	Filter: MCE Filter (37 mm)	1.0 / 3.0	3.0	300 / 1440	Routine shipping. Request ICPMS analysis.	TIC-ICP-MS-06: Modified NIOSH 7303
CAS#: 7440-41-7								No interferences reported.
Biphenyl	\$55.00	NONE	Sorbent Tubes: 226-95 XAD-7 tube	0.02 / 0.20	N	20	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-81: Modified OSHA PV2022
CAS#: 92-52-4								No interferences reported.

[1] ADDITIONAL ANALYTES: Because it is often possible to collect more than one analyte on certain sampling media, the charges for analysis of additional analytes are discounted as follows:
 Organic Solvents \$35.00 Acids/Anions \$44.00 Metals by ICP \$28.00
 Isocyanates \$60.00 Aldehydes \$60.00 Silica (see below) \$20.00
 Particulate, quartz and cristobalite on the same air sample is \$105.00 per sample. Acid treatment to remove interferences is an additional \$30 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together. NONE indicates that the analyte must be sampled alone. If sampling for two or more compounds, adhere to the flow rates/air volumes, or sampling times for EACH compound.

[3] PASSIVE MONITORS: Passive samplers will be billed when shipped from the Lab.
 Assay Organic Vapor Monitors (OVM) are \$16.00 each.
 Assay Ammonia or Aldehyde Monitors and SKC Methanol or Mercury Samplers are \$18.00 each.
 SKC Anesthetic Gas or Ethylene Oxide Samplers are \$20.00 each.

[4] VOLUME/TIME: Recommended Air Volume in Liters for active sampling or Sampling Time in minutes for passive sampling. NA = not applicable.

[5] HANDLING: Most NIOSH or OSHA methods indicate that samples are stable at room temperature, however, because shipping temperatures vary - Travelers IH Lab recommends shipping samples cold overnight to the Lab.

[6] REFERENCE METHOD: Analytical methods are based on the listed references, but may be modified at the discretion of Travelers.



INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM)		Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
				TWA	STEL			
Bismuth	\$36.00	ICP 001	Filter: MCE Filter (37 mm)	1.0 / 3.0	N	240 / 960	Routine shipping. May be sampled using a PVC filter if particulate is also desired. All acid soluble bismuth compounds are quantified. Bismuth telluride can be sampled as total dust.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
CAS#: 7440-69-9								
Bisphenol A	\$75.00	NONE	Filter: Glass Fiber Filter (37 mm)	0.50 / 1.5	N	10 / 360	Refrigerate samples after collection and ship cold overnight to the Lab. No interferences reported.	TIC-LC-28: Modified OSHA 1018
CAS#: 80-05-7								
Bromine	\$75.00	IC 2	Filter: Silver Membrane Filter (25 mm)	0.30 / 1.0	1.0	80 / 360	Protect samples from light after collection. Chlorine and bromine can be sampled together. Other bromide compounds may interfere, note presence on the sampling datasheet.	TIC-IC-08: Modified NIOSH 6011
CAS#: 7726-95-6								
1,3-Butadiene	\$77.00	NONE	Sorbent Tubes: 226-37 Charcoal tubes - set of two separate tubes in series	0.01 / 0.50	0.2	16 / 25	Sample by placing 2 tubes in holders connected together. The tube closest to the pump is the BACK (PART B). After sampling; separate, cap and label tubes FRONT and BACK. Samples MUST be refrigerated after collection and shipped cold overnight to the Lab.	TIC-GC-15: Modified NIOSH 1024
		NONE	Passive Sampler: Assay 566 OVM		N	180-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 106-99-0								
n-Butane	\$60.00	CS2DB5	Sorbent Tubes: Tandem Carbosieve SIII tubes - 2 tubes in series	0.05	0.05	3	Sample by placing 2 tubes in holders connected together. The tube closest to the pump is the BACK. After sampling; separate, cap and label tubes FRONT and BACK. Refrigerate samples after collection and ship cold overnight to the Lab. Other compounds may interfere. Note any compounds present in the sampling environment on the sampling datasheet.	TIC-GC-79: Modified OSHA PV2010
CAS#: 106-97-8								
n-Butanol	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	N	4 / 10	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1401
		GC-U	Passive Sampler: Assay 566 OVM		N	30-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 71-36-3								
sec-Butanol	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	0.2	2 / 10	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1401
		GC-U	Passive Sampler: Assay 566 OVM		N	15-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 78-92-2								
							No interferences reported.	

[1] ADDITIONAL ANALYTES: Because it is often possible to collect more than one analyte on certain sampling media, the charges for analysis of additional analytes are discounted as follows:
 Organic Solvents \$35.00 Acids/Anions \$44.00 Metals by ICP \$28.00
 Isocyanates \$60.00 Aldehydes \$60.00 Silica (see below) \$20.00
 Particulate, quartz and cristobalite on the same air sample is \$105.00 per sample. Acid treatment to remove interferences is an additional \$30 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together. NONE indicates that the analyte must be sampled alone. If sampling for two or more compounds, adhere to the flow rates/air volumes, or sampling times for EACH compound.

[3] PASSIVE MONITORS: Passive samplers will be billed when shipped from the Lab.
 Assay Organic Vapor Monitors (OVM) are \$16.00 each.
 Assay Ammonia or Aldehyde Monitors and SKC Methanol or Mercury Samplers are \$18.00 each.
 SKC Anesthetic Gas or Ethylene Oxide Samplers are \$20.00 each.

[4] VOLUME/TIME: Recommended Air Volume in Liters for active sampling or Sampling Time in minutes for passive sampling. NA = not applicable.

[5] HANDLING: Most NIOSH or OSHA methods indicate that samples are stable at room temperature, however, because shipping temperatures vary - Travelers IH Lab recommends shipping samples cold overnight to the Lab.

[6] REFERENCE METHOD: Analytical methods are based on the listed references, but may be modified at the discretion of Travelers.



INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM)		Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
				TWA	STEL			
tert-Butanol	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	0.2	3 / 10	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86; Modified NIOSH 1400
		GC-U	Passive Sampler: Assay 566 OVM		N	15-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 75-65-0							No interferences reported.	
2-Butoxyethanol	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.10	N	3 / 48	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86; Modified OSHA 83/NIOSH 1403
		GC-U	Passive Sampler: Assay 566 OVM		N	30-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 111-76-2							No interferences reported.	
2-Butoxyethyl acetate	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.02 / 0.10	N	3 / 48	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86; Modified OSHA 83
		GC-U	Passive Sampler: Assay 566 OVM		N	30-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 112-07-2							No interferences reported.	
n-Butyl acetate	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.02 / 0.20	0.2	1 / 10	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86; Modified NIOSH 1450
		GC-U	Passive Sampler: Assay 566 OVM		Y	15-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 123-86-4							No interferences reported.	
sec-Butyl acetate	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	0.2	1 / 10	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86; Modified NIOSH 1450
		GC-U	Passive Sampler: Assay 566 OVM		Y	15-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 105-46-4							No interferences reported.	
tert-Butyl acetate	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	0.2	3 / 10	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86; Modified NIOSH 1450
		GC-U	Passive Sampler: Assay 566 OVM		Y	15-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 540-88-5							No interferences reported.	

[1] ADDITIONAL ANALYTES: Because it is often possible to collect more than one analyte on certain sampling media, the charges for analysis of additional analytes are discounted as follows:
 Organic Solvents \$35.00 Acids/Anions \$44.00 Metals by ICP \$28.00
 Isocyanates \$60.00 Aldehydes \$60.00 Silica (see below) \$20.00
 Particulate, quartz and cristobalite on the same air sample is \$105.00 per sample. Acid treatment to remove interferences is an additional \$30 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together. NONE indicates that the analyte must be sampled alone. If sampling for two or more compounds, adhere to the flow rates/air volumes, or sampling times for EACH compound.

[3] PASSIVE MONITORS: Passive samplers will be billed when shipped from the Lab. Assay Organic Vapor Monitors (OVM) are \$16.00 each. Assay Ammonia or Aldehyde Monitors and SKC Methanol or Mercury Samplers are \$18.00 each. SKC Anesthetic Gas or Ethylene Oxide Samplers are \$20.00 each.

[4] VOLUME/TIME: Recommended Air Volume in Liters for active sampling or Sampling Time in minutes for passive sampling. NA = not applicable.

[5] HANDLING: Most NIOSH or OSHA methods indicate that samples are stable at room temperature, however, because shipping temperatures vary - Travelers IH Lab recommends shipping samples cold overnight to the Lab.

[6] REFERENCE METHOD: Analytical methods are based on the listed references, but may be modified at the discretion of Travelers.



INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM)		Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
				TWA	STEL			
n-Butyl acrylate	\$55.00	GC 4	Sorbent Tubes: 226-73 Coated Charcoal tube	0.05	N	10 / 12	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-01: Modified OSHA PV2011
		GC-U	Passive Sampler: Assay 566 OVM		N	60-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 141-32-2								
n-Butyl glycidyl ether	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	N	20 / 30	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1616
		GC-U	Passive Sampler: Assay 566 OVM		N	240-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 2426-08-6								
Butyl mercaptan	\$105.00	GC-MER	Filter: Mercaptan Filter - SKC 225-9007	0.10 / 0.20	0.2	55 / 150	Keep media frozen and protected from light before and after sampling and ship samples cold overnight to the Lab.	TIC-GC-37: Modified NIOSH 2542
							Dimethyl disulfide, diethyl disulfide and dibutyl disulfide may interfere, note presence on the sampling datasheet.	
CAS#: 109-79-5								
Butyraldehyde	\$95.00	LC-ALD1	Sorbent Tubes: 226-119 Coated silica gel tube followed by 226-09 Charcoal tube	0.05 / 0.20	N	2 / 15	Sample by placing 2 tubes in holders connected together. The charcoal tube (closest to the pump) collects acetonitrile from the 226-119 tube and is disposed. Keep 226-119 tube frozen before and after sampling and ship samples cold overnight to the Lab.	TIC-LC-01: Modified EPA IP-6A
		DNPH1	Passive Sampler: Assay 571 Aldehyde Monitor		N	15-600 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab. Call for info regarding sampling other aldehydes.	
CAS#: 123-72-8								
Cadmium and Compounds, as Cd	\$36.00	ICP 001	Filter: MCE Filter (37 mm)	1.0 / 3.0	N	500 / 960	Routine shipping. If Total particulate is also desired, sample using a Preweighed PVC filter. Respirable samples may be collected on a Preweighed DRS filter (2.0 LPM flow rate) – see Respirable particulate instructions.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
							No interferences reported.	
CAS#: 7440-43-9								
Calcium	\$36.00	ICP 001	Filter: MCE Filter (37 mm)	1.0 / 3.0	N	120 / 960	Routine shipping. May be sampled using a PVC filter if particulate is also desired.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
							All water soluble calcium compounds are included in the result.	
CAS#: 7440-70-2								
Calcium hydroxide	\$36.00	ICP 001	Filter: MCE Filter (37 mm)	1.0 / 3.0	N	60 / 960	Routine shipping. May be sampled using a PVC filter if particulate is also desired.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
							All water soluble calcium compounds are included in the result.	
CAS#: 1305-62-0								

[1] ADDITIONAL ANALYTES: Because it is often possible to collect more than one analyte on certain sampling media, the charges for analysis of additional analytes are discounted as follows:
 Organic Solvents \$35.00 Acids/Anions \$44.00 Metals by ICP \$28.00
 Isocyanates \$60.00 Aldehydes \$60.00 Silica (see below) \$20.00
 Particulate, quartz and cristobalite on the same air sample is \$105.00 per sample. Acid treatment to remove interferences is an additional \$30 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together. NONE indicates that the analyte must be sampled alone. If sampling for two or more compounds, adhere to the flow rates/air volumes, or sampling times for EACH compound.

[3] PASSIVE MONITORS: Passive samplers will be billed when shipped from the Lab.
 Assay Organic Vapor Monitors (OVM) are \$16.00 each.
 Assay Ammonia or Aldehyde Monitors and SKC Methanol or Mercury Samplers are \$18.00 each.
 SKC Anesthetic Gas or Ethylene Oxide Samplers are \$20.00 each.

[4] VOLUME/TIME: Recommended Air Volume in Liters for active sampling or Sampling Time in minutes for passive sampling. NA = not applicable.

[5] HANDLING: Most NIOSH or OSHA methods indicate that samples are stable at room temperature, however, because shipping temperatures vary - Travelers IH Lab recommends shipping samples cold overnight to the Lab.

[6] REFERENCE METHOD: Analytical methods are based on the listed references, but may be modified at the discretion of Travelers.



INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM)		Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
				TWA	STEL			
Calcium oxide	\$36.00	ICP 001	Filter: MCE Filter (37 mm)	1.0 / 3.0	N	120 / 960	Routine shipping. May be sampled using a PVC filter if particulate is also desired.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
CAS#: 1305-78-8							All water soluble calcium compounds are included in the result.	
Camphor, synthetic	\$55.00	GC 2	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	0.2	30 / 48	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-45: Modified NIOSH 1301
		GC-U	Passive Sampler: Assay 566 OVM		N	120-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 76-22-2							No interferences reported.	
Caprolactam	\$130.00	NONE	Filter & Tube: 226-57 XAD-7 OVS	0.50 / 1.0	1.0	10 / 100	The sampler contains a filter and sorbent material in a single tube. After sampling, cap both ends of the sampler. Refrigerate samples after collection and ship cold overnight to the Lab.	TIC-LC-31: Modified OSHA PV2012
CAS#: 105-60-2							Specify dust and/or vapor on the sampling datasheet.	
Carbon Black, OSHA	\$80.00	NONE	Filter: PVC Filter-Preweighed in 2 piece cassette	1.0 / 2.0	N	300 / 960	Routine shipping. Particulate is analyzed first (\$27) and extraction is done (\$53) if the particulate weight gain is above 100 micrograms.	TIC-GRV-05: Modified OSHA ID-196
CAS#: 1333-86-4							Gravimetric method nonspecific, all particulate matter in the sampling environment is collected and quantified.	
Carbon disulfide	\$105.00	NONE	Sorbent Tubes: 226-44 Drying tube followed by 226-09 Charcoal tube	0.05 / 0.20	0.2	15 / 50	Sample by placing 2 tubes in holders connected together. The charcoal tube is connected closest to the pump. After sampling, leave the tubes connected. Samples should be frozen and shipped cold overnight to the Lab.	TIC-GC-38: Modified NIOSH 1600
CAS#: 75-15-0							No interferences reported.	
Carbon tetrachloride	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	0.2	16 / 24	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1003
		GC-U	Passive Sampler: Assay 566 OVM		N	180-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 56-23-5							No interferences reported.	
Catechol	\$100.00	LC-PHE	Filter & Tube: 226-57 XAD-7 OVS	0.05 / 1.0	N	6 / 100	The sampler contains a filter and sorbent material in a single tube. After sampling, cap both ends of the sampler. Refrigerate samples after collection and ship cold overnight to the Lab.	TIC-LC-30: Modified OSHA PV2014
CAS#: 120-80-9							No interferences reported.	
Chlorine	\$75.00	IC 2	Filter: Silver Membrane Filter (25 mm)	0.30 / 1.0	1.0	180 / 360	Protect samples from light after collection. Chlorine and bromine can be sampled together.	TIC-IC-08: Modified NIOSH 6011
CAS#: 7782-50-5							Other chloride compounds may interfere, note presence on the sampling datasheet.	

[1] ADDITIONAL ANALYTES: Because it is often possible to collect more than one analyte on certain sampling media, the charges for analysis of additional analytes are discounted as follows:
 Organic Solvents \$35.00 Acids/Anions \$44.00 Metals by ICP \$28.00
 Isocyanates \$60.00 Aldehydes \$60.00 Silica (see below) \$20.00
 Particulate, quartz and cristobalite on the same air sample is \$105.00 per sample. Acid treatment to remove interferences is an additional \$30 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together. NONE indicates that the analyte must be sampled alone. If sampling for two or more compounds, adhere to the flow rates/air volumes, or sampling times for EACH compound.

[3] PASSIVE MONITORS: Passive samplers will be billed when shipped from the Lab. Assay Organic Vapor Monitors (OVM) are \$16.00 each. Assay Ammonia or Aldehyde Monitors and SKC Methanol or Mercury Samplers are \$18.00 each. SKC Anesthetic Gas or Ethylene Oxide Samplers are \$20.00 each.

[4] VOLUME/TIME: Recommended Air Volume in Liters for active sampling or Sampling Time in minutes for passive sampling. NA = not applicable.

[5] HANDLING: Most NIOSH or OSHA methods indicate that samples are stable at room temperature, however, because shipping temperatures vary - Travelers IH Lab recommends shipping samples cold overnight to the Lab.

[6] REFERENCE METHOD: Analytical methods are based on the listed references, but may be modified at the discretion of Travelers.



INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM)		Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
				TWA	STEL			
Chlorine dioxide	\$80.00	NONE	Impinger Soln: KI Impinger Solution	0.20 / 0.50	0.5	70 / 120	Keep impinger or bubbler volume greater than 10 mLs by adding fresh solution when necessary. After sampling transfer solution to plastic vial, rinse impinger or bubbler w/ fresh solution into vial and seal. Chlorine will not interfere. Large amounts of chloride may interfere, note presence on the sampling datasheet.	TIC-IC-09: Modified OSHA ID-202
CAS#: 10049-04-4								
Chlorobenzene	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	N	10 / 40	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1003
		GC-U	Passive Sampler: Assay 566 OVM		N	60-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 108-90-7								
p-Chlorobenzotrifluoride	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	N	5 / 10	Samples are only stable for 7 days at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1026
CAS#: 98-56-6								
Chlorobiphenyls (Arochlor 1242, 1248, 1254 or 1260)	\$90.00	NONE	Filter & Tube: Glass Fiber Filter followed by a 226-39 Florisil tube	0.05 / 0.20	N	30 / 50	Transfer filter to separate labeled glass vials after sampling. Protect samples from light, routine shipping. Specify which Arochlor (1248, 1260...) - \$90 per Arochlor. Other halogenated compounds may interfere, note presence on the sampling datasheet.	TIC-GC-25: Modified NIOSH 5503
CAS#: varies								
Chlorobromomethane	\$77.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	N	1 / 60	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1003
CAS#: 74-97-5								
Chlorodifluoromethane	\$77.00	GC 74	Sorbent Tubes: Tandem 226-09 Charcoal tubes - 2 tubes in series	0.01 / 0.05	N	1 / 4	Sample by placing 2 tubes in holders connected together. The tube closest to the pump is the BACK. After sampling; separate, cap and label tubes FRONT and BACK. Refrigerate samples after collection and ship cold overnight to the Lab.	TIC-GC-48: Modified NIOSH 1018
CAS#: 75-45-6								
Chloroform	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	0.2	10 / 50	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1003
		GC-U	Passive Sampler: Assay 566 OVM		N	90-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 67-66-3								

[1] ADDITIONAL ANALYTES: Because it is often possible to collect more than one analyte on certain sampling media, the charges for analysis of additional analytes are discounted as follows:
 Organic Solvents \$35.00 Acids/Anions \$44.00 Metals by ICP \$28.00
 Isocyanates \$60.00 Aldehydes \$60.00 Silica (see below) \$20.00
 Particulate, quartz and cristobalite on the same air sample is \$105.00 per sample. Acid treatment to remove interferences is an additional \$30 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together. NONE indicates that the analyte must be sampled alone.
 If sampling for two or more compounds, adhere to the flow rates/air volumes, or sampling times for EACH compound.

[3] PASSIVE MONITORS: Passive samplers will be billed when shipped from the Lab.
 Assay Organic Vapor Monitors (OVM) are \$16.00 each.
 Assay Ammonia or Aldehyde Monitors and SKC Methanol or Mercury Samplers are \$18.00 each.
 SKC Anesthetic Gas or Ethylene Oxide Samplers are \$20.00 each.

[4] VOLUME/TIME: Recommended Air Volume in Liters for active sampling or Sampling Time in minutes for passive sampling.
 NA = not applicable.

[5] HANDLING: Most NIOSH or OSHA methods indicate that samples are stable at room temperature, however, because shipping temperatures vary - Travelers IH Lab recommends shipping samples cold overnight to the Lab.

[6] REFERENCE METHOD: Analytical methods are based on the listed references, but may be modified at the discretion of Travelers.



INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM)		Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
				TWA	STEL			
o-Chlorotoluene	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.05 / 0.20	N	3 / 10	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified OSHA In House Method
		GC-U	Passive Sampler: Assay 566 OVM		N	15-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 95-49-8								No interferences reported.
Chromium	\$36.00	ICP 001	Filter: MCE Filter (37 mm)	1.0 / 3.0	N	120 / 960	Routine shipping. Samples are acid digested and analyzed for total chromium. May be sampled using a PVC filter if particulate is also desired.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
CAS#: 7440-47-3								No interferences reported.
Chromium in the presence of Tungsten	\$60.00	WINSOL	Filter: MCE Filter (37 mm)	1.0 / 3.0	N	120 / 960	Routine shipping. Request IN THE PRESENCE OF TUNGSTEN on the sampling datasheet. Tungsten can also be quantified if requested.	TIC-ICP-02: Modified OSHA ID-213
CAS#: 7440-47-3								No interferences reported.
Chromium Hexavalent (welding, foundry, plating)	\$78.00	NONE	Filter: PVC Filter-Preweighed in 2 piece cassette	1.0 / 2.0	3.0	480 / 960	Indicate welding, foundry or plating operation (see also Chromium, Hexavalent (Paint)). SHIP OVERNIGHT - plating samples should be analyzed within 6 days of collection and welding samples should be analyzed within 8 days of collection.	TIC-IC-07: Modified OSHA ID-215
CAS#: 18540-29-9								Iron, nickel, copper and vanadium compounds may interfere, note presence on the sampling datasheet. All hexavalent chromium compounds will be included.
Chromium Hexavalent (in paint)	\$100.00	NONE	Filter: PVC Filter-Preweighed in 2 piece cassette	1.0 / 2.0	4.0	800 / 960	Request HEXAVALENT CHROMIUM - PAINTING OPERATION on the sampling datasheet. Ship overnight to the Lab.	TIC-IC-07: Modified OSHA ID-215
CAS#: 18540-29-9								Iron, nickel, copper and vanadium compounds may interfere, note presence on the sampling datasheet. All hexavalent chromium compounds will be included.
Cobalt	\$36.00	ICP 001	Filter: MCE Filter (37 mm)	1.0 / 3.0	N	500 / 960	Routine shipping. May be sampled using a PVC filter if particulate is also desired.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
CAS#: 7440-48-4								No interferences reported.
Cobalt in the presence of Tungsten	\$60.00	WINSOL	Filter: MCE Filter (37 mm)	1.0 / 3.0	N	480 / 960	Routine shipping. Request IN THE PRESENCE OF TUNGSTEN on the sampling datasheet. Tungsten can also be quantified if requested.	TIC-ICP-02: Modified OSHA ID-213
CAS#: 7440-48-4								No interferences reported.
Copper	\$36.00	ICP 001	Filter: MCE Filter (37 mm)	1.0 / 3.0	N	120 / 960	Routine shipping. If Total particulate is also desired, sample using a Preweighed PVC filter. Respirable samples may be collected on a Preweighed DRS filter (2.0 LPM flow rate) - see Respirable particulate instructions.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
CAS#: 7440-50-8								No interferences reported.
Copper in the presence of Tungsten	\$60.00	WINSOL	Filter: MCE Filter (37 mm)	1.0 / 3.0	N	120 / 960	Routine shipping. Request IN THE PRESENCE OF TUNGSTEN on the sampling datasheet. Tungsten can also be quantified if requested.	TIC-ICP-02: Modified OSHA ID-213
CAS#: 7440-50-8								No interferences reported.

[1] ADDITIONAL ANALYTES: Because it is often possible to collect more than one analyte on certain sampling media, the charges for analysis of additional analytes are discounted as follows:
 Organic Solvents \$35.00 Acids/Anions \$44.00 Metals by ICP \$28.00
 Isocyanates \$60.00 Aldehydes \$60.00 Silica (see below) \$20.00
 Particulate, quartz and cristobalite on the same air sample is \$105.00 per sample. Acid treatment to remove interferences is an additional \$30 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together. NONE indicates that the analyte must be sampled alone. If sampling for two or more compounds, adhere to the flow rates/air volumes, or sampling times for EACH compound.

[3] PASSIVE MONITORS: Passive samplers will be billed when shipped from the Lab.
 Assay Organic Vapor Monitors (OVM) are \$16.00 each.
 Assay Ammonia or Aldehyde Monitors and SKC Methanol or Mercury Samplers are \$18.00 each.
 SKC Anesthetic Gas or Ethylene Oxide Samplers are \$20.00 each.

[4] VOLUME/TIME: Recommended Air Volume in Liters for active sampling or Sampling Time in minutes for passive sampling. NA = not applicable.

[5] HANDLING: Most NIOSH or OSHA methods indicate that samples are stable at room temperature, however, because shipping temperatures vary - Travelers IH Lab recommends shipping samples cold overnight to the Lab.

[6] REFERENCE METHOD: Analytical methods are based on the listed references, but may be modified at the discretion of Travelers.



INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM)		Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
				TWA	STEL			
Cresol, all isomers	\$75.00	LC-PHE	Sorbent Tubes: 226-95 XAD-7 tube	0.05 / 0.10	N	6 / 24	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab. Other phenolic compounds may interfere, note presence on the sampling datasheet.	TIC-LC-22: Modified OSHA 32
CAS#: 1319-77-3								
Cristobalite, Bulk	\$110.00	XRD BULK	Small unbreakable container containing approx 1 tablespoon of sample	NA	N	NA	Routine shipping. Specify which polymorph(s) of silica are to be reported (quartz, cristobalite and/or trydimite). Results are reported as weight %. Identify sample matrix. Give as much information as possible as to what other minerals are present.	TIC-XRD-01: Modified NIOSH 7500
CAS#: 14464-46-1								
Cristobalite, Respirable	\$67.00	XRD	Filter: DRS containing a Preweighed PVC Filter	2.0	N	840 / 960	Routine shipping. Using a 2.0 LPM flow rate is CRITICAL when using a Disposable Respirable Sampler (DRS). Request RESPIRABLE SILICA (quartz and cristobalite). DRS samplers are billed \$17 each when shipped. Note interferences on the sampling datasheet: mica, potash, feldspar, zircon, graphite, aluminosilicate, calcite. High dust loading may increase the MRL. If needed, acid treatment to remove interferences is an additional \$30 per sample.	TIC-XRD-01: Modified NIOSH 7500
CAS#: 14464-46-1								
Crotonaldehyde	\$95.00	LC-ALD1	Sorbent Tubes: 226-119 Coated silica gel tube followed by 226-09 Charcoal tube	0.05 / 0.20	0.5	2 / 15	Sample by placing 2 tubes in holders connected together. The charcoal tube (closest to the pump) collects acetonitrile from the 226-119 tube and is disposed. Keep 226-119 tube frozen before and after sampling and ship samples cold overnight to the Lab. After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab. Call for info regarding sampling other aldehydes. Other aldehydes, ketones and ozone react with and consume the DNPH. Ozone can degrade the aldehyde-DNPH derivative.	TIC-LC-01: Modified EPA IP-6A
		DNPH1	Passive Sampler: Assay 571 Aldehyde Monitor		N	30-600 mins		
CAS#: 4170-30-3								
Cumene	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	N	2 / 30	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab. After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	TIC-GC-86: Modified NIOSH 1501
		GC-U	Passive Sampler: Assay 566 OVM		N	60-720 mins		
CAS#: 98-82-8								
Cyanide Salts as CN	\$75.00	NONE	Filter: MCE Filter (37 mm)	0.50 / 1.0	N	30 / 480	Routine shipping. All particulate cyanide compounds are detected. Particulate and gaseous cyanide can be collected together on SKC-226-210 (soda lime tube with a glass fiber plug) - see Hydrogen cyanide.	TIC-IC-12: Modified OSHA ID-120
CAS#: varies								

[1] ADDITIONAL ANALYTES: Because it is often possible to collect more than one analyte on certain sampling media, the charges for analysis of additional analytes are discounted as follows:
 Organic Solvents \$35.00 Acids/Anions \$44.00 Metals by ICP \$28.00
 Isocyanates \$60.00 Aldehydes \$60.00 Silica (see below) \$20.00
 Particulate, quartz and cristobalite on the same air sample is \$105.00 per sample. Acid treatment to remove interferences is an additional \$30 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together. NONE indicates that the analyte must be sampled alone.
 If sampling for two or more compounds, adhere to the flow rates/air volumes, or sampling times for EACH compound.

[3] PASSIVE MONITORS: Passive samplers will be billed when shipped from the Lab.
 Assay Organic Vapor Monitors (OVM) are \$16.00 each.
 Assay Ammonia or Aldehyde Monitors and SKC Methanol or Mercury Samplers are \$18.00 each.
 SKC Anesthetic Gas or Ethylene Oxide Samplers are \$20.00 each.

[4] VOLUME/TIME: Recommended Air Volume in Liters for active sampling or Sampling Time in minutes for passive sampling.
 NA = not applicable.

[5] HANDLING: Most NIOSH or OSHA methods indicate that samples are stable at room temperature, however, because shipping temperatures vary - Travelers IH Lab recommends shipping samples cold overnight to the Lab.

[6] REFERENCE METHOD: Analytical methods are based on the listed references, but may be modified at the discretion of Travelers.



INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM)		Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
				TWA	STEL			
Cyclohexane	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	N	3 / 5	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86; Modified NIOSH 1500
		GC-U	Passive Sampler: Assay 566 OVM		N	15-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 110-82-7							No interferences reported.	
Cyclohexanol	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	N	2 / 10	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86; Modified NIOSH 1402
		GC-U	Passive Sampler: Assay 566 OVM		N	15-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 108-93-0							No interferences reported.	
Cyclohexanone	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	0.2	6 / 10	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86; Modified NIOSH 1300
		GC-U	Passive Sampler: Assay 566 OVM		N	30-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 108-94-1							No interferences reported.	
Cyclohexene	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	N	3 / 7	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86; Modified NIOSH 1500
		GC-U	Passive Sampler: Assay 566 OVM		N	15-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 110-83-8							No interferences reported.	
Cyclohexylamine	\$85.00	AMINE2	Sorbent Tubes: 226-98 Coated XAD-7 tube	0.05 / 0.20	0.2	20	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-20; Modified OSHA PV2016
CAS#: 108-91-8							Other amine compounds may interfere, note presence on the sampling datasheet.	
Cyclopentane	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	N	3 / 7	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86; Modified NIOSH 1500
		CAS#: 287-92-3						

[1] ADDITIONAL ANALYTES: Because it is often possible to collect more than one analyte on certain sampling media, the charges for analysis of additional analytes are discounted as follows:
 Organic Solvents \$35.00 Acids/Anions \$44.00 Metals by ICP \$28.00
 Isocyanates \$60.00 Aldehydes \$60.00 Silica (see below) \$20.00
 Particulate, quartz and cristobalite on the same air sample is \$105.00 per sample. Acid treatment to remove interferences is an additional \$30 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together. NONE indicates that the analyte must be sampled alone.
 If sampling for two or more compounds, adhere to the flow rates/air volumes, or sampling times for EACH compound.

[3] PASSIVE MONITORS: Passive samplers will be billed when shipped from the Lab.
 Assay Organic Vapor Monitors (OVM) are \$16.00 each.
 Assay Ammonia or Aldehyde Monitors and SKC Methanol or Mercury Samplers are \$18.00 each.
 SKC Anesthetic Gas or Ethylene Oxide Samplers are \$20.00 each.

[4] VOLUME/TIME: Recommended Air Volume in Liters for active sampling or Sampling Time in minutes for passive sampling.
 NA = not applicable.

[5] HANDLING: Most NIOSH or OSHA methods indicate that samples are stable at room temperature, however, because shipping temperatures vary - Travelers IH Lab recommends shipping samples cold overnight to the Lab.

[6] REFERENCE METHOD: Analytical methods are based on the listed references, but may be modified at the discretion of Travelers.



INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM)		Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
				TWA	STEL			
Desflurane	\$77.00	NONE	Sorbent Tubes: 226-83 Anasorb 747 tube	0.02 / 0.05	N	2 / 3	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-02: Modified OSHA 106
		NONE	Passive Sampler: SKC 575-002 Anasorb 747 Sampler		N	30-240 mins	Refrigerate samples after collection and ship cold overnight to the Lab.	
CAS#: 57041-67-5								No interferences reported.
Diacetone alcohol	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	N	2 / 10	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1402
		GC-U	Passive Sampler: Assay 566 OVM		N	15-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 123-42-2								No interferences reported.
Diacetyl	\$110.00	GC 8	Sorbent Tubes: 226-183 Silica Gel tubes - Set of two separate tubes in series	0.05 / 0.20	0.2	6 / 9	Sample by placing 2 tubes in holders connected together. The tube closest to the pump is the BACK. After sampling; separate, cap and label tubes FRONT and BACK. Protect samples from light during and after sampling (wrap the tubes in aluminum foil).	TIC-GC-84: Modified OSHA 1012
CAS#: 431-03-8								The turnaround time for this analyte is 10 working days due to the sample processing time required by the method.
2,6-Di-tert-butyl-p-cresol	\$75.00	NONE	Filter & Tube: 226-57 XAD-7 OVS	1.0	N	100	The sampler contains a filter and sorbent material in a single tube. After sampling, cap both ends of the sampler. Refrigerate samples after collection and ship cold overnight to the Lab.	TIC-GC-52: Modified OSHA PV2108
CAS#: 128-37-0								No interferences reported.
Dibutyl phthalate	\$75.00	GCPH	Filter & Tube: 226-56 Tenax OVS	0.50 / 1.0	N	50 / 300	Routine shipping. The sampler contains a filter and sorbent material in a single tube. After sampling, cap both ends of the sampler.	TIC-GC-27: Modified OSHA 104
CAS#: 84-74-2								Other phthalates will collect, note presence on the sampling datasheet.
o-Dichlorobenzene	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	0.2	3 / 10	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1003
		GC-U	Passive Sampler: Assay 566 OVM		Y	30-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 95-50-1								No interferences reported.

[1] ADDITIONAL ANALYTES: Because it is often possible to collect more than one analyte on certain sampling media, the charges for analysis of additional analytes are discounted as follows:
 Organic Solvents \$35.00 Acids/Anions \$44.00 Metals by ICP \$28.00
 Isocyanates \$60.00 Aldehydes \$60.00 Silica (see below) \$20.00
 Particulate, quartz and cristobalite on the same air sample is \$105.00 per sample. Acid treatment to remove interferences is an additional \$30 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together. NONE indicates that the analyte must be sampled alone. If sampling for two or more compounds, adhere to the flow rates/air volumes, or sampling times for EACH compound.

[3] PASSIVE MONITORS: Passive samplers will be billed when shipped from the Lab. Assay Organic Vapor Monitors (OVM) are \$16.00 each. Assay Ammonia or Aldehyde Monitors and SKC Methanol or Mercury Samplers are \$18.00 each. SKC Anesthetic Gas or Ethylene Oxide Samplers are \$20.00 each.

[4] VOLUME/TIME: Recommended Air Volume in Liters for active sampling or Sampling Time in minutes for passive sampling. NA = not applicable.

[5] HANDLING: Most NIOSH or OSHA methods indicate that samples are stable at room temperature, however, because shipping temperatures vary - Travelers IH Lab recommends shipping samples cold overnight to the Lab.

[6] REFERENCE METHOD: Analytical methods are based on the listed references, but may be modified at the discretion of Travelers.



INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM)		Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
				TWA	STEL			
p-Dichlorobenzene	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	N	6 / 10	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1003
		GC-U	Passive Sampler: Assay 566 OVM		N	120-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 106-46-7							No interferences reported.	
Dichlorodifluoromethane	\$77.00	GC 74	Sorbent Tubes: Tandem 226-09 Charcoal tubes - 2 tubes in series	0.01 / 0.05	N	1 / 4	Sample by placing 2 tubes in holders connected together. The tube closest to the pump is the BACK. After sampling; separate, cap and label tubes FRONT and BACK. Refrigerate samples after collection and ship cold overnight to the Lab.	TIC-GC-48: Modified NIOSH 1018
CAS#: 75-71-8							No interferences reported.	
1,1-Dichloroethane	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	N	1 / 15	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1003
		GC-U	Passive Sampler: Assay 566 OVM		N	15-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 75-34-3							No interferences reported.	
1,2-Dichloroethane	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	0.2	1 / 50	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1003
		GC-U	Passive Sampler: Assay 566 OVM		N	15-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 107-06-2							No interferences reported.	
1,1-Dichloroethylene	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	N	8	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1015
		GC-U	Passive Sampler: Assay 566 OVM		N	180-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 75-35-4							No interferences reported.	
1,2-Dichloroethylene (cis and trans isomers)	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	N	1 / 5	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1003
		GC-U	Passive Sampler: Assay 566 OVM		N	15-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 540-59-0							Isomers (cis and trans) are combined in a single result.	

[1] ADDITIONAL ANALYTES: Because it is often possible to collect more than one analyte on certain sampling media, the charges for analysis of additional analytes are discounted as follows:
 Organic Solvents \$35.00 Acids/Anions \$44.00 Metals by ICP \$28.00
 Isocyanates \$60.00 Aldehydes \$60.00 Silica (see below) \$20.00
 Particulate, quartz and cristobalite on the same air sample is \$105.00 per sample. Acid treatment to remove interferences is an additional \$30 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together. NONE indicates that the analyte must be sampled alone. If sampling for two or more compounds, adhere to the flow rates/air volumes, or sampling times for EACH compound.

[3] PASSIVE MONITORS: Passive samplers will be billed when shipped from the Lab. Assay Organic Vapor Monitors (OVM) are \$16.00 each. Assay Ammonia or Aldehyde Monitors and SKC Methanol or Mercury Samplers are \$18.00 each. SKC Anesthetic Gas or Ethylene Oxide Samplers are \$20.00 each.

[4] VOLUME/TIME: Recommended Air Volume in Liters for active sampling or Sampling Time in minutes for passive sampling. NA = not applicable.

[5] HANDLING: Most NIOSH or OSHA methods indicate that samples are stable at room temperature, however, because shipping temperatures vary - Travelers IH Lab recommends shipping samples cold overnight to the Lab.

[6] REFERENCE METHOD: Analytical methods are based on the listed references, but may be modified at the discretion of Travelers.



INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM)		Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
				TWA	STEL			
1,1-Dichloro-1-fluoroethane	\$77.00	NONE	Sorbent Tubes: 226-09 Charcoal tube	0.05	N	1	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab. Other organic compounds may interfere, especially HCFCs. Note any compounds present in the sampling environment on the sampling datasheet.	TIC-GC-01: Modified OSHA 113
CAS#: 1717-00-6								
2,2-Dichloro-1,1,1-trifluoroethane	\$77.00	NONE	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.05	N	1 / 3	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-01: Modified NIOSH 1020
CAS#: 306-83-2							No interferences reported.	
Diethanolamine	\$100.00	IC 2	Sorbent Tubes: 226-98 Coated XAD-7 tube	0.20	N	50 / 96	Routine shipping. Other amine compounds may interfere, note presence on the sampling datasheet.	TIC-IC-11: Modified NIOSH 3509
CAS#: 111-42-2								
Diethylamine	\$100.00	AMINE3	Sorbent Tubes: 226-96 Coated XAD-7 tube	0.01 / 0.20	0.2	6 / 10	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab. Other amine compounds may interfere, note presence on the sampling datasheet.	TIC-LC-07: Modified OSHA 41
CAS#: 109-89-7								
Diethylbenzenes (o-, m-, and p- isomers)	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	N	3 / 23	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1501
CAS#: 25340-17-4							No interferences reported.	
Diethylene glycol	\$75.00	GC 12	Filter & Tube: 226-57 XAD-7 OVS	0.50 / 2.0	N	25 / 60	The sampler contains a filter and sorbent material in a single tube. After sampling, cap both ends of the sampler. Refrigerate samples after collection and ship cold overnight to the Lab.	TIC-GC-17: Modified NIOSH 5523
CAS#: 111-46-6							No interferences reported.	
Diethylene glycol monobutyl ether	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.05 / 0.20	N	6 / 12	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified OSHA PV2095
		GC-U	Passive Sampler: Assay 566 OVM		N	60-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 112-34-5							No interferences reported.	
Diethylene glycol monobutyl ether acetate	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.05 / 0.20	N	6 / 10	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified OSHA PV2095
CAS#: 124-17-4							No interferences reported.	

[1] ADDITIONAL ANALYTES: Because it is often possible to collect more than one analyte on certain sampling media, the charges for analysis of additional analytes are discounted as follows:
 Organic Solvents \$35.00 Acids/Anions \$44.00 Metals by ICP \$28.00
 Isocyanates \$60.00 Aldehydes \$60.00 Silica (see below) \$20.00
 Particulate, quartz and cristobalite on the same air sample is \$105.00 per sample. Acid treatment to remove interferences is an additional \$30 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together. NONE indicates that the analyte must be sampled alone. If sampling for two or more compounds, adhere to the flow rates/air volumes, or sampling times for EACH compound.

[3] PASSIVE MONITORS: Passive samplers will be billed when shipped from the Lab.
 Assay Organic Vapor Monitors (OVM) are \$16.00 each.
 Assay Ammonia or Aldehyde Monitors and SKC Methanol or Mercury Samplers are \$18.00 each.
 SKC Anesthetic Gas or Ethylene Oxide Samplers are \$20.00 each.

[4] VOLUME/TIME: Recommended Air Volume in Liters for active sampling or Sampling Time in minutes for passive sampling. NA = not applicable.

[5] HANDLING: Most NIOSH or OSHA methods indicate that samples are stable at room temperature, however, because shipping temperatures vary - Travelers IH Lab recommends shipping samples cold overnight to the Lab.

[6] REFERENCE METHOD: Analytical methods are based on the listed references, but may be modified at the discretion of Travelers.



INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM)		Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
				TWA	STEL			
Diethylene glycol monoethyl ether	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	N	3 / 10	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified OSHA PV2013
		GC-U	Passive Sampler: Assay 566 OVM			N	30-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.
CAS#: 111-90-0							No interferences reported.	
Diethylene glycol monoethyl ether acetate	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	N	3 / 10	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified OSHA PV2013
		GC-U	Passive Sampler: Assay 566 OVM			N	60-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.
CAS#: 112-15-2							No interferences reported.	
Diethylene glycol monomethyl ether	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	N	3 / 10	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified OSHA PV2013
		GC-U	Passive Sampler: Assay 566 OVM			N	60-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.
CAS#: 111-77-3							No interferences reported.	
Diethylene triamine	\$100.00	NONE	Sorbent Tubes: 226-30-18 Coated XAD-2 tube	0.025 / 0.10	N	6 / 20	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-LC-14: Modified NIOSH 2540
		GC-U	Passive Sampler: Assay 566 OVM			N	15-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.
CAS#: 111-40-0							Other amine compounds may interfere, note presence on the sampling datasheet.	
Di-(2-ethylhexyl) phthalate	\$75.00	GCPH	Filter & Tube: 226-56 Tenax OVS	0.50 / 1.0	N	50 / 300	The sampler contains a filter and sorbent material in a single tube. After sampling, cap both ends of the sampler. Refrigerate samples after collection and ship cold overnight to the Lab.	TIC-GC-27: Modified OSHA 104
		GC-U	Passive Sampler: Assay 566 OVM			N	15-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.
CAS#: 117-81-7							Other phthalates will collect, note presence on the sampling datasheet.	
Diisobutyl ketone	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	N	3 / 25	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1300
		GC-U	Passive Sampler: Assay 566 OVM			N	15-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.
CAS#: 108-83-8							No interferences reported.	

[1] ADDITIONAL ANALYTES: Because it is often possible to collect more than one analyte on certain sampling media, the charges for analysis of additional analytes are discounted as follows:
 Organic Solvents \$35.00 Acids/Anions \$44.00 Metals by ICP \$28.00
 Isocyanates \$60.00 Aldehydes \$60.00 Silica (see below) \$20.00
 Particulate, quartz and cristobalite on the same air sample is \$105.00 per sample. Acid treatment to remove interferences is an additional \$30 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together. NONE indicates that the analyte must be sampled alone. If sampling for two or more compounds, adhere to the flow rates/air volumes, or sampling times for EACH compound.

[3] PASSIVE MONITORS: Passive samplers will be billed when shipped from the Lab. Assay Organic Vapor Monitors (OVM) are \$16.00 each. Assay Ammonia or Aldehyde Monitors and SKC Methanol or Mercury Samplers are \$18.00 each. SKC Anesthetic Gas or Ethylene Oxide Samplers are \$20.00 each.

[4] VOLUME/TIME: Recommended Air Volume in Liters for active sampling or Sampling Time in minutes for passive sampling. NA = not applicable.

[5] HANDLING: Most NIOSH or OSHA methods indicate that samples are stable at room temperature, however, because shipping temperatures vary - Travelers IH Lab recommends shipping samples cold overnight to the Lab.

[6] REFERENCE METHOD: Analytical methods are based on the listed references, but may be modified at the discretion of Travelers.



INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM)		Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
				TWA	STEL			
1,2-Dimethoxyethane	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	0.2	8 / 20	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1400
		GC-U	Passive Sampler: Assay 566 OVM		N	15-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab. Isopropyl alcohol, dichloromethane and dimethyl ether may interfere, note presence on the sampling datasheet.	
CAS#: 110-71-4								
Dimethyl acetamide	\$64.00	GC 12	Sorbent Tubes: 226-10 Silica gel tube	0.01 / 1.0	N	3 / 80	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-53: Modified NIOSH 2004
		GC-U	Passive Sampler: Assay 566 OVM		N	60-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab. No interferences reported.	
CAS#: 127-19-5								
Dimethylamine	\$100.00	NONE	Sorbent Tubes: 226-96 Coated XAD-7 tube	0.10 / 0.20	0.2	5 / 10	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-LC-07: Modified OSHA 34
							Other amine compounds may interfere, note presence on the sampling datasheet.	
CAS#: 124-40-3								
Dimethyl disulfide	\$120.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.10	N	16 / 20	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified OSHA In House Method
							No interferences reported.	
CAS#: 624-92-0								
Dimethylformamide	\$64.00	GC 12	Sorbent Tubes: 226-10 Silica gel tube	0.05 / 1.0	N	4 / 80	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-53: Modified NIOSH 2004
		GC-H	Passive Sampler: Assay 566 OVM		N	180-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 68-12-2								
Dimethyl phthalate	\$75.00	GCPH	Filter & Tube: 226-56 Tenax OVS	0.50 / 1.0	N	50 / 300	The sampler contains a filter and sorbent material in a single tube. After sampling, cap both ends of the sampler. Refrigerate samples after collection and ship cold overnight to the Lab.	TIC-GC-27: Modified OSHA 104
							Other phthalates will collect, note presence on the sampling datasheet.	

[1] ADDITIONAL ANALYTES: Because it is often possible to collect more than one analyte on certain sampling media, the charges for analysis of additional analytes are discounted as follows:
 Organic Solvents \$35.00 Acids/Anions \$44.00 Metals by ICP \$28.00
 Isocyanates \$60.00 Aldehydes \$60.00 Silica (see below) \$20.00
 Particulate, quartz and cristobalite on the same air sample is \$105.00 per sample. Acid treatment to remove interferences is an additional \$30 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together. NONE indicates that the analyte must be sampled alone. If sampling for two or more compounds, adhere to the flow rates/air volumes, or sampling times for EACH compound.

[3] PASSIVE MONITORS: Passive samplers will be billed when shipped from the Lab. Assay Organic Vapor Monitors (OVM) are \$16.00 each. Assay Ammonia or Aldehyde Monitors and SKC Methanol or Mercury Samplers are \$18.00 each. SKC Anesthetic Gas or Ethylene Oxide Samplers are \$20.00 each.

[4] VOLUME/TIME: Recommended Air Volume in Liters for active sampling or Sampling Time in minutes for passive sampling. NA = not applicable.

[5] HANDLING: Most NIOSH or OSHA methods indicate that samples are stable at room temperature, however, because shipping temperatures vary - Travelers IH Lab recommends shipping samples cold overnight to the Lab.

[6] REFERENCE METHOD: Analytical methods are based on the listed references, but may be modified at the discretion of Travelers.



INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM)		Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
				TWA	STEL			
Dimethyl sulfide	\$120.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.10	N	10 / 12	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified OSHA PV2210
CAS#: 75-18-3							No interferences reported.	
Di-n-octyl phthalate	\$75.00	GCPH	Filter & Tube: 226-56 Tenax OVS	0.50 / 1.0	N	50 / 300	Routine shipping. The sampler contains a filter and sorbent material in a single tube. After sampling, cap both ends of the sampler.	TIC-GC-27: Modified OSHA 104
CAS#: 117-84-0							Other phthalates will collect, note presence on the sampling datasheet.	
1,4-Dioxane	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	N	0.5 / 15	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1602
		GC-U	Passive Sampler: Assay 566 OVM		N	15-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 123-91-1							No interferences reported.	
1,3-Dioxolane	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.05 / 0.20	N	6 / 15	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: In House Method
		GC-U	Passive Sampler: Assay 566 OVM		N	60-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 646-06-0							No interferences reported.	
Dipropylene glycol methyl ether	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.05 / 0.10	0.1	1 / 10	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified OSHA 101
		GC-U	Passive Sampler: Assay 566 OVM		N	15-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 34590-94-8							No interferences reported.	
Dipropylene glycol methyl ether acetate	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	N	6 / 10	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified OSHA 101
		GC-U	Passive Sampler: Assay 566 OVM		N	60-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 88917-22-0							No interferences reported.	

[1] ADDITIONAL ANALYTES: Because it is often possible to collect more than one analyte on certain sampling media, the charges for analysis of additional analytes are discounted as follows:
 Organic Solvents \$35.00 Acids/Anions \$44.00 Metals by ICP \$28.00
 Isocyanates \$60.00 Aldehydes \$60.00 Silica (see below) \$20.00
 Particulate, quartz and cristobalite on the same air sample is \$105.00 per sample. Acid treatment to remove interferences is an additional \$30 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together. NONE indicates that the analyte must be sampled alone. If sampling for two or more compounds, adhere to the flow rates/air volumes, or sampling times for EACH compound.

[3] PASSIVE MONITORS: Passive samplers will be billed when shipped from the Lab. Assay Organic Vapor Monitors (OVM) are \$16.00 each. Assay Ammonia or Aldehyde Monitors and SKC Methanol or Mercury Samplers are \$18.00 each. SKC Anesthetic Gas or Ethylene Oxide Samplers are \$20.00 each.

[4] VOLUME/TIME: Recommended Air Volume in Liters for active sampling or Sampling Time in minutes for passive sampling. NA = not applicable.

[5] HANDLING: Most NIOSH or OSHA methods indicate that samples are stable at room temperature, however, because shipping temperatures vary - Travelers IH Lab recommends shipping samples cold overnight to the Lab.

[6] REFERENCE METHOD: Analytical methods are based on the listed references, but may be modified at the discretion of Travelers.



INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM)		Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
				TWA	STEL			
Divinyl benzene	\$55.00	GC 11	Sorbent Tubes: 226-73 Coated Charcoal tube	0.01 / 0.05	N	2 / 12	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified OSHA 89
CAS#: 1321-74-0							No interferences reported.	
Elemental & Organic Carbon	\$62.00	NONE	Filter: DPM Cassette-Elemental & Organic Carbon	2.0 / 3.0	N	150 / 1920	Analysis is subcontracted to an AIHA Accredited Laboratory. Price is for Elemental and Organic Carbon on a single sample.	NIOSH 5040
CAS#: varies							No interferences reported.	
Enflurane	\$77.00	AnestCS2	Sorbent Tubes: 226-83 Anasorb 747 tube	0.05	0.05	2 / 14	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-02: Modified OSHA 103
		GC-E	Passive Sampler: SKC 575-002 Anasorb 747 Sampler		N	30-240 mins	Refrigerate samples after collection and ship cold overnight to the Lab. Cannot quantify low enough for comparison to OSHA target or NIOSH REL.	
CAS#: 13838-16-9							No interferences reported.	
Epichlorohydrin	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	N	30	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1010
		GC-U	Passive Sampler: Assay 566 OVM		N	480-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 106-89-8							No interferences reported.	
Ethanolamine	\$100.00	IC 2	Sorbent Tubes: 226-98 Coated XAD-7 tube	0.20	0.2	50 / 96	Routine shipping.	TIC-IC-11: Modified NIOSH 3509
CAS#: 141-43-5							Other amine compounds may interfere, note presence on the sampling datasheet.	
2-Ethoxyethanol	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.10	N	16 / 48	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified OSHA 53/NIOSH 1403
		GC-U	Passive Sampler: Assay 566 OVM		N	60-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 110-80-5							No interferences reported.	
2-Ethoxyethyl acetate	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.10	N	10 / 48	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1450
CAS#: 111-15-9							No interferences reported.	

[1] ADDITIONAL ANALYTES: Because it is often possible to collect more than one analyte on certain sampling media, the charges for analysis of additional analytes are discounted as follows:
 Organic Solvents \$35.00 Acids/Anions \$44.00 Metals by ICP \$28.00
 Isocyanates \$60.00 Aldehydes \$60.00 Silica (see below) \$20.00
 Particulate, quartz and cristobalite on the same air sample is \$105.00 per sample. Acid treatment to remove interferences is an additional \$30 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together. NONE indicates that the analyte must be sampled alone. If sampling for two or more compounds, adhere to the flow rates/air volumes, or sampling times for EACH compound.

[3] PASSIVE MONITORS: Passive samplers will be billed when shipped from the Lab.
 Assay Organic Vapor Monitors (OVM) are \$16.00 each.
 Assay Ammonia or Aldehyde Monitors and SKC Methanol or Mercury Samplers are \$18.00 each.
 SKC Anesthetic Gas or Ethylene Oxide Samplers are \$20.00 each.

[4] VOLUME/TIME: Recommended Air Volume in Liters for active sampling or Sampling Time in minutes for passive sampling. NA = not applicable.

[5] HANDLING: Most NIOSH or OSHA methods indicate that samples are stable at room temperature, however, because shipping temperatures vary - Travelers IH Lab recommends shipping samples cold overnight to the Lab.

[6] REFERENCE METHOD: Analytical methods are based on the listed references, but may be modified at the discretion of Travelers.



INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM)		Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
				TWA	STEL			
Ethyl acetate	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	N	1 / 10	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1457
		GC-U	Passive Sampler: Assay 566 OVM		N	15-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 141-78-6							No interferences reported.	
Ethyl acrylate	\$55.00	GC 4	Sorbent Tubes: 226-73 Coated Charcoal tube	0.01 / 0.05	0.05	6 / 12	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-01: Modified OSHA 92
		GC-U	Passive Sampler: Assay 566 OVM		Y	30-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 140-88-5							No interferences reported.	
Ethyl alcohol	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.05	0.05	1 / 3	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1400
		GC-U	Passive Sampler: Assay 566 OVM		Y	15-180 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 64-17-5							Dichloromethane (methylene chloride) may interfere, note presence on the sampling datasheet.	
Ethylamine	\$100.00	AMINE3	Sorbent Tubes: 226-96 Coated XAD-7 tube	0.01 / 0.20	0.2	6 / 10	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-LC-07: Modified OSHA 36
CAS#: 75-04-7							Other amine compounds may interfere, note presence on the sampling datasheet.	
Ethyl amyl ketone	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	N	5 / 25	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1301
CAS#: 106-68-3							No interferences reported.	
Ethyl benzene	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	N	3 / 24	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1501
		GC-U	Passive Sampler: Assay 566 OVM		N	30-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 100-41-4							No interferences reported.	

[1] ADDITIONAL ANALYTES: Because it is often possible to collect more than one analyte on certain sampling media, the charges for analysis of additional analytes are discounted as follows:
 Organic Solvents \$35.00 Acids/Anions \$44.00 Metals by ICP \$28.00
 Isocyanates \$60.00 Aldehydes \$60.00 Silica (see below) \$20.00
 Particulate, quartz and cristobalite on the same air sample is \$105.00 per sample. Acid treatment to remove interferences is an additional \$30 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together. NONE indicates that the analyte must be sampled alone. If sampling for two or more compounds, adhere to the flow rates/air volumes, or sampling times for EACH compound.

[3] PASSIVE MONITORS: Passive samplers will be billed when shipped from the Lab.
 Assay Organic Vapor Monitors (OVM) are \$16.00 each.
 Assay Ammonia or Aldehyde Monitors and SKC Methanol or Mercury Samplers are \$18.00 each.
 SKC Anesthetic Gas or Ethylene Oxide Samplers are \$20.00 each.

[4] VOLUME/TIME: Recommended Air Volume in Liters for active sampling or Sampling Time in minutes for passive sampling. NA = not applicable.

[5] HANDLING: Most NIOSH or OSHA methods indicate that samples are stable at room temperature, however, because shipping temperatures vary - Travelers IH Lab recommends shipping samples cold overnight to the Lab.

[6] REFERENCE METHOD: Analytical methods are based on the listed references, but may be modified at the discretion of Travelers.



INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM)		Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
				TWA	STEL			
Ethyl butyl ketone	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	0.2	3 / 25	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1301
CAS#: 106-35-4							No interferences reported.	
Ethyl cyanoacrylate	\$95.00	CYANO	Sorbent Tubes: 226-98 Coated XAD-7 tube	0.05 / 0.10	N	20 / 24	Ship overnight to the Lab on DRY ICE. Methyl and ethyl cyanoacrylate can be sampled on the same tube.	TIC-LC-21: Modified OSHA 55
CAS#: 7085-85-0							No interferences reported.	
Ethylenediamine	\$100.00	NONE	Sorbent Tubes: 226-30-18 Coated XAD-2 tube	0.01 / 0.10	N	1 / 10	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-LC-14: Modified OSHA 60
CAS#: 107-15-3							Other amine compounds may interfere, note presence on the sampling datasheet.	
Ethylene glycol	\$75.00	GC 12	Filter & Tube: 226-57 XAD-7 OVS	0.50 / 2.0	2.0	20 / 60	The sampler contains a filter and sorbent material in a single tube. After sampling, cap both ends of the sampler. Refrigerate samples after collection and ship cold overnight to the Lab.	TIC-GC-17: Modified OSHA Stopgap / NIOSH 5523
CAS#: 107-21-1							No interferences reported.	
Ethylene oxide	\$105.00	NONE	Sorbent Tubes: 226-178 Coated Anasorb 747 tube	0.02 / 0.05	0.05	8 / 24	Keep media frozen before and after sampling and ship samples cold overnight to the Lab.	TIC-GC-34: Modified OSHA 1010
		NONE	Passive Sampler: SKC 575-005 ETO Sampler		N	180-480 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 75-21-8							2-Bromoethanol is a positive interference, note presence on the sampling datasheet.	
Ethyl ether	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	0.2	1 / 3	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1610
		GC-U	Passive Sampler: Assay 566 OVM		Y	15-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 60-29-7							HCFCs or hexane may interfere, note presence on the sampling datasheet.	
Ethyl-3-ethoxypropionate	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.10	N	2 / 10	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified OSHA PV2025
CAS#: 763-69-9							No interferences reported.	
Ethyl formate	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	0.2	1 / 10	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1452
CAS#: 109-94-4							No interferences reported.	

[1] ADDITIONAL ANALYTES: Because it is often possible to collect more than one analyte on certain sampling media, the charges for analysis of additional analytes are discounted as follows:

Organic Solvents	\$35.00	Acids/Anions	\$44.00	Metals by ICP	\$28.00
Isocyanates	\$60.00	Aldehydes	\$60.00	Silica (see below)	\$20.00

Particulate, quartz and cristobalite on the same air sample is \$105.00 per sample. Acid treatment to remove interferences is an additional \$30 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together. NONE indicates that the analyte must be sampled alone. If sampling for two or more compounds, adhere to the flow rates/air volumes, or sampling times for EACH compound.

[3] PASSIVE MONITORS: Passive samplers will be billed when shipped from the Lab. Assay Organic Vapor Monitors (OVM) are \$16.00 each. Assay Ammonia or Aldehyde Monitors and SKC Methanol or Mercury Samplers are \$18.00 each. SKC Anesthetic Gas or Ethylene Oxide Samplers are \$20.00 each.

[4] VOLUME/TIME: Recommended Air Volume in Liters for active sampling or Sampling Time in minutes for passive sampling. NA = not applicable.

[5] HANDLING: Most NIOSH or OSHA methods indicate that samples are stable at room temperature, however, because shipping temperatures vary - Travelers IH Lab recommends shipping samples cold overnight to the Lab.

[6] REFERENCE METHOD: Analytical methods are based on the listed references, but may be modified at the discretion of Travelers.



INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM)		Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
				TWA	STEL			
2-Ethylhexyl acrylate	\$55.00	GC 4	Sorbent Tubes: 226-73 Coated Charcoal tube	0.01 / 0.10	N	8 / 12	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-01: Modified OSHA PV2026
		GC-U	Passive Sampler: Assay 566 OVM		N	60-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 103-11-7							No interferences reported.	
Ethyl lactate	\$55.00	GC 9	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	N	8 / 12	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-73: Modified OSHA PV2081
		GC-H	Passive Sampler: Assay 566 OVM		N	60-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 97-64-3							No interferences reported.	
Ethyl methacrylate	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.05 / 0.20	N	6 / 10	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified OSHA PV2100
		GC-U	Passive Sampler: Assay 566 OVM		N	60-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 97-63-2							No interferences reported.	
Ethyl silicate	\$60.00	NONE	Sorbent Tubes: 226-30-04 XAD-2 tube	0.02 / 0.05	N	3 / 9	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-07: Modified NIOSH S264
							Other compounds may interfere. Note any compounds present in the sampling environment on the sampling datasheet.	
CAS#: 78-10-4								
Fibers, Total	\$35.00	NONE	Filter: Fiber Count Filter (PCM) non-conductive cowl (25 mm) - Open-faced	1.0 / 3.0	N	240 / 960	Routine shipping.	TIC-PCM-01: NIOSH 7400 Issue 3
							Fibers meeting the counting criteria will be included in the results. Avoid overloading the filter, accurate counts are not possible with overloaded filters.	
CAS#: varies								
Fluoride particulate as F, Insoluble	\$120.00	NONE	Filter: Hydrogen Fluoride (HFO) Filter	1.0 / 2.0	N	500 / 800	Request INSOLUBLE FLUORIDE PARTICULATE. If Hydrogen Fluoride is also desired, request Insoluble Fluoride Particulate and Hydrogen Fluoride as F. Price listed is for Fluoride Particulate only.	TIC-IC-14: Modified OSHA ID-110
							Caustic compounds such as NaOH or KOH may cause an interference at high levels.	

[1] ADDITIONAL ANALYTES: Because it is often possible to collect more than one analyte on certain sampling media, the charges for analysis of additional analytes are discounted as follows:
 Organic Solvents \$35.00 Acids/Anions \$44.00 Metals by ICP \$28.00
 Isocyanates \$60.00 Aldehydes \$60.00 Silica (see below) \$20.00
 Particulate, quartz and cristobalite on the same air sample is \$105.00 per sample. Acid treatment to remove interferences is an additional \$30 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together. NONE indicates that the analyte must be sampled alone. If sampling for two or more compounds, adhere to the flow rates/air volumes, or sampling times for EACH compound.

[3] PASSIVE MONITORS: Passive samplers will be billed when shipped from the Lab. Assay Organic Vapor Monitors (OVM) are \$16.00 each. Assay Ammonia or Aldehyde Monitors and SKC Methanol or Mercury Samplers are \$18.00 each. SKC Anesthetic Gas or Ethylene Oxide Samplers are \$20.00 each.

[4] VOLUME/TIME: Recommended Air Volume in Liters for active sampling or Sampling Time in minutes for passive sampling. NA = not applicable.

[5] HANDLING: Most NIOSH or OSHA methods indicate that samples are stable at room temperature, however, because shipping temperatures vary - Travelers IH Lab recommends shipping samples cold overnight to the Lab.

[6] REFERENCE METHOD: Analytical methods are based on the listed references, but may be modified at the discretion of Travelers.



INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM)		Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
				TWA	STEL			
Fluoride particulate as F, Soluble	\$65.00	NONE	Filter: Hydrogen Fluoride (HFO) Filter	1.0 / 2.0	N	500 / 800	Request SOLUBLE FLUORIDE PARTICULATE. If Hydrogen Fluoride is also desired, request Soluble Fluoride Particulate and Hydrogen Fluoride as F. Price listed is for Fluoride Particulate only.	TIC-IC-14: Modified NIOSH 7906
CAS#: varies							Caustic compounds such as NaOH or KOH may cause an interference at high levels.	
Formaldehyde	\$95.00	LC-ALD1	Sorbent Tubes: 226-119 Coated silica gel tube followed by 226-09 Charcoal tube	0.05 / 0.50	0.5	10 / 25	Sample by placing 2 tubes in holders connected together. The charcoal tube (closest to the pump) collects acetonitrile from the 226-119 tube and is disposed. Keep 226-119 tube frozen before and after sampling and ship samples cold overnight to the Lab.	TIC-LC-01: Modified EPA IP-6A/NIOSH 2016
		DNPH1	Passive Sampler: Assay 571 Aldehyde Monitor		Y	360-600 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab. Call for info regarding sampling other aldehydes.	
CAS#: 50-00-0							Other aldehydes, ketones and ozone react with and consume the DNPH. Ozone can degrade the aldehyde-DNPH derivative.	
Formic acid	\$65.00	ICOA	Sorbent Tubes: ORBO 53 Specially cleaned silica gel tube	0.05 / 0.20	0.2	24	A PTFE prefilter can be used for the sampling and analysis of formate salts. Refrigerate samples after collection and ship cold overnight to the Lab.	TIC-IC-02: Modified NIOSH 2011
CAS#: 64-18-6							Formate esters and formate salts may interfere, note presence on the sampling datasheet.	
Furfural	\$55.00	NONE	Sorbent Tubes: 226-81A Anasorb 747 tube	0.10 / 1.0	N	120 / 180	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified OSHA 72
CAS#: 98-01-1							No interferences reported.	
Furfuryl alcohol	\$60.00	NONE	Sorbent Tubes: 226-115 Porapak Q tube	0.01 / 0.05	0.05	12 / 25	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-42: Modified NIOSH 2505
CAS#: 98-00-0							No interferences reported.	
Gasoline as Total Hydrocarbons	\$70.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	0.2	10 / 20	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified OSHA PV2028
		GC-U	Passive Sampler: Assay 566 OVM		Y	60-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 8006-61-9							Petroleum distillates (pds) contain several compounds. Quantitation of individual compounds or pd mixtures may not be possible. Specify the distillate on the sampling datasheet (VMP, Stoddard, etc.). If multiple pds, request Petroleum Distillate fraction.	

[1] ADDITIONAL ANALYTES: Because it is often possible to collect more than one analyte on certain sampling media, the charges for analysis of additional analytes are discounted as follows:
 Organic Solvents \$35.00 Acids/Anions \$44.00 Metals by ICP \$28.00
 Isocyanates \$60.00 Aldehydes \$60.00 Silica (see below) \$20.00
 Particulate, quartz and cristobalite on the same air sample is \$105.00 per sample. Acid treatment to remove interferences is an additional \$30 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together. NONE indicates that the analyte must be sampled alone. If sampling for two or more compounds, adhere to the flow rates/air volumes, or sampling times for EACH compound.

[3] PASSIVE MONITORS: Passive samplers will be billed when shipped from the Lab. Assay Organic Vapor Monitors (OVM) are \$16.00 each. Assay Ammonia or Aldehyde Monitors and SKC Methanol or Mercury Samplers are \$18.00 each. SKC Anesthetic Gas or Ethylene Oxide Samplers are \$20.00 each.

[4] VOLUME/TIME: Recommended Air Volume in Liters for active sampling or Sampling Time in minutes for passive sampling. NA = not applicable.

[5] HANDLING: Most NIOSH or OSHA methods indicate that samples are stable at room temperature, however, because shipping temperatures vary - Travelers IH Lab recommends shipping samples cold overnight to the Lab.

[6] REFERENCE METHOD: Analytical methods are based on the listed references, but may be modified at the discretion of Travelers.



INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM)		Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
				TWA	STEL			
Glutaraldehyde	\$95.00	LC-ALD1	Sorbent Tubes: 226-119 Coated silica gel tube followed by 226-09 Charcoal tube	0.05 / 0.50	0.5	1 / 30	Sample by placing 2 tubes in holders connected together. The charcoal tube (closest to the pump) collects acetonitrile from the 226-119 tube and is disposed. Keep 226-119 tube frozen before and after sampling and ship samples cold overnight to the Lab.	TIC-LC-01: Modified EPA IP-6A/NIOSH 2532
		DNPH1	Passive Sampler: Assay 571 Aldehyde Monitor		N	180-600 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab. Call for info regarding sampling other aldehydes.	
CAS#: 111-30-8							Other aldehydes, ketones and ozone react with and consume the DNPH. Ozone can degrade the aldehyde-DNPH derivative.	
Halothane	\$77.00	AnestCS2	Sorbent Tubes: 226-83 Anasorb 747 tube	0.05	0.05	2 / 19	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-02: Modified OSHA 103
		GC-E	Passive Sampler: SKC 575-002 Anasorb 747 Sampler		N	30-480 mins	Refrigerate samples after collection and ship cold overnight to the Lab. Cannot quantify low enough for comparison to OSHA target or NIOSH REL.	
CAS#: 151-67-7							No interferences reported.	
n-Heptane	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	0.2	2 / 4	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1500
		GC-U	Passive Sampler: Assay 566 OVM		Y	15-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 142-82-5							No interferences reported.	
Hexachloroethane	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	N	16 / 70	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1003
CAS#: 67-72-1							No interferences reported.	
1,6-Hexamethylene diisocyanate	\$95.00	NCO	Filter: Isocyanate (NCO) Filter - Open-faced	0.50 / 1.0	1.0	120 / 240	Keep media cold before sampling. Collect sample by removing the top of the 3-piece filter cassette (section w/o wagon wheel design). After sampling; replace the top of the cassette & buttons. Ship samples cold overnight to the Lab.	TIC-LC-03: Modified OSHA 42
		CAS#: 822-06-0						
							Note presence of other isocyanates in sampling environment on the sampling datasheet.	
n-Hexane	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	N	3 / 5	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1500
		GC-U	Passive Sampler: Assay 566 OVM		N	15-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 110-54-3							HCFCs or ether may interfere, note presence on the sampling datasheet.	

[1] ADDITIONAL ANALYTES: Because it is often possible to collect more than one analyte on certain sampling media, the charges for analysis of additional analytes are discounted as follows:
 Organic Solvents \$35.00 Acids/Anions \$44.00 Metals by ICP \$28.00
 Isocyanates \$60.00 Aldehydes \$60.00 Silica (see below) \$20.00
 Particulate, quartz and cristobalite on the same air sample is \$105.00 per sample. Acid treatment to remove interferences is an additional \$30 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together. NONE indicates that the analyte must be sampled alone. If sampling for two or more compounds, adhere to the flow rates/air volumes, or sampling times for EACH compound.

[3] PASSIVE MONITORS: Passive samplers will be billed when shipped from the Lab.
 Assay Organic Vapor Monitors (OVM) are \$16.00 each.
 Assay Ammonia or Aldehyde Monitors and SKC Methanol or Mercury Samplers are \$18.00 each.
 SKC Anesthetic Gas or Ethylene Oxide Samplers are \$20.00 each.

[4] VOLUME/TIME: Recommended Air Volume in Liters for active sampling or Sampling Time in minutes for passive sampling. NA = not applicable.

[5] HANDLING: Most NIOSH or OSHA methods indicate that samples are stable at room temperature, however, because shipping temperatures vary - Travelers IH Lab recommends shipping samples cold overnight to the Lab.

[6] REFERENCE METHOD: Analytical methods are based on the listed references, but may be modified at the discretion of Travelers.



INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM)		Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
				TWA	STEL			
Hexane, Other Isomers	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	0.2	1 / 5	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1500
		GC-U	Passive Sampler: Assay 566 OVM			N	15-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.
CAS#: varies							Analysis does not include n-hexane. HCFCs or ether may interfere, note presence on the sampling datasheet.	
1,6-Hexanediol diacrylate	\$55.00	NONE	Sorbent Tubes: 226-110 Chromosorb 106 tube	0.20	N	20 / 48	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified OSHA PV2133
CAS#: 13048-33-4							No interferences reported.	
Hexylene glycol	\$75.00	NONE	Sorbent Tubes: 226-09 Charcoal tube	0.025 / 0.20	0.2	4 / 9	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-57: Modified OSHA PV2101
CAS#: 107-41-5							No interferences reported.	
Hydrazine	\$110.00	NONE	Filter: PDA Filter or SKC 225-9012	0.10 / 1.0	N	40 / 240	Filters are special order and may not be readily available. After sampling avoid temperatures exceeding 90°F. Refrigerate samples after collection and ship cold overnight to the Lab.	TIC-LC-33: Modified OSHA 108
CAS#: 302-01-2							Aromatic amines and monoethylhydrazine interfere, note presence on the sampling datasheet. Ammonia does not interfere.	
Hydrazoic acid	\$80.00	NONE	Sorbent Tubes: 226-55 Coated silica gel tube	NA	1.0	5	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-IC-19: Modified OSHA ID-211
CAS#: 7782-79-8							Sodium azide converts to hydrazoic acid on contact with water. Particulate azide can be collected and analyzed using a PVC prefilter.	
Hydrogen bromide	\$65.00	IC 1	Sorbent Tubes: ORBO 53 Specially cleaned silica gel tube	0.02 / 0.20	0.5	3 / 96	Routine shipping.	TIC-IC-01: Modified OSHA ID-165SG
CAS#: 10035-10-6							Other bromide compounds may interfere, note presence on the sampling datasheet.	
Hydrogen chloride	\$65.00	IC 1	Sorbent Tubes: ORBO 53 Specially cleaned silica gel tube	0.02 / 0.20	0.5	7.5 / 96	Routine shipping.	TIC-IC-01: Modified OSHA ID-174SG
CAS#: 7647-01-0							Other chloride compounds may interfere, note presence on the sampling datasheet.	

[1] ADDITIONAL ANALYTES: Because it is often possible to collect more than one analyte on certain sampling media, the charges for analysis of additional analytes are discounted as follows:
 Organic Solvents \$35.00 Acids/Anions \$44.00 Metals by ICP \$28.00
 Isocyanates \$60.00 Aldehydes \$60.00 Silica (see below) \$20.00
 Particulate, quartz and cristobalite on the same air sample is \$105.00 per sample. Acid treatment to remove interferences is an additional \$30 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together. NONE indicates that the analyte must be sampled alone. If sampling for two or more compounds, adhere to the flow rates/air volumes, or sampling times for EACH compound.

[3] PASSIVE MONITORS: Passive samplers will be billed when shipped from the Lab.
 Assay Organic Vapor Monitors (OVM) are \$16.00 each.
 Assay Ammonia or Aldehyde Monitors and SKC Methanol or Mercury Samplers are \$18.00 each.
 SKC Anesthetic Gas or Ethylene Oxide Samplers are \$20.00 each.

[4] VOLUME/TIME: Recommended Air Volume in Liters for active sampling or Sampling Time in minutes for passive sampling. NA = not applicable.

[5] HANDLING: Most NIOSH or OSHA methods indicate that samples are stable at room temperature, however, because shipping temperatures vary - Travelers IH Lab recommends shipping samples cold overnight to the Lab.

[6] REFERENCE METHOD: Analytical methods are based on the listed references, but may be modified at the discretion of Travelers.



INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM)		Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
				TWA	STEL			
Hydrogen cyanide	\$85.00	NONE	Filter & Tube: 226-210 Sorbent Tube, soda lime w/built in fiberglass plug	0.20	0.2	15 / 120	Routine shipping. The sampler contains a fiberglass plug and sorbent material in a single tube. After sampling, cap both ends of the sampler. Particulate cyanide (cyanide salts) is collected on the fiberglass plug and can be analyzed for an additional \$75. Hydrogen sulfide is a potential interference, note presence on the sampling datasheet.	TIC-IC-12: Modified NIOSH 6017
CAS#: 74-90-8								
Hydrogen fluoride as F	\$65.00	NONE	Filter: Hydrogen Fluoride (HFO) Filter	1.0 / 2.0	N	500 / 800	Request HYDROGEN FLUORIDE AS F on the sampling datasheet. Fluoride Particulate can also be analyzed (see Fluoride Particulate). Price listed is for Hydrogen Fluoride only.	TIC-IC-14: Modified OSHA ID-110
CAS#: 7664-39-3								
Hydrogen peroxide	\$85.00	NONE	Filter: Hydrogen Peroxide Filter	1.0 / 2.0	N	60 / 240	Caustic compounds such as NaOH or KOH may cause an interference at high levels. Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-IC-20: Modified OSHA 1019
CAS#: 7722-84-1								
Hydrogen sulfide	\$65.00	NONE	Filter & Tube: PTFE Filter followed by an ORBO 34 special charcoal tube	0.10 / 0.20	1.5	40 / 50	No interferences reported. Samples are collected by connecting a filter cassette to a sorbent tube (closest to the pump). After sampling, separate and cap both ends of the the cassette and tube. Refrigerate samples after collection and ship cold overnight to the Lab.	TIC-IC-04: Modified NIOSH 6013
CAS#: 7783-06-4								
Hydroquinone	\$88.00	NONE	Filter: MCE Filter (37 mm)	1.0 / 3.0	N	60 / 180	Sulfur dioxide (SO2) is a positive interference, note presence on the sampling datasheet. The filter removes particulate sulfates and is not normally analyzed, but it can be analyzed for particulate sulfates if requested. TRANSFER FILTER TO PLASTIC VIAL CONTAINING 1% ACETIC ACID IMMEDIATELY AFTER SAMPLING. Hydroquinone is unstable on the collection media and MUST be stabilized with 1% acetic acid immediately after sampling.	TIC-LC-17: Modified NIOSH 5004
CAS#: 123-31-9								
2-Hydroxyethyl methacrylate	\$55.00	GC 9	Sorbent Tubes: 226-09 Charcoal tube	0.20	N	10	No interferences reported. Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-71: Modified OSHA In House Method
CAS#: 868-77-9								
Indium	\$36.00	ICP 001	Filter: MCE Filter (37 mm)	1.0 / 3.0	N	480 / 960	No interferences reported. Routine shipping. May be sampled using a PVC filter if particulate is also desired.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
CAS#: 7440-74-6								

[1] ADDITIONAL ANALYTES: Because it is often possible to collect more than one analyte on certain sampling media, the charges for analysis of additional analytes are discounted as follows:
 Organic Solvents \$35.00 Acids/Anions \$44.00 Metals by ICP \$28.00
 Isocyanates \$60.00 Aldehydes \$60.00 Silica (see below) \$20.00
 Particulate, quartz and cristobalite on the same air sample is \$105.00 per sample. Acid treatment to remove interferences is an additional \$30 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together. NONE indicates that the analyte must be sampled alone. If sampling for two or more compounds, adhere to the flow rates/air volumes, or sampling times for EACH compound.

[3] PASSIVE MONITORS: Passive samplers will be billed when shipped from the Lab.
 Assay Organic Vapor Monitors (OVM) are \$16.00 each.
 Assay Ammonia or Aldehyde Monitors and SKC Methanol or Mercury Samplers are \$18.00 each.
 SKC Anesthetic Gas or Ethylene Oxide Samplers are \$20.00 each.

[4] VOLUME/TIME: Recommended Air Volume in Liters for active sampling or Sampling Time in minutes for passive sampling. NA = not applicable.

[5] HANDLING: Most NIOSH or OSHA methods indicate that samples are stable at room temperature, however, because shipping temperatures vary - Travelers IH Lab recommends shipping samples cold overnight to the Lab.

[6] REFERENCE METHOD: Analytical methods are based on the listed references, but may be modified at the discretion of Travelers.



INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM)		Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
				TWA	STEL			
Inhalable particulate	\$27.00	GRAV 003	Filter: DRS containing a Preweighed PVC Filter	2.0	N	960	Routine shipping. Flow rate of 2.0 liters per minute is CRITICAL. Disposable Respirable Sampler (DRS) MUST have the fom plug removed prior to sampling for inhalable particulate. DRS samplers are billed \$17 each when shipped. Gravimetric method nonspecific, all particulate matter in the sampling environment is collected and quantified.	TIC-GRV-01: Modified NIOSH 0500
CAS#: varies								
Inorganic Acid Scan	\$165.00	IC 1	Sorbent Tubes: ORBO 53 Specially cleaned silica gel tube	0.02 / 0.20	0.5	30 / 96	Routine shipping. Analysis includes hydrobromic, hydrochloric, nitric, phosphoric and sulfuric acids. Other bromide, chloride, nitrate, phosphate, and sulfate compounds may interfere.	TIC-IC-01: Modified OSHA ID-165SG/OSHA ID-174SG
CAS#: varies								
Iodine	\$60.00	NONE	Sorbent Tubes: 226-80 Coated Anasorb 747 tube	0.02 / 0.50	0.5	2.5 / 15	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab. Gaseous or particulate iodide compounds may interfere, note presence on the sampling datasheet. Loss of iodine has been noted when sampling in > 50% RH.	TIC-IC-10: Modified OSHA ID-212
CAS#: 7553-56-2								
Iron	\$36.00	ICP 001	Filter: MCE Filter (37 mm)	1.0 / 3.0	N	120 / 960	Routine shipping. May be sampled using a PVC filter if particulate is also desired. No interferences reported.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
CAS#: 7439-89-6								
Iron oxide as Fe2O3	\$36.00	ICP 001	Filter: MCE Filter (37 mm)	1.0 / 3.0	N	120 / 960	Routine shipping. If Total particulate is also desired, sample using a Preweighed PVC filter. Respirable samples may be collected on a Preweighed DRS filter (2.0 LPM flow rate) – see Respirable particulate instructions. All sources of iron are included in the result.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
CAS#: 1309-37-1								
Iron oxide as Fe2O3 in the presence of Tungsten	\$60.00	WINSOL	Filter: MCE Filter (37 mm)	1.0 / 3.0	N	120 / 960	Routine shipping. Request IN THE PRESENCE OF TUNGSTEN on the sampling datasheet. Tungsten can also be quantified if requested.	TIC-ICP-02: Modified OSHA ID-213
CAS#: 1309-37-1								
Isoamyl acetate	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	0.2	3 / 10	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab. No interferences reported.	TIC-GC-86: Modified NIOSH 1450
CAS#: 123-92-2								
Isoamyl alcohol	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.02 / 0.20	0.2	3 / 10	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab. GC-U Passive Sampler: Assay 566 OVM	TIC-GC-86: Modified NIOSH 1402
CAS#: 123-51-3								

[1] ADDITIONAL ANALYTES: Because it is often possible to collect more than one analyte on certain sampling media, the charges for analysis of additional analytes are discounted as follows:
 Organic Solvents \$35.00 Acids/Anions \$44.00 Metals by ICP \$28.00
 Isocyanates \$60.00 Aldehydes \$60.00 Silica (see below) \$20.00
 Particulate, quartz and cristobalite on the same air sample is \$105.00 per sample. Acid treatment to remove interferences is an additional \$30 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together. NONE indicates that the analyte must be sampled alone. If sampling for two or more compounds, adhere to the flow rates/air volumes, or sampling times for EACH compound.

[3] PASSIVE MONITORS: Passive samplers will be billed when shipped from the Lab. Assay Organic Vapor Monitors (OVM) are \$16.00 each. Assay Ammonia or Aldehyde Monitors and SKC Methanol or Mercury Samplers are \$18.00 each. SKC Anesthetic Gas or Ethylene Oxide Samplers are \$20.00 each.

[4] VOLUME/TIME: Recommended Air Volume in Liters for active sampling or Sampling Time in minutes for passive sampling. NA = not applicable.

[5] HANDLING: Most NIOSH or OSHA methods indicate that samples are stable at room temperature, however, because shipping temperatures vary - Travelers IH Lab recommends shipping samples cold overnight to the Lab.

[6] REFERENCE METHOD: Analytical methods are based on the listed references, but may be modified at the discretion of Travelers.



INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM)		Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
				TWA	STEL			
Isobutyl acetate	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	0.2	3 / 10	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1450
		GC-U	Passive Sampler: Assay 566 OVM		Y	15-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 110-19-0							No interferences reported.	
Isobutyl alcohol	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	N	2 / 10	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1401
		GC-U	Passive Sampler: Assay 566 OVM		N	15-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 78-83-1							No interferences reported.	
Isocyanate Scan	\$220.00	NCO	Filter: Isocyanate (NCO) Filter - Open-faced	0.50 / 1.0	1.0	240	Keep media cold before sampling. Collect sample by removing the top of the 3-piece filter cassette (section w/o wagon wheel design). After sampling; replace the top of the cassette & buttons. Ship samples cold overnight to the Lab.	TIC-LC-03: Modified OSHA 42/OSHA 47/OSHA PV2034
							Scan includes HDI, 2,4-TDI, 2,6-TDI, MDI and IPDI. Note presence of other isocyanates in sampling environment on the sampling datasheet.	
CAS#: varies								
Isoflurane	\$77.00	AnestCS2	Sorbent Tubes: 226-83 Anasorb 747 tube	0.05	0.05	2 / 17	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-02: Modified OSHA 103
		GC-E	Passive Sampler: SKC 575-002 Anasorb 747 Sampler		N	30-480 mins	Refrigerate samples after collection and ship cold overnight to the Lab.	
CAS#: 26675-46-7							No interferences reported.	
Isooctane	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	N	2 / 4	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: In House Method
		GC-U	Passive Sampler: Assay 566 OVM		N	15-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 540-84-1							No interferences reported.	
Isooctyl alcohol	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	N	3 / 10	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified OSHA PV2033
CAS#: 26952-21-6							No interferences reported.	

[1] ADDITIONAL ANALYTES: Because it is often possible to collect more than one analyte on certain sampling media, the charges for analysis of additional analytes are discounted as follows:
 Organic Solvents \$35.00 Acids/Anions \$44.00 Metals by ICP \$28.00
 Isocyanates \$60.00 Aldehydes \$60.00 Silica (see below) \$20.00
 Particulate, quartz and cristobalite on the same air sample is \$105.00 per sample. Acid treatment to remove interferences is an additional \$30 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together. NONE indicates that the analyte must be sampled alone. If sampling for two or more compounds, adhere to the flow rates/air volumes, or sampling times for EACH compound.

[3] PASSIVE MONITORS: Passive samplers will be billed when shipped from the Lab. Assay Organic Vapor Monitors (OVM) are \$16.00 each. Assay Ammonia or Aldehyde Monitors and SKC Methanol or Mercury Samplers are \$18.00 each. SKC Anesthetic Gas or Ethylene Oxide Samplers are \$20.00 each.

[4] VOLUME/TIME: Recommended Air Volume in Liters for active sampling or Sampling Time in minutes for passive sampling. NA = not applicable.

[5] HANDLING: Most NIOSH or OSHA methods indicate that samples are stable at room temperature, however, because shipping temperatures vary - Travelers IH Lab recommends shipping samples cold overnight to the Lab.

[6] REFERENCE METHOD: Analytical methods are based on the listed references, but may be modified at the discretion of Travelers.



INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM)		Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
				TWA	STEL			
Isophorone	\$55.00	GC14	Sorbent Tubes: 226-81A Anasorb 747 tube	0.02 / 1.0	1.0	6 / 25	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 2508
		GC-U	Passive Sampler: Assay 566 OVM		N	30-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 78-59-1							No interferences reported.	
Isophorone diisocyanate	\$95.00	NCO	Filter: Isocyanate (NCO) Filter - Open-faced	0.50 / 1.0	1.0	120 / 240	Keep media cold before sampling. Collect sample by removing the top of the 3-piece filter cassette (section w/o wagon wheel design). After sampling; replace the top of the cassette & buttons. Ship samples cold overnight to the Lab.	TIC-LC-03: Modified OSHA PV2034
							Note presence of other isocyanates in sampling environment on the sampling datasheet.	
CAS#: 4098-71-9								
Isopropyl acetate	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.02 / 0.20	0.2	1 / 9	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1454
		GC-U	Passive Sampler: Assay 566 OVM			Y	15-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.
CAS#: 108-21-4							No interferences reported.	
Isopropyl alcohol	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	0.2	1 / 3	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1400
		GC-U	Passive Sampler: Assay 566 OVM			Y	15-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.
CAS#: 67-63-0							No interferences reported.	
Isopropyl ether	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.05	0.05	1 / 3	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1618
		GC-U	Passive Sampler: Assay 566 OVM			Y	15-420 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.
CAS#: 108-20-3							No interferences reported.	
Kerosene as Total Hydrocarbons	\$70.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	N	20	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified OSHA 48
							Petroleum distillates (pds) contain several compounds. Quantitation of individual compounds or pd mixtures may not be possible. Specify the distillate on the sampling datasheet (VMP, Stoddard, etc.). If multiple pds, request Petroleum Distillate fraction.	
CAS#: 8008-20-6								

[1] ADDITIONAL ANALYTES: Because it is often possible to collect more than one analyte on certain sampling media, the charges for analysis of additional analytes are discounted as follows:
 Organic Solvents \$35.00 Acids/Anions \$44.00 Metals by ICP \$28.00
 Isocyanates \$60.00 Aldehydes \$60.00 Silica (see below) \$20.00
 Particulate, quartz and cristobalite on the same air sample is \$105.00 per sample. Acid treatment to remove interferences is an additional \$30 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together. NONE indicates that the analyte must be sampled alone. If sampling for two or more compounds, adhere to the flow rates/air volumes, or sampling times for EACH compound.

[3] PASSIVE MONITORS: Passive samplers will be billed when shipped from the Lab. Assay Organic Vapor Monitors (OVM) are \$16.00 each. Assay Ammonia or Aldehyde Monitors and SKC Methanol or Mercury Samplers are \$18.00 each. SKC Anesthetic Gas or Ethylene Oxide Samplers are \$20.00 each.

[4] VOLUME/TIME: Recommended Air Volume in Liters for active sampling or Sampling Time in minutes for passive sampling. NA = not applicable.

[5] HANDLING: Most NIOSH or OSHA methods indicate that samples are stable at room temperature, however, because shipping temperatures vary - Travelers IH Lab recommends shipping samples cold overnight to the Lab.

[6] REFERENCE METHOD: Analytical methods are based on the listed references, but may be modified at the discretion of Travelers.



INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM)		Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
				TWA	STEL			
Lead	\$36.00	ICP 001	Filter: MCE Filter (37 mm)	1.0 / 3.0	N	600 / 960	Routine shipping. May be sampled using a PVC filter if particulate is also desired.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
CAS#: 7439-92-1							No interferences reported.	
Lead swipe	\$61.00	ICP 001	Wipe Sample: Whatman 540 Filter Wipe	NA	N	NA	Routine shipping. Enclose wipe in labeled petri dish. The Laboratory is not AIHA accredited for environmental lead samples.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
CAS#: 7439-92-1							Large amount of other metals may interfere, note presence on the sampling datasheet.	
d-Limonene	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	N	6 / 30	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1552
		GC-U	Passive Sampler: Assay 566 OVM		N	60-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 5989-27-5							No interferences reported.	
Magnesium	\$36.00	ICP 001	Filter: MCE Filter (37 mm)	1.0 / 3.0	N	120 / 960	Routine shipping. May be sampled using a PVC filter if particulate is also desired.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
CAS#: 7439-95-4							No interferences reported.	
Magnesium oxide	\$36.00	ICP 001	Filter: MCE Filter (37 mm)	1.0 / 3.0	N	120 / 960	Routine shipping. May be sampled using a PVC filter if particulate is also desired.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
CAS#: 1309-48-4							All acid soluble magnesium is included in the result.	
Manganese	\$36.00	ICP 001	Filter: MCE Filter (37 mm)	1.0 / 3.0	2.0	120 / 960	Routine shipping. If Total particulate is also desired, sample using a Preweighed PVC filter. Respirable samples may be collected on a Preweighed DRS filter (2.0 LPM flow rate) – see Respirable particulate instructions.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
CAS#: 7439-96-5							No interferences reported.	
Manganese in the presence of Tungsten	\$60.00	WINSOL	Filter: MCE Filter (37 mm)	1.0 / 3.0	3.0	960 / 1440	Routine shipping. Request IN THE PRESENCE OF TUNGSTEN on the sampling datasheet. Tungsten can also be quantified if requested.	TIC-ICP-02: Modified OSHA ID-213
CAS#: varies							No interferences reported.	
2-Mercaptoethanol	\$105.00	NONE	Sorbent Tubes: 226-10 Silica gel tube	0.10 / 0.20	N	9 / 10	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-83: Modified OSHA In House Method
CAS#: 60-24-2							No interferences reported.	
Mercury Particulate	\$70.00	NONE	Filter: MCE Filter (37 mm)	1.0 / 2.0	2.0	100 / 480	Routine shipping. Particulate mercury compounds and mercury containing dusts are collected and analyzed.	TIC-ICP-MS-03: Modified OSHA ID-145
CAS#: varies							No interferences reported.	

[1] ADDITIONAL ANALYTES: Because it is often possible to collect more than one analyte on certain sampling media, the charges for analysis of additional analytes are discounted as follows:
 Organic Solvents \$35.00 Acids/Anions \$44.00 Metals by ICP \$28.00
 Isocyanates \$60.00 Aldehydes \$60.00 Silica (see below) \$20.00
 Particulate, quartz and cristobalite on the same air sample is \$105.00 per sample. Acid treatment to remove interferences is an additional \$30 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together. NONE indicates that the analyte must be sampled alone. If sampling for two or more compounds, adhere to the flow rates/air volumes, or sampling times for EACH compound.

[3] PASSIVE MONITORS: Passive samplers will be billed when shipped from the Lab. Assay Organic Vapor Monitors (OVM) are \$16.00 each. Assay Ammonia or Aldehyde Monitors and SKC Methanol or Mercury Samplers are \$18.00 each. SKC Anesthetic Gas or Ethylene Oxide Samplers are \$20.00 each.

[4] VOLUME/TIME: Recommended Air Volume in Liters for active sampling or Sampling Time in minutes for passive sampling. NA = not applicable.

[5] HANDLING: Most NIOSH or OSHA methods indicate that samples are stable at room temperature, however, because shipping temperatures vary - Travelers IH Lab recommends shipping samples cold overnight to the Lab.

[6] REFERENCE METHOD: Analytical methods are based on the listed references, but may be modified at the discretion of Travelers.



INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM)		Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
				TWA	STEL			
Mercury Vapor	\$65.00	NONE	Sorbent Tubes: 226-17-1A Anasorb C300 tube	0.05 / 0.20	N	40 / 96	Routine shipping. Use MCE prefilter if aryl or inorganic mercury compounds also present.	TIC-ICP-MS-02: Modified OSHA ID-140
		NONE	Passive Sampler: SKC 520-02A Inorganic Mercury Sampler		N	400-480 mins	Routine shipping. Exposure time of 400 minutes will achieve a method reporting limit of 50% of the ACGIH TLV. Other mercury compounds may interfere, note presence on the sampling datasheet.	
CAS#: 7439-97-6								
Metal Bulk 20 Element Scan	\$225.00	ICP 001	Small unbreakable container containing approx. 1 teaspoon of solid or 1 oz liquid.	NA	N	NA	See specific metals for CAS #s and instructions. Scan includes Al, Sb, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, Se, Ag, Sn, V, Zn.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
CAS#: varies								
Metal Scan 20 Elements	\$200.00	ICP 001	Filter: MCE Filter (37 mm)	1.0 / 3.0	3.0	960 / 1260	Routine shipping. See specific metals for CAS #s and Interferences. Scan includes Al, Sb, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, Se, Ag, Sn, V, Zn. Minimum air volume of 960 L is needed due to low exposure limit for Be.	TIC-ICP-01: Modified OSHA ID-121/NIOSH 7300
CAS#: varies								
Metal Solder Scan	\$110.00	ICP 001	Filter: MCE Filter (37 mm)	1.0 / 3.0	3.0	960 / 1260	Routine shipping. See specific metals for CAS #s and Interferences. Scan includes Sb, Be, Cd, Cu, Pb, Ag, Sn and ZnO. Minimum air volume of 960 L is needed due to low exposure limit for Be.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
CAS#: varies								
Metal Working Fluids as Total Mass and Extractables	\$80.00	NONE	Filter: PTFE Filter (37 mm) - Preweighed	2.0	N	960	Routine shipping. Total particulates are determined (\$27) and an extraction is done (\$53) if the particulate weight gain is above 50 micrograms.	TIC-GRV-03: Modified NIOSH 5524/ASTM PS42-97
CAS#: varies								
Methacrylic acid	\$100.00	NONE	Sorbent Tubes: Tandem 226-30-08 Anasorb 708 tubes - 2 tubes in series	0.05 / 0.10	N	1 / 24	Sample by placing 2 tubes in holders connected together. The tube closest to the pump is the BACK. After sampling; separate, cap and label tubes FRONT and BACK. Refrigerate samples after collection and ship cold overnight to the Lab.	TIC-LC-04: Modified OSHA PV2005
CAS#: 79-41-4								
2-Methoxyethanol	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.10	N	95 / 120	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified OSHA 53/NIOSH 1403
CAS#: 109-86-4								
2-Methoxyethyl acetate	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.10	N	60 / 100	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified OSHA 53/NIOSH 1451
CAS#: 110-49-6								

[1] ADDITIONAL ANALYTES: Because it is often possible to collect more than one analyte on certain sampling media, the charges for analysis of additional analytes are discounted as follows:
 Organic Solvents \$35.00 Acids/Anions \$44.00 Metals by ICP \$28.00
 Isocyanates \$60.00 Aldehydes \$60.00 Silica (see below) \$20.00
 Particulate, quartz and cristobalite on the same air sample is \$105.00 per sample. Acid treatment to remove interferences is an additional \$30 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together. NONE indicates that the analyte must be sampled alone. If sampling for two or more compounds, adhere to the flow rates/air volumes, or sampling times for EACH compound.

[3] PASSIVE MONITORS: Passive samplers will be billed when shipped from the Lab.
 Assay Organic Vapor Monitors (OVM) are \$16.00 each.
 Assay Ammonia or Aldehyde Monitors and SKC Methanol or Mercury Samplers are \$18.00 each.
 SKC Anesthetic Gas or Ethylene Oxide Samplers are \$20.00 each.

[4] VOLUME/TIME: Recommended Air Volume in Liters for active sampling or Sampling Time in minutes for passive sampling. NA = not applicable.

[5] HANDLING: Most NIOSH or OSHA methods indicate that samples are stable at room temperature, however, because shipping temperatures vary - Travelers IH Lab recommends shipping samples cold overnight to the Lab.

[6] REFERENCE METHOD: Analytical methods are based on the listed references, but may be modified at the discretion of Travelers.



INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM)		Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
				TWA	STEL			
Methyl acetate	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	0.2	3 / 10	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1458
		GC-U	Passive Sampler: Assay 566 OVM		Y	15-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 79-20-9							No interferences reported.	
Methyl acrylate	\$55.00	GC 4	Sorbent Tubes: 226-73 Coated Charcoal tube	0.01 / 0.05	N	3 / 12	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-01: Modified OSHA 92
		GC-U	Passive Sampler: Assay 566 OVM		N	60-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 96-33-3							No interferences reported.	
Methyl alcohol	\$55.00	NONE	Sorbent Tubes: 226-82 Anasorb 747 tubes - set of two separate tubes in series	0.01 / 0.05	0.05	1 / 3	Sample by placing 2 tubes in holders connected together. The tube closest to the pump is the BACK (PART B). After sampling; separate, cap and label tubes FRONT and BACK. Samples MUST be refrigerated after collection and shipped cold overnight to the Lab.	TIC-GC-59: Modified OSHA 5001
		NONE	Passive Sampler: SKC 575-007 Methanol Sampler		N	120-480 mins	Refrigerate samples after collection and ship cold overnight to the Lab.	
CAS#: 67-56-1							No interferences reported.	
Methylamine	\$100.00	AMINE3	Sorbent Tubes: 226-96 Coated XAD-7 tube	0.05 / 0.20	0.2	6 / 10	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-LC-07: Modified OSHA 40
CAS#: 74-89-5							Other amine compounds may interfere, note presence on the sampling datasheet.	
Methyl amyl alcohol	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	0.2	3 / 10	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1402
		GC-U	Passive Sampler: Assay 566 OVM		Y	30-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 108-11-2							No interferences reported.	
Methyl n-amyl ketone	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	N	3 / 25	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1301
		GC-U	Passive Sampler: Assay 566 OVM		N	15-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 110-43-0							No interferences reported.	

[1] ADDITIONAL ANALYTES: Because it is often possible to collect more than one analyte on certain sampling media, the charges for analysis of additional analytes are discounted as follows:
 Organic Solvents \$35.00 Acids/Anions \$44.00 Metals by ICP \$28.00
 Isocyanates \$60.00 Aldehydes \$60.00 Silica (see below) \$20.00
 Particulate, quartz and cristobalite on the same air sample is \$105.00 per sample. Acid treatment to remove interferences is an additional \$30 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together. NONE indicates that the analyte must be sampled alone. If sampling for two or more compounds, adhere to the flow rates/air volumes, or sampling times for EACH compound.

[3] PASSIVE MONITORS: Passive samplers will be billed when shipped from the Lab. Assay Organic Vapor Monitors (OVM) are \$16.00 each. Assay Ammonia or Aldehyde Monitors and SKC Methanol or Mercury Samplers are \$18.00 each. SKC Anesthetic Gas or Ethylene Oxide Samplers are \$20.00 each.

[4] VOLUME/TIME: Recommended Air Volume in Liters for active sampling or Sampling Time in minutes for passive sampling. NA = not applicable.

[5] HANDLING: Most NIOSH or OSHA methods indicate that samples are stable at room temperature, however, because shipping temperatures vary - Travelers IH Lab recommends shipping samples cold overnight to the Lab.

[6] REFERENCE METHOD: Analytical methods are based on the listed references, but may be modified at the discretion of Travelers.



INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM)		Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
				TWA	STEL			
Methyl bromide	\$77.00	NONE	Sorbent Tubes: Tandem 226-83 Anasorb 747 tubes - 2 tubes in series	0.01 / 0.20	0.2	3	Sample by placing 2 tubes in holders connected together. The tube closest to the pump is the BACK. After sampling; separate, cap and label tubes FRONT and BACK. Refrigerate samples after collection and ship cold overnight to the Lab.	TIC-GC-02: Modified OSHA PV2040
CAS#: 74-83-9							No interferences reported.	
Methyl tert-butyl ether	\$55.00	NONE	Sorbent Tubes: 226-37 Charcoal tubes - set of two separate tubes in series	0.05 / 0.20	N	6 / 96	Sample by placing 2 tubes in holders connected together. The tube closest to the pump is the BACK (PART B). After sampling; separate, cap and label tubes FRONT and BACK. Samples MUST be refrigerated after collection and shipped cold overnight to the Lab.	TIC-GC-01: Modified NIOSH 1615
		GC-U	Passive Sampler: Assay 566 OVM		N	15-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 1634-04-4							No interferences reported.	
Methyl n-butyl ketone	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	0.2	12 / 25	Samples should be refrigerated immediately after sampling and MUST BE ANALYZED WITHIN 1 WEEK. Ship samples cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1300
		GC-U	Passive Sampler: Assay 566 OVM		N	90-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 591-78-6							No interferences reported.	
Methyl-2-cyanoacrylate	\$95.00	CYANO	Sorbent Tubes: 226-98 Coated XAD-7 tube	0.01 / 0.10	0.2	20 / 24	Ship overnight to the Lab on DRY ICE. Methyl and ethyl cyanoacrylate can be sampled on the same tube.	TIC-LC-21: Modified OSHA 55
CAS#: 137-05-3							No interferences reported.	
Methyl cyclohexane	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	N	1 / 4	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1500
		GC-U	Passive Sampler: Assay 566 OVM		N	15-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 108-87-2							No interferences reported.	
Methylcyclohexanol	\$55.00	NONE	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	N	2 / 15	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-06: Modified NIOSH 1404
CAS#: 25639-42-3							No interferences reported.	
4,4'-Methylenebis(2-chloroaniline)	\$90.00	NONE	Filter & Tube: 226-99 Silica Gel OVS	0.50 / 1.0	N	160 / 240	The sampler contains a filter and sorbent material in a single tube. After sampling, cap both ends of the sampler. Refrigerate samples after collection and ship cold overnight to the Lab.	TIC-LC-35: Modified NIOSH 236
CAS#: 101-14-4							No interferences reported.	

[1] ADDITIONAL ANALYTES: Because it is often possible to collect more than one analyte on certain sampling media, the charges for analysis of additional analytes are discounted as follows:
 Organic Solvents \$35.00 Acids/Anions \$44.00 Metals by ICP \$28.00
 Isocyanates \$60.00 Aldehydes \$60.00 Silica (see below) \$20.00
 Particulate, quartz and cristobalite on the same air sample is \$105.00 per sample. Acid treatment to remove interferences is an additional \$30 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together. NONE indicates that the analyte must be sampled alone. If sampling for two or more compounds, adhere to the flow rates/air volumes, or sampling times for EACH compound.

[3] PASSIVE MONITORS: Passive samplers will be billed when shipped from the Lab.
 Assay Organic Vapor Monitors (OVM) are \$16.00 each.
 Assay Ammonia or Aldehyde Monitors and SKC Methanol or Mercury Samplers are \$18.00 each.
 SKC Anesthetic Gas or Ethylene Oxide Samplers are \$20.00 each.

[4] VOLUME/TIME: Recommended Air Volume in Liters for active sampling or Sampling Time in minutes for passive sampling. NA = not applicable.

[5] HANDLING: Most NIOSH or OSHA methods indicate that samples are stable at room temperature, however, because shipping temperatures vary - Travelers IH Lab recommends shipping samples cold overnight to the Lab.

[6] REFERENCE METHOD: Analytical methods are based on the listed references, but may be modified at the discretion of Travelers.



INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM)		Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
				TWA	STEL			
Methylene bis(4-cyclohexylisocyanate)	\$95.00	NONE	Filter: Isocyanate (NCO) Filter - Open-faced	0.50 / 1.0	N	100 / 240	Keep media cold before sampling. Collect sample by removing the top of the 3-piece filter cassette (section w/o wagon wheel design). After sampling; replace the top of the cassette & buttons. Ship samples cold overnight to the Lab. Note presence of other isocyanates in sampling environment on the sampling datasheet.	TIC-LC-03: Modified OSHA PV2092
CAS#: 5124-30-1								
Methylene bisphenyl diisocyanate	\$95.00	NCO	Filter: Isocyanate (NCO) Filter - Open-faced	0.50 / 1.0	1.0	100 / 240	Keep media cold before sampling. Collect sample by removing the top of the 3-piece filter cassette (section w/o wagon wheel design). After sampling; replace the top of the cassette & buttons. Ship samples cold overnight to the Lab. Note presence of other isocyanates in sampling environment on the sampling datasheet.	TIC-LC-03: Modified OSHA 47
CAS#: 101-68-8								
Methylene chloride	\$55.00	GC-U	Sorbent Tubes: Tandem 226-09 Charcoal tubes - 2 tubes in series	0.01 / 0.20	0.2	5 / 6	Sample by placing 2 tubes in holders connected together. The tube closest to the pump is the BACK. After sampling; separate, cap and label tubes FRONT and BACK. Refrigerate samples after collection and ship cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1005
		GC-U	Passive Sampler: Assay 566 OVM		N	60-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 75-09-2								
4,4'-Methylenedianiline	\$90.00	NONE	Filter: MDA Filter - Open-faced	1.0 / 2.0	N	100 / 1000	Ethanol may interfere, note presence on the sampling datasheet. Collect sample by removing the top of the 3-piece filter cassette (that DOES NOT have a wagon wheel design). After sampling transfer the filter to a vial containing 3 mL of 0.1N methanolic KOH solution. 4,4'-Diphenylmethane diisocyanate (MDI) will interfere, note presence on the sampling datasheet. Sample volume of 100 liters will achieve a method reporting limit of 60% of the OSHA PEL.	TIC-LC-15: Modified NIOSH 5029
CAS#: 101-77-9								
Methyl ethyl ketone	\$55.00	GC14	Sorbent Tubes: 226-81A Anasorb 747 tube	0.01 / 0.20	0.2	1 / 12	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 2500
		GC-U	Passive Sampler: Assay 566 OVM		Y	15-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 78-93-3								
Methylethyl ketoxime	\$55.00	NONE	Sorbent Tubes: 226-93 XAD-4 tube	0.1	N	5 / 10	No interferences reported. Routine shipping.	TIC-GC-60: Modified OSHA In House Method
CAS#: 96-29-7								
Methyl formate	\$55.00	NONE	Sorbent Tubes: 226-83 Anasorb 747 tube	0.025 / 0.05	0.05	2.5 / 3	No interferences reported. Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-75: Modified OSHA PV2041
		GC-H	Passive Sampler: Assay 566 OVM		Y	15-240 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 107-31-3								
							No interferences reported.	

[1] ADDITIONAL ANALYTES: Because it is often possible to collect more than one analyte on certain sampling media, the charges for analysis of additional analytes are discounted as follows:
 Organic Solvents \$35.00 Acids/Anions \$44.00 Metals by ICP \$28.00
 Isocyanates \$60.00 Aldehydes \$60.00 Silica (see below) \$20.00
 Particulate, quartz and cristobalite on the same air sample is \$105.00 per sample. Acid treatment to remove interferences is an additional \$30 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together. NONE indicates that the analyte must be sampled alone. If sampling for two or more compounds, adhere to the flow rates/air volumes, or sampling times for EACH compound.

[3] PASSIVE MONITORS: Passive samplers will be billed when shipped from the Lab. Assay Organic Vapor Monitors (OVM) are \$16.00 each. Assay Ammonia or Aldehyde Monitors and SKC Methanol or Mercury Samplers are \$18.00 each. SKC Anesthetic Gas or Ethylene Oxide Samplers are \$20.00 each.

[4] VOLUME/TIME: Recommended Air Volume in Liters for active sampling or Sampling Time in minutes for passive sampling. NA = not applicable.

[5] HANDLING: Most NIOSH or OSHA methods indicate that samples are stable at room temperature, however, because shipping temperatures vary - Travelers IH Lab recommends shipping samples cold overnight to the Lab.

[6] REFERENCE METHOD: Analytical methods are based on the listed references, but may be modified at the discretion of Travelers.



INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM)		Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
				TWA	STEL			
Methyl isoamyl acetate	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	N	1 / 10	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1450
CAS#: 108-84-9							No interferences reported.	
Methyl isoamyl ketone	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	0.2	3 / 10	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified OSHA PV2042
		GC-U	Passive Sampler: Assay 566 OVM		Y	30-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 110-12-3							No interferences reported.	
Methyl isobutyl ketone	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	0.2	3 / 25	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1300
		GC-U	Passive Sampler: Assay 566 OVM		Y	30-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 108-10-1							No interferences reported.	
Methyl isopropyl ketone	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.10	N	4 / 10	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified OSHA In House Method
CAS#: 563-80-4							No interferences reported.	
Methyl mercaptan	\$105.00	GC-MER	Filter: Mercaptan Filter - SKC 225-9007	0.01 / 0.20	0.2	20 / 150	Keep media frozen and protected from light before and after sampling and ship samples cold overnight to the Lab.	TIC-GC-37: Modified NIOSH 2542
							Dimethyl disulfide, diethyl disulfide and dibutyl disulfide may interfere, note presence on the sampling datasheet.	
CAS#: 74-93-1							No interferences reported.	
Methyl methacrylate	\$55.00	GC 11	Sorbent Tubes: 226-73 Coated Charcoal tube	0.01 / 0.05	0.05	1 / 3	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified OSHA 94
		GC-U	Passive Sampler: Assay 566 OVM		Y	15-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 80-62-6							No interferences reported.	

[1] ADDITIONAL ANALYTES: Because it is often possible to collect more than one analyte on certain sampling media, the charges for analysis of additional analytes are discounted as follows:
 Organic Solvents \$35.00 Acids/Anions \$44.00 Metals by ICP \$28.00
 Isocyanates \$60.00 Aldehydes \$60.00 Silica (see below) \$20.00
 Particulate, quartz and cristobalite on the same air sample is \$105.00 per sample. Acid treatment to remove interferences is an additional \$30 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together. NONE indicates that the analyte must be sampled alone. If sampling for two or more compounds, adhere to the flow rates/air volumes, or sampling times for EACH compound.

[3] PASSIVE MONITORS: Passive samplers will be billed when shipped from the Lab. Assay Organic Vapor Monitors (OVM) are \$16.00 each. Assay Ammonia or Aldehyde Monitors and SKC Methanol or Mercury Samplers are \$18.00 each. SKC Anesthetic Gas or Ethylene Oxide Samplers are \$20.00 each.

[4] VOLUME/TIME: Recommended Air Volume in Liters for active sampling or Sampling Time in minutes for passive sampling. NA = not applicable.

[5] HANDLING: Most NIOSH or OSHA methods indicate that samples are stable at room temperature, however, because shipping temperatures vary - Travelers IH Lab recommends shipping samples cold overnight to the Lab.

[6] REFERENCE METHOD: Analytical methods are based on the listed references, but may be modified at the discretion of Travelers.



INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM)		Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
				TWA	STEL			
Methyl propyl ketone	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	0.2	1 / 10	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1300
		GC-U	Passive Sampler: Assay 566 OVM		Y	15-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 107-87-9								
N-Methyl-2-pyrrolidinone	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.05 / 0.20	N	15 / 125	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified OSHA PV2043/NIOSH 1302
		GC-U	Passive Sampler: Assay 566 OVM		N	60-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 872-50-4								
Mineral oils	\$80.00	NONE	Filter: PTFE Filter (37 mm) - Preweighed	2.0	N	960	Routine shipping. Total particulates are determined (\$27) and an extraction is done (\$53) if the particulate weight gain is above 50 micrograms.	TIC-GRV-03: Modified NIOSH 5524/ASTM PS42-97
CAS#: varies								
Mineral spirits as Total Hydrocarbons	\$70.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	N	9 / 20	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified OSHA 48
		GC-U	Passive Sampler: Assay 566 OVM		N	360-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 64475-85-0								
Molybdenum	\$36.00	ICP 001	Filter: MCE Filter (37 mm)	1.0 / 3.0	N	5 / 960	Routine shipping. If Total particulate is also desired, sample using a Preweighed PVC filter. Respirable samples may be collected on a Preweighed DRS filter (2.0 LPM flow rate) – see Respirable particulate instructions.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
CAS#: 7439-98-7								
Molybdenum in the presence of Tungsten	\$60.00	WINSOL	Filter: MCE Filter (37 mm)	1.0 / 3.0	N	240 / 960	Routine shipping. Request IN THE PRESENCE OF TUNGSTEN on the sampling datasheet. Tungsten can also be quantified if requested.	TIC-ICP-02: Modified OSHA ID-213
CAS#: 7439-98-7								
Morpholine	\$85.00	AMINE2	Sorbent Tubes: 226-98 Coated XAD-7 tube	0.10	N	10	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-20: Modified OSHA PV2123
CAS#: 110-91-8								
Other amine compounds may interfere, note presence on the sampling datasheet.								

[1] ADDITIONAL ANALYTES: Because it is often possible to collect more than one analyte on certain sampling media, the charges for analysis of additional analytes are discounted as follows:
 Organic Solvents \$35.00 Acids/Anions \$44.00 Metals by ICP \$28.00
 Isocyanates \$60.00 Aldehydes \$60.00 Silica (see below) \$20.00
 Particulate, quartz and cristobalite on the same air sample is \$105.00 per sample. Acid treatment to remove interferences is an additional \$30 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together. NONE indicates that the analyte must be sampled alone. If sampling for two or more compounds, adhere to the flow rates/air volumes, or sampling times for EACH compound.

[3] PASSIVE MONITORS: Passive samplers will be billed when shipped from the Lab. Assay Organic Vapor Monitors (OVM) are \$16.00 each. Assay Ammonia or Aldehyde Monitors and SKC Methanol or Mercury Samplers are \$18.00 each. SKC Anesthetic Gas or Ethylene Oxide Samplers are \$20.00 each.

[4] VOLUME/TIME: Recommended Air Volume in Liters for active sampling or Sampling Time in minutes for passive sampling. NA = not applicable.

[5] HANDLING: Most NIOSH or OSHA methods indicate that samples are stable at room temperature, however, because shipping temperatures vary – Travelers IH Lab recommends shipping samples cold overnight to the Lab.

[6] REFERENCE METHOD: Analytical methods are based on the listed references, but may be modified at the discretion of Travelers.



INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM)		Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
				TWA	STEL			
Naphthalene	\$89.00	NONE	Sorbent Tubes: 226-110 Chromosorb 106 tube	0.05 / 0.20	N	6 / 10	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab. Other compounds may interfere. Note any compounds present in the sampling environment on the sampling datasheet.	TIC-GC-86: Modified OSHA 35
CAS#: 91-20-3								
Nickel	\$36.00	ICP001	Filter: MCE Filter (37 mm)	1.0 / 3.0	N	120 / 960	Routine shipping. May be sampled using a PVC filter if particulate is also desired.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
CAS#: 7440-02-0								
Nickel in the presence of Tungsten	\$60.00	WINSOL	Filter: MCE Filter (37 mm)	1.0 / 3.0	N	240 / 960	Routine shipping. Request IN THE PRESENCE OF TUNGSTEN on the sampling datasheet. Tungsten can also be quantified if requested.	TIC-ICP-02: Modified OSHA ID-213
CAS#: 7440-02-0								
Nickel - Water Soluble	\$36.00	ICP H2O	Filter: PVC Filter-Preweighed in 2 piece cassette	1.0 / 3.0	N	120 / 960	Routine shipping. Request WATER SOLUBLE NICKEL on the sampling datasheet.	TIC-ICP-01: Modified OSHA ID-121
CAS#: varies								
Nicotine	\$88.00	NONE	Sorbent Tubes: 226-30-04 XAD-2 tube	0.20 / 1.0	N	80 / 400	Refrigerate samples after collection and ship cold overnight to the Lab. If nicotine is present in dust use a PTFE prefilter and submit both to lab for analysis. NIOSH indicates that samples are stable for 5 days at 25°C.	TIC-GC-31: Modified NIOSH 2544
CAS#: 54-11-5								
Nitric acid	\$65.00	IC 1	Sorbent Tubes: ORBO 53 Specially cleaned silica gel tube	0.02 / 0.20	0.5	6 / 96	Routine shipping. Note other nitrate containing compounds present in the sampling environment on the sampling datasheet.	TIC-IC-01: Modified OSHA ID-165SG
CAS#: 7697-37-2								
Nitric oxide	\$65.00	NONE	Sorbent Tubes: 226-182 Coated molecular sieve/oxidizer tube	0.10	N	1 / 24	Refrigerate samples after collection and ship cold overnight to the Lab. TUBE ORIENTATION IS CRITICAL, make sure air is pulled through in the proper direction. Nitrogen dioxide collects on the 1st section of sorbent and can be analyzed on the same sample. Nitric oxide collects on the 3rd section of sorbent.	TIC-IC-16: Modified OSHA ID-190
CAS#: 10102-43-9								
p-Nitroaniline	\$60.00	NONE	Filter: MCE Filter (37 mm)	1.0 / 3.0	N	120 / 350	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab. Other compounds may interfere. Note any compounds present in the sampling environment on the sampling datasheet.	TIC-LC-40: Modified NIOSH 5033
CAS#: 100-01-6								
Nitroethane	\$60.00	NONE	Sorbent Tubes: 226-3002A XAD-2 Tubes - set of two separate tubes in series	0.01 / 0.05	N	1 / 3	Sample by placing 2 tubes in holders connected together. The tube closest to the pump is the BACK (PART B). After sampling; separate, cap and label tubes FRONT and BACK. Samples MUST be refrigerated after collection and shipped cold overnight to the Lab.	TIC-GC-78: Modified NIOSH 2526
CAS#: 79-24-3								

[1] ADDITIONAL ANALYTES: Because it is often possible to collect more than one analyte on certain sampling media, the charges for analysis of additional analytes are discounted as follows:
 Organic Solvents \$35.00 Acids/Anions \$44.00 Metals by ICP \$28.00
 Isocyanates \$60.00 Aldehydes \$60.00 Silica (see below) \$20.00
 Particulate, quartz and cristobalite on the same air sample is \$105.00 per sample. Acid treatment to remove interferences is an additional \$30 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together. NONE indicates that the analyte must be sampled alone.
 If sampling for two or more compounds, adhere to the flow rates/air volumes, or sampling times for EACH compound.

[3] PASSIVE MONITORS: Passive samplers will be billed when shipped from the Lab.
 Assay Organic Vapor Monitors (OVM) are \$16.00 each.
 Assay Ammonia or Aldehyde Monitors and SKC Methanol or Mercury Samplers are \$18.00 each.
 SKC Anesthetic Gas or Ethylene Oxide Samplers are \$20.00 each.

[4] VOLUME/TIME: Recommended Air Volume in Liters for active sampling or Sampling Time in minutes for passive sampling.
 NA = not applicable.

[5] HANDLING: Most NIOSH or OSHA methods indicate that samples are stable at room temperature, however, because shipping temperatures vary - Travelers IH Lab recommends shipping samples cold overnight to the Lab.

[6] REFERENCE METHOD: Analytical methods are based on the listed references, but may be modified at the discretion of Travelers.

**INDUSTRIAL HYGIENE LABORATORY**

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM)		Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
				TWA	STEL			
Nitrogen dioxide	\$65.00	NONE	Sorbent Tubes: 226-40-02 Coated molecular sieve tube	0.05 / 0.20	0.2	11 / 24	Refrigerate samples after collection and ship cold overnight to the Lab. If also sampling for nitric oxide, following the sampling directions for Nitric oxide and collect at least 11 liters of air.	TIC-IC-16: Modified OSHA ID-182
CAS#: 10102-44-0							No interferences reported.	
Nonane	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	N	3 / 10	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1500
		GC-U	Passive Sampler: Assay 566 OVM		N	15-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 111-84-2							No interferences reported.	
Octane	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	N	2 / 4	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1500
		GC-U	Passive Sampler: Assay 566 OVM		N	15-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 111-65-9							No interferences reported.	
Oxalic acid	\$64.00	NONE	Filter: Glass Fiber Filter (37 mm) - Open faced	1.0 / 2.0	2.0	30 / 100	Routine shipping. Collect sample by removing the top of the 3-piece filter cassette (that DOES NOT have a wagon wheel design).	TIC-IC-18: Modified OSHA PV2115
CAS#: 144-62-7							No interferences reported.	
Ozone	\$68.00	NONE	Filter: Ozone Filter	0.25 / 0.50	1.5	90 / 120	Keep media frozen before and after sampling and ship samples cold overnight to the Lab. Call Lab if SO2 is present before sampling. MEDIA SHELF LIFE IS ONLY 2 WEEKS - ALLOW AT LEAST 3 DAYS FOR THE LAB TO PREPARE THE MEDIA.	TIC-IC-13: Modified OSHA ID-214
CAS#: 10028-15-6							Sulfur dioxide gas and soluble particulate nitrate compounds may interfere, note presence on the sampling datasheet.	
Pentachlorophenol	\$100.00	NONE	Sorbent Tubes: 226-97 XAD-7 tubes - Set of 3 tubes	0.05 / 0.20	0.2	24 / 48	To sample, connect tube A to tube B with flexible tubing (arrows in the same direction) - tube B is closest to the pump. After sampling; keep A & B connected and attach opened tube C to tube A. Refrigerate and ship the samples cold overnight to the Lab.	TIC-LC-19: Modified OSHA 39
CAS#: 87-86-5							No interferences reported.	
Pentane	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.05	0.05	1 / 4	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1500
		GC-U	Passive Sampler: Assay 566 OVM		N	15-360 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 109-66-0							No interferences reported.	

[1] ADDITIONAL ANALYTES: Because it is often possible to collect more than one analyte on certain sampling media, the charges for analysis of additional analytes are discounted as follows:
 Organic Solvents \$35.00 Acids/Anions \$44.00 Metals by ICP \$28.00
 Isocyanates \$60.00 Aldehydes \$60.00 Silica (see below) \$20.00
 Particulate, quartz and cristobalite on the same air sample is \$105.00 per sample. Acid treatment to remove interferences is an additional \$30 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together. NONE indicates that the analyte must be sampled alone. If sampling for two or more compounds, adhere to the flow rates/air volumes, or sampling times for EACH compound.

[3] PASSIVE MONITORS: Passive samplers will be billed when shipped from the Lab. Assay Organic Vapor Monitors (OVM) are \$16.00 each. Assay Ammonia or Aldehyde Monitors and SKC Methanol or Mercury Samplers are \$18.00 each. SKC Anesthetic Gas or Ethylene Oxide Samplers are \$20.00 each.

[4] VOLUME/TIME: Recommended Air Volume in Liters for active sampling or Sampling Time in minutes for passive sampling. NA = not applicable.

[5] HANDLING: Most NIOSH or OSHA methods indicate that samples are stable at room temperature, however, because shipping temperatures vary - Travelers IH Lab recommends shipping samples cold overnight to the Lab.

[6] REFERENCE METHOD: Analytical methods are based on the listed references, but may be modified at the discretion of Travelers.



INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM)		Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
				TWA	STEL			
2,3-Pentanedione	\$110.00	GC 8	Sorbent Tubes: 226-183 Silica Gel tubes - Set of two separate tubes in series	0.05 / 0.20	N	3 / 9	Sample by placing 2 tubes in holders connected together. The tube closest to the pump is the BACK. After sampling; separate, cap and label tubes FRONT and BACK. Protect samples from light during and after sampling (wrap the tubes in aluminum foil). The turnaround time for this analyte is 10 working days due to the sample processing time required by the method.	TIC-GC-84: Modified OSHA 1012
CAS#: 600-14-6								
Peracetic acid	\$100.00	NONE	Filter & Tube: Hydrogen peroxide filter followed by a 226-193-UC Cleaned & coated silica gel tube	1.0	1.0	15	Samples are collected by connecting a filter cassette to a sorbent tube (closest to the pump). A flow rate of 1 LITER PER MINUTE MUST BE USED. Refrigerate samples after collection and ship cold overnight to the Lab. No interferences reported. Peracetic acid and hydrogen peroxide can be sampled using the same sampling train.	TIC-LC-42: Modified INRS method
CAS#: 79-21-0								
Petroleum distillate as Total Hydrocarbons	\$70.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	N	12 / 20	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab. Petroleum distillates (pds) contain several compounds. Quantitation of individual compounds or pd mixtures may not be possible. Specify the distillate on the sampling datasheet (VMP, Stoddard, etc.). If multiple pds, request Petroleum Distillate fraction.	TIC-GC-86: Modified OSHA 48
CAS#: varies								
Petroleum ether	\$70.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	N	6 / 20	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab. No interferences reported.	TIC-GC-86: Modified NIOSH 1550
CAS#: 8030-31-7								
Phenol	\$75.00	LC-PHE	Sorbent Tubes: 226-95 XAD-7 tube	0.05 / 0.10	N	6 / 24	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab. Other compounds may interfere. Note any compounds present in the sampling environment on the sampling datasheet.	TIC-LC-22: Modified OSHA 32
CAS#: 108-95-2								
4-Phenylcyclohexene	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	N	1 / 20	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab. No interferences reported.	TIC-GC-86: Modified OSHA In House Method
CAS#: 4994-16-5								
m-Phenylene diamine	\$90.00	PDA	Filter: PDA Filter or SKC 225-9012	0.50 / 1.0	N	200 / 240	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab. Other amine compounds may interfere, note presence on the sampling datasheet.	TIC-LC-20: Modified OSHA 87
CAS#: 108-45-2								

[1] ADDITIONAL ANALYTES: Because it is often possible to collect more than one analyte on certain sampling media, the charges for analysis of additional analytes are discounted as follows:
 Organic Solvents \$35.00 Acids/Anions \$44.00 Metals by ICP \$28.00
 Isocyanates \$60.00 Aldehydes \$60.00 Silica (see below) \$20.00
 Particulate, quartz and cristobalite on the same air sample is \$105.00 per sample. Acid treatment to remove interferences is an additional \$30 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together. NONE indicates that the analyte must be sampled alone. If sampling for two or more compounds, adhere to the flow rates/air volumes, or sampling times for EACH compound.

[3] PASSIVE MONITORS: Passive samplers will be billed when shipped from the Lab.
 Assay Organic Vapor Monitors (OVM) are \$16.00 each.
 Assay Ammonia or Aldehyde Monitors and SKC Methanol or Mercury Samplers are \$18.00 each.
 SKC Anesthetic Gas or Ethylene Oxide Samplers are \$20.00 each.

[4] VOLUME/TIME: Recommended Air Volume in Liters for active sampling or Sampling Time in minutes for passive sampling. NA = not applicable.

[5] HANDLING: Most NIOSH or OSHA methods indicate that samples are stable at room temperature, however, because shipping temperatures vary - Travelers IH Lab recommends shipping samples cold overnight to the Lab.

[6] REFERENCE METHOD: Analytical methods are based on the listed references, but may be modified at the discretion of Travelers.



INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM)		Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
				TWA	STEL			
o-Phenylene diamine	\$90.00	PDA	Filter: PDA Filter or SKC 225-9012	0.50 / 1.0	N	200 / 240	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-LC-20: Modified OSHA 87
CAS#: 95-54-5							Other amine compounds may interfere, note presence on the sampling datasheet.	
p-Phenylene diamine	\$90.00	PDA	Filter: PDA Filter or SKC 225-9012	0.50 / 1.0	N	200 / 240	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-LC-20: Modified OSHA 87
CAS#: 106-50-3							Other amine compounds may interfere, note presence on the sampling datasheet.	
Phenyl ether vapor	\$55.00	NONE	Sorbent Tubes: 226-95 XAD-7 tube	0.02 / 0.20	N	20	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-81: Modified OSHA PV2022
		NONE	Passive Sampler: Assay 566 OVM		N	120-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 101-84-8							No interferences reported.	
Phenyl glycidyl ether	\$55.00	GC 1	Sorbent Tubes: 226-09 Charcoal tube	0.05 / 1.0	N	240 / 450	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-01: Modified NIOSH 1619
CAS#: 122-60-1							No interferences reported.	
Phosphine	\$80.00	NONE	Filter: Phosphine Filter - SKC 225-9018	1.0	2.0	240 / 335	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-ICP-13: Modified OSHA 1003
CAS#: 7803-51-2							No interferences reported.	
Phosphoric acid	\$65.00	IC 1	Sorbent Tubes: ORBO 53 Specially cleaned silica gel tube	0.02 / 0.20	0.5	30 / 96	Routine shipping.	TIC-IC-01: Modified OSHA ID-165SG
							Soluble phosphate compounds may interfere, note presence on the sampling datasheet.	
CAS#: 7664-38-2							No interferences reported.	
Platinum, metal	\$60.00	NONE	Filter: MCE Filter (37 mm)	1.0 / 3.0	N	240 / 1400	Routine shipping. Request PLATINUM METAL on the sampling datasheet.	TIC-ICP-01: Modified NIOSH 7303
CAS#: 7440-06-4							No interferences reported.	
Platinum - Water Soluble Salts, as Pt	\$55.00	NONE	Filter: MCE Filter (37 mm)	1.0 / 3.0	N	500 / 1400	Routine shipping. Request WATER SOLUBLE PLATINUM on the sampling datasheet.	TIC-ICP-MS-07: Modified OSHA ID-130SG
CAS#: varies							All water soluble platinum is included in the result.	

[1] ADDITIONAL ANALYTES: Because it is often possible to collect more than one analyte on certain sampling media, the charges for analysis of additional analytes are discounted as follows:

Organic Solvents	\$35.00	Acids/Anions	\$44.00	Metals by ICP	\$28.00
Isocyanates	\$60.00	Aldehydes	\$60.00	Silica (see below)	\$20.00

Particulate, quartz and cristobalite on the same air sample is \$105.00 per sample. Acid treatment to remove interferences is an additional \$30 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together. NONE indicates that the analyte must be sampled alone. If sampling for two or more compounds, adhere to the flow rates/air volumes, or sampling times for EACH compound.

[3] PASSIVE MONITORS: Passive samplers will be billed when shipped from the Lab. Assay Organic Vapor Monitors (OVM) are \$16.00 each. Assay Ammonia or Aldehyde Monitors and SKC Methanol or Mercury Samplers are \$18.00 each. SKC Anesthetic Gas or Ethylene Oxide Samplers are \$20.00 each.

[4] VOLUME/TIME: Recommended Air Volume in Liters for active sampling or Sampling Time in minutes for passive sampling. NA = not applicable.

[5] HANDLING: Most NIOSH or OSHA methods indicate that samples are stable at room temperature, however, because shipping temperatures vary - Travelers IH Lab recommends shipping samples cold overnight to the Lab.

[6] REFERENCE METHOD: Analytical methods are based on the listed references, but may be modified at the discretion of Travelers.



INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM)		Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
				TWA	STEL			
Polynuclear Aromatic Hydrocarbon Scan - NIOSH 5506	\$280.00	NONE	Filter & Tube: PTFE Filter followed by a 226-30-04 XAD-2 tube	1.0 / 2.0	N	200 / 1000	Samples are collected by connecting a filter cassette to a sorbent tube (closest to the pump). Protect from sunlight and transfer filter to a vial after sampling. Refrigerate after collection and ship cold overnight to the lab. Scan includes 16 compounds.	TIC-LC-12: Modified NIOSH 5506
CAS#: varies							No interferences reported.	
Polynuclear Aromatic Hydrocarbon Scan - OSHA 58	\$190.00	NONE	Filter: Glass Fiber Filter (37 mm)	1.0 / 2.0	N	960	Protect sample from direct sunlight during and after sampling. Transfer filter to a vial after sampling. Refrigerate samples after collection and ship cold overnight to the Lab. Scan includes 5 compounds. Individual PAHs can be quantified - \$85 each.	TIC-LC-02: Modified OSHA 58
CAS#: varies							No interferences reported.	
Potassium hydroxide	\$36.00	ICP H2O	Filter: PVC Filter-Preweighed in 2 piece cassette	1.0 / 3.0	3.0	40 / 960	Routine shipping.	TIC-ICP-01: Modified OSHA ID-121
CAS#: 1310-58-3							All water soluble potassium is included in the result.	
Propane	\$60.00	CS2DB5	Sorbent Tubes: Tandem Carbosieve SIII tubes - 2 tubes in series	0.10	N	5	Sample by placing 2 tubes in holders connected together. The tube closest to the pump is the BACK. After sampling; separate, cap and label tubes FRONT and BACK. Refrigerate samples after collection and ship cold overnight to the Lab.	TIC-GC-79: Modified OSHA PV2077
CAS#: 74-98-6							Other compounds may interfere. Note any compounds present in the sampling environment on the sampling datasheet.	
Propionic acid	\$65.00	ICOA	Sorbent Tubes: ORBO 53 Specially cleaned silica gel tube	0.05 / 0.20	N	10 / 18	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-IC-02: Modified OSHA In House Method
CAS#: 79-09-4							Other compounds may interfere. Note any compounds present in the sampling environment on the sampling datasheet.	
2-Propoxyethanol	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.05	N	4 / 10	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified OSHA 83/NIOSH 1403
		GC-U	Passive Sampler: Assay 566 OVM		N	90-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 2807-30-9							No interferences reported.	
n-Propyl acetate	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	0.2	1 / 10	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1450
		GC-U	Passive Sampler: Assay 566 OVM		Y	15-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 109-60-4							No interferences reported.	

[1] ADDITIONAL ANALYTES: Because it is often possible to collect more than one analyte on certain sampling media, the charges for analysis of additional analytes are discounted as follows:
 Organic Solvents \$35.00 Acids/Anions \$44.00 Metals by ICP \$28.00
 Isocyanates \$60.00 Aldehydes \$60.00 Silica (see below) \$20.00
 Particulate, quartz and cristobalite on the same air sample is \$105.00 per sample. Acid treatment to remove interferences is an additional \$30 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together. NONE indicates that the analyte must be sampled alone. If sampling for two or more compounds, adhere to the flow rates/air volumes, or sampling times for EACH compound.

[3] PASSIVE MONITORS: Passive samplers will be billed when shipped from the Lab. Assay Organic Vapor Monitors (OVM) are \$16.00 each. Assay Ammonia or Aldehyde Monitors and SKC Methanol or Mercury Samplers are \$18.00 each. SKC Anesthetic Gas or Ethylene Oxide Samplers are \$20.00 each.

[4] VOLUME/TIME: Recommended Air Volume in Liters for active sampling or Sampling Time in minutes for passive sampling. NA = not applicable.

[5] HANDLING: Most NIOSH or OSHA methods indicate that samples are stable at room temperature, however, because shipping temperatures vary - Travelers IH Lab recommends shipping samples cold overnight to the Lab.

[6] REFERENCE METHOD: Analytical methods are based on the listed references, but may be modified at the discretion of Travelers.



INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM)		Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
				TWA	STEL			
n-Propyl alcohol	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	N	2 / 10	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1401
		GC-U	Passive Sampler: Assay 566 OVM		N	15-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 71-23-8							No interferences reported.	
n-Propyl bromide	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	N	30	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified OSHA PV2061
		CAS#: 106-94-5						
Propylene glycol	\$75.00	GC 12	Filter & Tube: 226-57 XAD-7 OVS	0.50 / 2.0	N	25 / 60	The sampler contains a filter and sorbent material in a single tube. After sampling, cap both ends of the sampler. Refrigerate samples after collection and ship cold overnight to the Lab.	TIC-GC-17: Modified NIOSH 5523
		CAS#: 57-55-6						
Propylene glycol-1-methyl ether-2-acetate	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.02 / 0.10	N	6 / 10	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified OSHA 99
		GC-U	Passive Sampler: Assay 566 OVM		N	15-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 108-65-6							No interferences reported.	
Propylene glycol monomethyl ether	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.10	0.1	3 / 10	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified OSHA 99
		GC-U	Passive Sampler: Assay 566 OVM		Y	30-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 107-98-2							No interferences reported.	
Propylene oxide	\$55.00	NONE	Sorbent Tubes: 226-09 Charcoal tube	0.02 / 0.20	N	10	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-01: Modified NIOSH 1612
		NONE	Passive Sampler: Assay 566 OVM		N	180-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 75-56-9							Acetone or alcohols may interfere, note presence on the sampling datasheet.	
Pyrethrum	\$84.00	NONE	Filter: Glass Fiber Filter (37 mm)	1.0 / 3.0	N	15 / 400	Routine shipping.	TIC-LC-18: Modified NIOSH 5008
		CAS#: 8003-34-7						

[1] ADDITIONAL ANALYTES: Because it is often possible to collect more than one analyte on certain sampling media, the charges for analysis of additional analytes are discounted as follows:
 Organic Solvents \$35.00 Acids/Anions \$44.00 Metals by ICP \$28.00
 Isocyanates \$60.00 Aldehydes \$60.00 Silica (see below) \$20.00
 Particulate, quartz and cristobalite on the same air sample is \$105.00 per sample. Acid treatment to remove interferences is an additional \$30 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together. NONE indicates that the analyte must be sampled alone. If sampling for two or more compounds, adhere to the flow rates/air volumes, or sampling times for EACH compound.

[3] PASSIVE MONITORS: Passive samplers will be billed when shipped from the Lab. Assay Organic Vapor Monitors (OVM) are \$16.00 each. Assay Ammonia or Aldehyde Monitors and SKC Methanol or Mercury Samplers are \$18.00 each. SKC Anesthetic Gas or Ethylene Oxide Samplers are \$20.00 each.

[4] VOLUME/TIME: Recommended Air Volume in Liters for active sampling or Sampling Time in minutes for passive sampling. NA = not applicable.

[5] HANDLING: Most NIOSH or OSHA methods indicate that samples are stable at room temperature, however, because shipping temperatures vary - Travelers IH Lab recommends shipping samples cold overnight to the Lab.

[6] REFERENCE METHOD: Analytical methods are based on the listed references, but may be modified at the discretion of Travelers.



INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM)		Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
				TWA	STEL			
Pyridine	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.05 / 1.0	N	115 / 150	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1613
CAS#: 110-86-1							No interferences reported.	
Quartz, Bulk	\$110.00	XRD BULK	Small unbreakable container containing approx 1 tablespoon of sample	NA	N	NA	Routine shipping. Specify which polymorph(s) of silica are to be reported (quartz, cristobalite and/or trydimite). Results are reported as weight %.	TIC-XRD-01: Modified NIOSH 7500
CAS#: 14808-60-7							Identify sample matrix. Give as much information as possible as to what other minerals are present.	
Quartz, Respirable	\$67.00	XRD	Filter: DRS containing a Prew weighed PVC Filter	2.0	N	840 / 960	Routine shipping. Using a 2.0 LPM flow rate is CRITICAL when using a Disposable Respirable Sampler (DRS). Request RESPIRABLE SILICA (quartz and cristobalite). DRS samplers are billed \$17 each when shipped.	TIC-XRD-01: Modified NIOSH 7500
CAS#: 14808-60-7							Note interferences on the sampling datasheet: mica, potash, feldspar, zircon, graphite, aluminosilicate, calcite. High dust loading may increase the MRL. If needed, acid treatment to remove interferences is an additional \$30 per sample.	
Resorcinol	\$75.00	LC-PHE	Sorbent Tubes: 226-95 XAD-7 tube	0.10 / 0.20	0.1	6 / 24	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-LC-22: Modified OSHA 32
CAS#: 108-46-3							Other compounds may interfere. Note any compounds present in the sampling environment on the sampling datasheet.	
Respirable particulate	\$27.00	GRAV 002	Filter: DRS containing a Prew weighed PVC Filter	2.0	N	200 / 1200	Routine shipping. Using a 2.0 LPM flow rate is CRITICAL when using a Disposable Respirable Sampler (DRS). Request RESPIRABLE PARTICULATE on the sampling datasheet. DRS samplers are billed \$17 each when shipped.	TIC-GRV-01: Modified NIOSH 0600
CAS#: varies							Gravimetric method nonspecific, all particulate matter in the sampling environment is collected and quantified.	
Rubber solvent (Naphtha) as Total Hydrocarbons	\$70.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	N	12	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1550
CAS#: 8002-05-9							Petroleum distillates (pds) contain several compounds. Quantitation of individual compounds or pd mixtures may not be possible. Specify the distillate on the sampling datasheet (VMP, Stoddard, etc.). If multiple pds, request Petroleum Distillate fraction.	
Selenium	\$36.00	ICP 001	Filter: MCE Filter (37 mm)	1.0 / 3.0	N	500 / 960	Routine shipping. May be sampled using a PVC filter if particulate is also desired.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
CAS#: 7782-49-2							No interferences reported.	

[1] ADDITIONAL ANALYTES: Because it is often possible to collect more than one analyte on certain sampling media, the charges for analysis of additional analytes are discounted as follows:
 Organic Solvents \$35.00 Acids/Anions \$44.00 Metals by ICP \$28.00
 Isocyanates \$60.00 Aldehydes \$60.00 Silica (see below) \$20.00
 Particulate, quartz and cristobalite on the same air sample is \$105.00 per sample. Acid treatment to remove interferences is an additional \$30 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together. NONE indicates that the analyte must be sampled alone. If sampling for two or more compounds, adhere to the flow rates/air volumes, or sampling times for EACH compound.

[3] PASSIVE MONITORS: Passive samplers will be billed when shipped from the Lab.
 Assay Organic Vapor Monitors (OVM) are \$16.00 each.
 Assay Ammonia or Aldehyde Monitors and SKC Methanol or Mercury Samplers are \$18.00 each.
 SKC Anesthetic Gas or Ethylene Oxide Samplers are \$20.00 each.

[4] VOLUME/TIME: Recommended Air Volume in Liters for active sampling or Sampling Time in minutes for passive sampling. NA = not applicable.

[5] HANDLING: Most NIOSH or OSHA methods indicate that samples are stable at room temperature, however, because shipping temperatures vary - Travelers IH Lab recommends shipping samples cold overnight to the Lab.

[6] REFERENCE METHOD: Analytical methods are based on the listed references, but may be modified at the discretion of Travelers.



INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM)		Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
				TWA	STEL			
Sevoflurane	\$77.00	AnestCS2	Sorbent Tubes: 226-83 Anasorb 747 tube	0.05	N	12	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-02: Modified OSHA ID-103
		GC-E	Passive Sampler: SKC 575-002 Anasorb 747 Sampler		N	30-480 mins	Refrigerate samples after collection and ship cold overnight to the Lab.	
CAS#: 28523-86-6								
Silver	\$36.00	ICP 001	Filter: MCE Filter (37 mm)	1.0 / 3.0	N	960 / 1400	Routine shipping. Request SILVER METAL on the sampling datasheet.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
							Result is for total silver.	
CAS#: 7440-22-4								
Silver - Water Soluble	\$36.00	ICP H2O	Filter: PVC Filter-Preweighed in 2 piece cassette	1.0 / 3.0	N	1200 / 1400	Routine shipping. Request WATER SOLUBLE SILVER on the sampling datasheet.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
							All water soluble silver is included in the result.	
CAS#: varies								
Sodium bisulfite	\$36.00	ICP H2O	Filter: PVC Filter-Preweighed in 2 piece cassette	1.0 / 3.0	N	120 / 960	Routine shipping.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
							All water soluble sodium is included in the result.	
CAS#: 7631-90-5								
Sodium hydroxide	\$36.00	ICP H2O	Filter: PVC Filter-Preweighed in 2 piece cassette	1.0 / 3.0	3.0	120 / 960	Routine shipping.	TIC-ICP-01: Modified OSHA ID-121
							All water soluble sodium is included in the result.	
CAS#: 1310-73-2								
Sodium - Water Soluble	\$36.00	ICP H2O	Filter: PVC Filter-Preweighed in 2 piece cassette	1.0 / 3.0	N	120 / 960	Routine shipping.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
							All water soluble sodium is included in the result.	
CAS#: varies								
Stoddard solvent as Total Hydrocarbons	\$70.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	N	9 / 20	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified OSHA ID-48
		GC-U	Passive Sampler: Assay 566 OVM		N	90-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
							Petroleum distillates (pds) contain several compounds. Quantitation of individual compounds or pd mixtures may not be possible. Specify the distillate on the sampling datasheet (VMP, Stoddard, etc.). If multiple pds, request Petroleum Distillate fraction.	
CAS#: 8052-41-3								
Strontium	\$36.00	NONE	Filter: MCE Filter (37 mm)	1.0 / 3.0	N	240 / 960	Finely divided metal IGNITES SPONTANEOUSLY IN AIR.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
							No interferences reported.	
CAS#: 7440-24-6								
Strontium chromate, as CrVI	\$78.00	NONE	Filter: PVC Filter-Preweighed in 2 piece cassette	1.0 / 2.0	2.0	800 / 960	Indicate welding, foundry or plating operation (see also Chromium, Hexavalent (Paint)). SHIP OVERNIGHT - plating samples should be analyzed within 6 days of collection and welding samples should be analyzed within 8 days of collection.	TIC-IC-07: Modified OSHA ID-215
							Iron, nickel, copper and vanadium compounds may interfere, note presence on the sampling datasheet. All hexavalent chromium compounds will be included.	
CAS#: 7789-06-2								

[1] ADDITIONAL ANALYTES: Because it is often possible to collect more than one analyte on certain sampling media, the charges for analysis of additional analytes are discounted as follows:

Organic Solvents	\$35.00	Acids/Anions	\$44.00	Metals by ICP	\$28.00
Isocyanates	\$60.00	Aldehydes	\$60.00	Silica (see below)	\$20.00

Particulate, quartz and cristobalite on the same air sample is \$105.00 per sample. Acid treatment to remove interferences is an additional \$30 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together. NONE indicates that the analyte must be sampled alone. If sampling for two or more compounds, adhere to the flow rates/air volumes, or sampling times for EACH compound.

[3] PASSIVE MONITORS: Passive samplers will be billed when shipped from the Lab. Assay Organic Vapor Monitors (OVM) are \$16.00 each. Assay Ammonia or Aldehyde Monitors and SKC Methanol or Mercury Samplers are \$18.00 each. SKC Anesthetic Gas or Ethylene Oxide Samplers are \$20.00 each.

[4] VOLUME/TIME: Recommended Air Volume in Liters for active sampling or Sampling Time in minutes for passive sampling. NA = not applicable.

[5] HANDLING: Most NIOSH or OSHA methods indicate that samples are stable at room temperature, however, because shipping temperatures vary - Travelers IH Lab recommends shipping samples cold overnight to the Lab.

[6] REFERENCE METHOD: Analytical methods are based on the listed references, but may be modified at the discretion of Travelers.



INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM)		Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
				TWA	STEL			
Styrene monomer	\$55.00	GC 11	Sorbent Tubes: 226-73 Coated Charcoal tube	0.02 / 0.05	0.05	2 / 12	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified OSHA 89
		GC-U	Passive Sampler: Assay 566 OVM		Y	60-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 100-42-5								
Sulfur dioxide	\$65.00	NONE	Filter: Sulfur Dioxide (SO2) Filter	0.50 / 1.5	1.5	60 / 200	Routine shipping.	TIC-IC-05: Modified NIOSH 6004
CAS#: 7446-09-5								
Sulfuric acid	\$65.00	IC 1	Sorbent Tubes: ORBO 53 Specially cleaned silica gel tube	0.02 / 0.20	N	90 / 96	Routine shipping.	TIC-IC-01: Modified OSHA ID-165SG
CAS#: 7664-93-9								
1,1,2,2-Tetrachloroethane	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	N	6 / 30	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1019
		GC-U	Passive Sampler: Assay 566 OVM		N	360-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 79-34-5								
Tetrachloroethylene	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	0.2	3 / 40	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1003
		GC-U	Passive Sampler: Assay 566 OVM		Y	30-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 127-18-4								
Tetraethyl lead, as Pb	\$96.00	NONE	Filter & Tube: Glass Fiber Filter followed by a 226-09 Charcoal tube	0.50 / 1.0	N	400 / 480	Samples are collected by connecting a filter cassette to a sorbent tube (closest to the pump). After sampling, discard the glass fiber filter and cap both ends of the tube. Refrigerate samples after collection and ship cold overnight to the Lab.	TIC-ICP-12: Stopgap
CAS#: 78-00-2								
Tetrahydrofuran	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	0.2	2 / 9	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1609
		GC-U	Passive Sampler: Assay 566 OVM		Y	15-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 109-99-9								

[1] ADDITIONAL ANALYTES: Because it is often possible to collect more than one analyte on certain sampling media, the charges for analysis of additional analytes are discounted as follows:

Organic Solvents	\$35.00	Acids/Anions	\$44.00	Metals by ICP	\$28.00
Isocyanates	\$60.00	Aldehydes	\$60.00	Silica (see below)	\$20.00

Particulate, quartz and cristobalite on the same air sample is \$105.00 per sample. Acid treatment to remove interferences is an additional \$30 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together. NONE indicates that the analyte must be sampled alone. If sampling for two or more compounds, adhere to the flow rates/air volumes, or sampling times for EACH compound.

[3] PASSIVE MONITORS: Passive samplers will be billed when shipped from the Lab. Assay Organic Vapor Monitors (OVM) are \$16.00 each. Assay Ammonia or Aldehyde Monitors and SKC Methanol or Mercury Samplers are \$18.00 each. SKC Anesthetic Gas or Ethylene Oxide Samplers are \$20.00 each.

[4] VOLUME/TIME: Recommended Air Volume in Liters for active sampling or Sampling Time in minutes for passive sampling. NA = not applicable.

[5] HANDLING: Most NIOSH or OSHA methods indicate that samples are stable at room temperature, however, because shipping temperatures vary - Travelers IH Lab recommends shipping samples cold overnight to the Lab.

[6] REFERENCE METHOD: Analytical methods are based on the listed references, but may be modified at the discretion of Travelers.

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM)		Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
				TWA	STEL			
Thallium	\$36.00	NONE	Filter: MCE Filter (37 mm)	1.0 / 3.0	N	960	Routine shipping. May be sampled using a PVC filter if particulate is also desired.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
CAS#: 7440-28-0							No interferences reported.	
Tin	\$36.00	ICP 001	Filter: MCE Filter (37 mm)	1.0 / 3.0	N	120 / 960	Routine shipping. May be sampled using a PVC filter if particulate is also desired.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
CAS#: 7440-31-5							No interferences reported.	
Tin, Organic Compounds as Sn	\$125.00	NONE	Filter & Tube: 226-30-16 XAD-2 OVS	1.0 / 1.5	1.5	60 / 500	Call Lab when organotin compounds are to be sampled. Cap media and ship to Lab ON DRY ICE by Overnight mail. DO NOT ship on Friday. Method available for 10 specific organotin compounds.	TIC-ICP-MS-05: Modified NIOSH 5504
CAS#: varies							Results are for a total organic tin compounds, as tin. Validated for tetrabutyl tin, tributyltin trichloride, tricyclohexyltin hydroxide and dibutyltin bis(isooctylmercaptoacetate).	
Titanium	\$36.00	NONE	Filter: MCE Filter (37 mm)	1.0 / 2.0	2.0	240 / 960	Routine shipping. NO HYGIENIC STANDARD. May be sampled as total particulate.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
CAS#: 7440-32-6							All acid soluble titanium compounds are quantified.	
Toluene	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	0.2	4 / 12	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1501
		GC-U	Passive Sampler: Assay 566 OVM		N	30-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 108-88-3							No interferences reported.	
Toluene-2,4-diisocyanate	\$95.00	NCO	Filter: Isocyanate (NCO) Filter - Open-faced	0.50 / 1.0	1.0	240	Keep media cold before sampling. Collect sample by removing the top of the 3-piece filter cassette (section w/o wagon wheel design). After sampling; replace the top of the cassette & buttons. Ship samples cold overnight to the Lab.	TIC-LC-03: Modified OSHA 42
CAS#: 584-84-9							Note presence of other isocyanates in sampling environment on the sampling datasheet.	
Toluene-2,6-diisocyanate	\$95.00	NCO	Filter: Isocyanate (NCO) Filter - Open-faced	0.50 / 1.0	1.0	240	Keep media cold before sampling. Collect sample by removing the top of the 3-piece filter cassette (section w/o wagon wheel design). After sampling; replace the top of the cassette & buttons. Ship samples cold overnight to the Lab.	TIC-LC-03: Modified OSHA 42
CAS#: 91-08-7							Note presence of other isocyanates in sampling environment on the sampling datasheet.	
Total Hydrocarbons	\$70.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.05 / 0.20	0.2	6 / 12	Refrigerate samples after sampling and ship samples cold overnight to the Lab. Request TOTAL HYDROCARBONS (AS TOLUENE if aromatic based compounds are predominant).	TIC-GC-86: In House Method
CAS#: varies							Many organic solvents collect on charcoal and will be included in results. All peaks summed and quantified as n-hexane (or toluene).	

[1] ADDITIONAL ANALYTES: Because it is often possible to collect more than one analyte on certain sampling media, the charges for analysis of additional analytes are discounted as follows:
 Organic Solvents \$35.00 Acids/Anions \$44.00 Metals by ICP \$28.00
 Isocyanates \$60.00 Aldehydes \$60.00 Silica (see below) \$20.00
 Particulate, quartz and cristobalite on the same air sample is \$105.00 per sample. Acid treatment to remove interferences is an additional \$30 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together. NONE indicates that the analyte must be sampled alone. If sampling for two or more compounds, adhere to the flow rates/air volumes, or sampling times for EACH compound.

[3] PASSIVE MONITORS: Passive samplers will be billed when shipped from the Lab. Assay Organic Vapor Monitors (OVM) are \$16.00 each. Assay Ammonia or Aldehyde Monitors and SKC Methanol or Mercury Samplers are \$18.00 each. SKC Anesthetic Gas or Ethylene Oxide Samplers are \$20.00 each.

[4] VOLUME/TIME: Recommended Air Volume in Liters for active sampling or Sampling Time in minutes for passive sampling. NA = not applicable.

[5] HANDLING: Most NIOSH or OSHA methods indicate that samples are stable at room temperature, however, because shipping temperatures vary - Travelers IH Lab recommends shipping samples cold overnight to the Lab.

[6] REFERENCE METHOD: Analytical methods are based on the listed references, but may be modified at the discretion of Travelers.



INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM)		Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
				TWA	STEL			
Total particulate	\$27.00	GRAV 001	Filter: PVC Filter-Preweighed in 2 piece cassette	1.0 / 2.0	N	200 / 960	Routine shipping. Gravimetric method nonspecific, all particulate matter in the sampling environment is collected and quantified.	TIC-GRV-01: Modified NIOSH 0500
CAS#: varies								
Tributyl phosphate	\$105.00	GC17	Filter: MCE Filter (37 mm)	1.0 / 3.0	N	30 / 100	Refrigerate samples after collection and ship cold overnight to the Lab. Sample with two MCE filters in tandem if the temperature is above 73° F.	TIC-GC-39: Modified NIOSH 5034
CAS#: 126-73-8								
1,1,1-Trichloroethane	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	0.2	1 / 8	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1003
		GC-U	Passive Sampler: Assay 566 OVM		Y	15-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 71-55-6								
1,1,2-Trichloroethane	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	N	10 / 60	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1003
		GC-U	Passive Sampler: Assay 566 OVM		N	90-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 79-00-5								
Trichloroethylene	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	0.2	9 / 30	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1022
		GC-U	Passive Sampler: Assay 566 OVM		Y	90-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 79-01-6								
Trichlorofluoromethane (Freon 11)	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.05	0.05	1 / 7	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1006
CAS#: 75-69-4								
1,1,2-Trichloro-1,2,2-trifluoroethane	\$77.00	NONE	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.05	0.05	1 / 3	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-01: Modified NIOSH 1020
		NONE	Passive Sampler: Assay 566 OVM		Y	15-90 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 76-13-1								
							Ether or hexane may interfere, note presence on the sampling datasheet.	

[1] ADDITIONAL ANALYTES: Because it is often possible to collect more than one analyte on certain sampling media, the charges for analysis of additional analytes are discounted as follows:
 Organic Solvents \$35.00 Acids/Anions \$44.00 Metals by ICP \$28.00
 Isocyanates \$60.00 Aldehydes \$60.00 Silica (see below) \$20.00
 Particulate, quartz and cristobalite on the same air sample is \$105.00 per sample. Acid treatment to remove interferences is an additional \$30 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together. NONE indicates that the analyte must be sampled alone. If sampling for two or more compounds, adhere to the flow rates/air volumes, or sampling times for EACH compound.

[3] PASSIVE MONITORS: Passive samplers will be billed when shipped from the Lab.
 Assay Organic Vapor Monitors (OVM) are \$16.00 each.
 Assay Ammonia or Aldehyde Monitors and SKC Methanol or Mercury Samplers are \$18.00 each.
 SKC Anesthetic Gas or Ethylene Oxide Samplers are \$20.00 each.

[4] VOLUME/TIME: Recommended Air Volume in Liters for active sampling or Sampling Time in minutes for passive sampling. NA = not applicable.

[5] HANDLING: Most NIOSH or OSHA methods indicate that samples are stable at room temperature, however, because shipping temperatures vary - Travelers IH Lab recommends shipping samples cold overnight to the Lab.

[6] REFERENCE METHOD: Analytical methods are based on the listed references, but may be modified at the discretion of Travelers.



INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM)		Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
				TWA	STEL			
Triethanolamine	\$100.00	IC 2	Sorbent Tubes: 226-98 Coated XAD-7 tube	0.20	N	100 / 120	Routine shipping.	TIC-IC-11: Modified NIOSH 3509
CAS#: 102-71-6							Other amine compounds may interfere, note presence on the sampling datasheet.	
Triethylamine	\$85.00	AMINE2	Sorbent Tubes: 226-98 Coated XAD-7 tube	0.05 / 0.20	0.2	20	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-20: Modified OSHA PV2060
CAS#: 121-44-8							Other amine compounds may interfere, note presence on the sampling datasheet.	
Triethylenetetramine	\$100.00	NONE	Sorbent Tubes: 226-30-18 Coated XAD-2 tube	0.025 / 0.10	N	4 / 20	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-LC-14: Modified OSHA 60/NIOSH 2540
CAS#: 112-24-3							No interferences reported.	
Triglycidyl isocyanurate	\$110.00	NONE	Filter: Glass Fiber Filter (37 mm)	1.0 / 2.0	N	400 / 480	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-41: In House Method
CAS#: 2451-62-9							No interferences reported.	
Trimethylamine	\$85.00	AMINE2	Sorbent Tubes: 226-98 Coated XAD-7 tube	0.05 / 0.20	0.2	6 / 20	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-20: Modified OSHA PV2060
CAS#: 75-50-3							Other amine compounds may interfere, note presence on the sampling datasheet.	
Trimethyl benzenes, all isomers	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	N	3 / 10	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified OSHA PV2091
		GC-U	Passive Sampler: Assay 566 OVM		N	60-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 25551-13-7							No interferences reported.	
Triphenyl phosphate	\$105.00	GC17	Filter: MCE Filter (37 mm)	1.0 / 3.0	N	18 / 400	Routine shipping.	TIC-GC-39: Modified NIOSH 5038
CAS#: 115-86-6							No interferences reported.	
Tungsten, metal	\$36.00	ICP 001	Filter: MCE Filter (37 mm)	1.0 / 3.0	N	60 / 960	Routine shipping. If Total particulate is also desired, sample using a Preweighed PVC filter. Respirable samples may be collected on a Preweighed DRS filter (2.0 LPM flow rate) – see Respirable particulate instructions.	TIC-ICP-01: Modified NIOSH 7300
CAS#: 7440-33-7							Analysis is for Tungsten Metal – see also Tungsten Insoluble Compounds or Tungsten Water Soluble Compounds.	

[1] ADDITIONAL ANALYTES: Because it is often possible to collect more than one analyte on certain sampling media, the charges for analysis of additional analytes are discounted as follows:
 Organic Solvents \$35.00 Acids/Anions \$44.00 Metals by ICP \$28.00
 Isocyanates \$60.00 Aldehydes \$60.00 Silica (see below) \$20.00
 Particulate, quartz and cristobalite on the same air sample is \$105.00 per sample. Acid treatment to remove interferences is an additional \$30 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together. NONE indicates that the analyte must be sampled alone. If sampling for two or more compounds, adhere to the flow rates/air volumes, or sampling times for EACH compound.

[3] PASSIVE MONITORS: Passive samplers will be billed when shipped from the Lab. Assay Organic Vapor Monitors (OVM) are \$16.00 each. Assay Ammonia or Aldehyde Monitors and SKC Methanol or Mercury Samplers are \$18.00 each. SKC Anesthetic Gas or Ethylene Oxide Samplers are \$20.00 each.

[4] VOLUME/TIME: Recommended Air Volume in Liters for active sampling or Sampling Time in minutes for passive sampling. NA = not applicable.

[5] HANDLING: Most NIOSH or OSHA methods indicate that samples are stable at room temperature, however, because shipping temperatures vary - Travelers IH Lab recommends shipping samples cold overnight to the Lab.

[6] REFERENCE METHOD: Analytical methods are based on the listed references, but may be modified at the discretion of Travelers.



INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM)		Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
				TWA	STEL			
Tungsten and Insoluble Compounds, as W	\$60.00	WINSOL	Filter: MCE Filter (37 mm)	1.0 / 3.0	3.0	240 / 960	Routine shipping. Request INSOLUBLE TUNGSTEN on the sampling datasheet. Analysis is for total tungsten and includes insoluble and soluble tungsten compounds.	TIC-ICP-02: Modified OSHA ID-213
CAS#: varies								
Tungsten - Water Soluble	\$36.00	NONE	Filter: PVC Filter-Preweighed in 2 piece cassette	1.0 / 3.0	3.0	60 / 960	Routine shipping. Request WATER SOLUBLE TUNGSTEN on the sampling datasheet. All water soluble tungsten is included in the result. All water soluble tungsten is included in the result.	TIC-ICP-02: Modified OSHA ID-213
CAS#: varies								
Turpentine as Total Hydrocarbons	\$70.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	N	30	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab. Petroleum distillates (pds) contain several compounds. Quantitation of individual compounds or pd mixtures may not be possible. Specify the distillate on the sampling datasheet (VMP, Stoddard, etc.). If multiple pds, request Petroleum Distillate fraction.	TIC-GC-86: Modified NIOSH 1551
CAS#: 8006-64-2								
Vanadium	\$36.00	ICP 001	Filter: MCE Filter (37 mm)	1.0 / 3.0	N	120 / 960	Routine shipping. May be sampled using a PVC filter if particulate is also desired. No interferences reported.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
CAS#: 7440-62-2								
Vanadium pentoxide fume as V2O5	\$36.00	ICP 001	Filter: MCE Filter (37 mm)	1.5 / 2.0	N	1200	Routine shipping. If Total particulate is also desired, sample using a Preweighed PVC filter. Respirable samples may be collected on a Preweighed DRS filter (2.0 LPM flow rate) – see Respirable particulate instructions.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
CAS#: 1314-62-1								
Vinyl acetate	\$55.00	NONE	Sorbent Tubes: ORBO 92 Carboxen 564 tube	0.05 / 0.10	0.2	3 / 24	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-69: Modified OSHA 51
		GC-U	Passive Sampler: Assay 566 OVM		N	60-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 108-05-4								
Vinyl chloride	\$77.00	NONE	Sorbent Tubes: Tandem 226-01 Charcoal tubes - 2 tubes in series	0.05	0.1	2 / 5	Sample by placing 2 tubes in holders connected together. The tube closest to the pump is the BACK. After sampling; separate, cap and label tubes FRONT and BACK. Refrigerate samples after collection and ship cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1007
		GC-U	Passive Sampler: Assay 566 OVM		N	180-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 75-01-4								
No interferences reported.								

[1] ADDITIONAL ANALYTES: Because it is often possible to collect more than one analyte on certain sampling media, the charges for analysis of additional analytes are discounted as follows:
 Organic Solvents \$35.00 Acids/Anions \$44.00 Metals by ICP \$28.00
 Isocyanates \$60.00 Aldehydes \$60.00 Silica (see below) \$20.00
 Particulate, quartz and cristobalite on the same air sample is \$105.00 per sample. Acid treatment to remove interferences is an additional \$30 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together. NONE indicates that the analyte must be sampled alone. If sampling for two or more compounds, adhere to the flow rates/air volumes, or sampling times for EACH compound.

[3] PASSIVE MONITORS: Passive samplers will be billed when shipped from the Lab.
 Assay Organic Vapor Monitors (OVM) are \$16.00 each.
 Assay Ammonia or Aldehyde Monitors and SKC Methanol or Mercury Samplers are \$18.00 each.
 SKC Anesthetic Gas or Ethylene Oxide Samplers are \$20.00 each.

[4] VOLUME/TIME: Recommended Air Volume in Liters for active sampling or Sampling Time in minutes for passive sampling. NA = not applicable.

[5] HANDLING: Most NIOSH or OSHA methods indicate that samples are stable at room temperature, however, because shipping temperatures vary - Travelers IH Lab recommends shipping samples cold overnight to the Lab.

[6] REFERENCE METHOD: Analytical methods are based on the listed references, but may be modified at the discretion of Travelers.



INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM)		Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
				TWA	STEL			
Vinyl cyclohexene	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.05 / 0.20	N	60 / 120	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-01: In House Method
CAS#: 100-40-3							No interferences reported.	
N-Vinyl-2-pyrrolidone	\$60.00	GC 9	Sorbent Tubes: 226-09 Charcoal tube	0.05 / 0.20	N	100 / 120	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-67: Modified OSHA PV2106
CAS#: 88-12-0							No interferences reported.	
Vinyl toluene	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	0.2	2 / 30	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1501
		GC-U	Passive Sampler: Assay 566 OVM			Y 15-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS#: 25013-15-4							No interferences reported.	
VM & P Naphtha as Total Hydrocarbons	\$70.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	N	12 / 20	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1550
		GC-U	Passive Sampler: Assay 566 OVM			N 90-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
							Petroleum distillates (pds) contain several compounds. Quantitation of individual compounds or pd mixtures may not be possible. Specify the distillate on the sampling datasheet (VMP, Stoddard, etc.). If multiple pds, request Petroleum Distillate fraction.	
CAS#: 8032-32-4								
Volatile Organic Compounds by GCMS	\$200.00	NONE	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	N	3 / 90	Identification of up to 10 peaks (greater than response of 0.001 µL/mL toluene) specifically or compound class (e.g. aliphatic hydrocarbon) by comparison to Lab and NIST spectral libraries. The largest peak is quantified against the response of toluene.	TIC-GCMS-01: In House Method
							No interferences reported. Additional compounds can be quantified for an additional cost.	
CAS#: varies								
Welding Fume Metal Scan	\$150.00	ICP001	Filter: MCE Filter (37 mm)	1.0 / 3.0	3.0	1200 / 1260	Routine shipping. See specific metals for CAS #s and Interferences. Scan includes Al, Sb, Be, Cd, Cr, Co, Cu, Fe2O3, Pb, Mn, Mo, Ni, V2O5 and ZnO. Minimum air volume of 1200 L is needed due to low exposure limit for Be.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
CAS#: varies							No interferences reported.	

[1] ADDITIONAL ANALYTES: Because it is often possible to collect more than one analyte on certain sampling media, the charges for analysis of additional analytes are discounted as follows:
 Organic Solvents \$35.00 Acids/Anions \$44.00 Metals by ICP \$28.00
 Isocyanates \$60.00 Aldehydes \$60.00 Silica (see below) \$20.00
 Particulate, quartz and cristobalite on the same air sample is \$105.00 per sample. Acid treatment to remove interferences is an additional \$30 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together. NONE indicates that the analyte must be sampled alone. If sampling for two or more compounds, adhere to the flow rates/air volumes, or sampling times for EACH compound.

[3] PASSIVE MONITORS: Passive samplers will be billed when shipped from the Lab.
 Assay Organic Vapor Monitors (OVM) are \$16.00 each.
 Assay Ammonia or Aldehyde Monitors and SKC Methanol or Mercury Samplers are \$18.00 each.
 SKC Anesthetic Gas or Ethylene Oxide Samplers are \$20.00 each.

[4] VOLUME/TIME: Recommended Air Volume in Liters for active sampling or Sampling Time in minutes for passive sampling. NA = not applicable.

[5] HANDLING: Most NIOSH or OSHA methods indicate that samples are stable at room temperature, however, because shipping temperatures vary - Travelers IH Lab recommends shipping samples cold overnight to the Lab.

[6] REFERENCE METHOD: Analytical methods are based on the listed references, but may be modified at the discretion of Travelers.



INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM)		Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
				TWA	STEL			
Xylenes (o-,m- and p-isomers)	\$55.00	GC-U	Sorbent Tubes: 226-09 Charcoal tube	0.01 / 0.20	0.2	3 / 23	Most NIOSH and OSHA methods indicate that samples are stable at room temperature. Travelers IH Lab recommends refrigerating samples after collection and shipping cold overnight to the Lab.	TIC-GC-86: Modified NIOSH 1501
		GC-U	Passive Sampler: Assay 566 OVM			N	30-720 mins	After sampling, cap monitor. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.
CAS#: 1330-20-7							No interferences reported.	
m-Xylylenediamine	\$100.00	NONE	Filter: PDA Filter or SKC 225-9012	NA	1.0	15	Routine shipping. The p-isomer (p-Xylylenediamine) can also be collected and analyzed.	TIC-LC-39: Modified OSHA 105
CAS#: 1477-55-0							No interferences reported.	
Yttrium	\$36.00	ICP 001	Filter: MCE Filter (37 mm)	1.0 / 3.0	N	120 / 960	Routine shipping. May be sampled using a PVC filter if particulate is also desired.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
CAS#: 7440-65-5							No interferences reported.	
Zinc	\$36.00	ICP 001	Filter: MCE Filter (37 mm)	1.0 / 3.0	2.0	120 / 960	Routine shipping. May be sampled using a PVC filter if particulate is also desired.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
CAS#: 7440-66-6							No interferences reported.	
Zinc chloride	\$36.00	ICP H2O	Filter: PVC Filter-Preweighed in 2 piece cassette	1.0 / 3.0	3.0	60 / 960	Routine shipping.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
CAS#: 7646-85-7							All water soluble zinc is included and reported as zinc chloride.	
Zinc oxide	\$36.00	ICP 001	Filter: MCE Filter (37 mm)	1.0 / 3.0	2.0	120 / 960	Routine shipping. If Total particulate is also desired, sample using a Preweighed PVC filter. Respirable samples may be collected on a Preweighed DRS filter (2.0 LPM flow rate) – see Respirable particulate instructions.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
							Total zinc is quantified and reported as zinc oxide. Method cannot distinguish dust from fume. May be sampled as total particulate as an option. Other zinc compounds may be detected.	
CAS#: 1314-13-2								
Zinc oxide in the presence of Tungsten	\$60.00	WINSOL	Filter: MCE Filter (37 mm)	1.0 / 3.0	3.0	120 / 960	Routine shipping. Request IN THE PRESENCE OF TUNGSTEN on the sampling datasheet. Tungsten can also be quantified if requested.	TIC-ICP-02: Modified OSHA ID-213
CAS#: 1314-13-2							All sources of zinc are included in the result.	
Zirconium	\$36.00	ICP 001	Filter: MCE Filter (37 mm)	1.0 / 3.0	2.0	60 / 960	Routine shipping. May be sampled using a PVC filter if particulate is also desired.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
CAS#: 7440-67-7							No interferences reported.	

[1] ADDITIONAL ANALYTES: Because it is often possible to collect more than one analyte on certain sampling media, the charges for analysis of additional analytes are discounted as follows:
 Organic Solvents \$35.00 Acids/Anions \$44.00 Metals by ICP \$28.00
 Isocyanates \$60.00 Aldehydes \$60.00 Silica (see below) \$20.00
 Particulate, quartz and cristobalite on the same air sample is \$105.00 per sample. Acid treatment to remove interferences is an additional \$30 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together. NONE indicates that the analyte must be sampled alone. If sampling for two or more compounds, adhere to the flow rates/air volumes, or sampling times for EACH compound.

[3] PASSIVE MONITORS: Passive samplers will be billed when shipped from the Lab. Assay Organic Vapor Monitors (OVM) are \$16.00 each. Assay Ammonia or Aldehyde Monitors and SKC Methanol or Mercury Samplers are \$18.00 each. SKC Anesthetic Gas or Ethylene Oxide Samplers are \$20.00 each.

[4] VOLUME/TIME: Recommended Air Volume in Liters for active sampling or Sampling Time in minutes for passive sampling. NA = not applicable.

[5] HANDLING: Most NIOSH or OSHA methods indicate that samples are stable at room temperature, however, because shipping temperatures vary - Travelers IH Lab recommends shipping samples cold overnight to the Lab.

[6] REFERENCE METHOD: Analytical methods are based on the listed references, but may be modified at the discretion of Travelers.



TRAVELERS RISK CONTROL LABORATORY

99 LAMBERTON RD
WINDSOR CT 06095-2127

Phone: 860-687-7400 Fax: 860-687-7430

Help Line: 1-800-842-0355 travelerslab.com

PLEASE RETURN EQUIPMENT TO THE ADDRESS ABOVE

- Standard Turn-Around Time (5 Business Days)
- 3 Business Day RUSH (50% surcharge is applied.)
- 2 Business Day RUSH (100% surcharge is applied.)
- 1 Business Day RUSH (200% surcharge is applied.)

**ALL RUSH REQUESTS MUST BE AUTHORIZED PRIOR TO SAMPLE SUBMISSION
LAB CONTACT WHO AUTHORIZED RUSH REQUEST:**

SEND REPORT TO:

Check if change of address

Name: _____

Company: _____

Address: _____

City, State, ZIP Code: _____

Phone #: _____

Fax #: _____

E-Mail Address: _____

SEND INVOICE TO:

Check if same as Send Report To

Name: _____

Company: _____

Address: _____

City, State, ZIP Code: _____

Phone/Fax: _____

E-Mail Address: _____

PO #: _____

Call for Credit Card Information (MasterCard or Visa)

Survey Date:

Location Sampled:

Shift Duration:

(hours)

Calibrator Barcode:

Sample or Filter #	Sample Description or Person Sampled	Job Task (please choose one)	Sampling Media (please choose one)	Sampling Time (1)			Pump Barcode	Flow Rates (LPM) (2)			Flow Rate Used	Sample Volume Liters	Analyte(s) Requested (review analyte compatibility codes in the Travelers Air Sampling Guidelines)
				Start (i.e. 7:33)	Stop (i.e. 16:08)	Total Minutes Sampled		Pre	Post	Average			
1234-5678	J. Example	Welding - Carbon	PVC filter - preweighed	08:35	15:45	430	00001234	2.010	2.024	2.017	2.017	867.3	manganese, iron oxide

Notes:

- (1) Enter the Start and Stop Times using military format (8:35 am = 08:35, 3:45 pm = 15:45, do not exceed 24 hours)
- (2) Enter the Pump Flow Rate in Liters per minute (LPM)

* An asterisk indicates that the pump flow rate changed by more than 5%. The lower flow rate, rather than the average, was used to calculate the sample air volume.

Submitted by	Print Name	Date
Received by (LAB)		
Special Instructions: (Please List Any)		

PLEASE SAVE THIS DATA SHEET FOR REFERENCE.

SEND A PRINTED COPY WITH THE SAMPLES AND EMAIL A COPY TO TICHLAB@Travelers.com.



travelers.com

The Travelers Indemnity Company and its property casualty affiliates. One Tower Square, Hartford, CT 06183

The information provided in this document is intended for use as a guideline and is not intended as, nor does it constitute, legal or professional advice. Travelers does not warrant that adherence to, or compliance with, any recommendations, best practices, checklists, or guidelines will result in a particular outcome. In no event will Travelers or any of its subsidiaries or affiliates be liable in tort or in contract to anyone who has access to or uses this information. Travelers does not warrant that the information in this document constitutes a complete and finite list of each and every item or procedure related to the topics or issues referenced herein. Furthermore, federal, state or local laws, regulations, standards or codes may change from time to time and the reader should always refer to the most current requirements. This material does not amend, or otherwise affect, the provisions or coverages of any insurance policy or bond issued by Travelers, nor is it a representation that coverage does or does not exist for any particular claim or loss under any such policy or bond. Coverage depends on the facts and circumstances involved in the claim or loss, all applicable policy or bond provisions, and any applicable law.

© 2023 The Travelers Indemnity Company. All rights reserved. Travelers and the Travelers Umbrella logo are registered trademarks of The Travelers Indemnity Company in the U.S. and other countries. A0071 Rev. 5-23