



Travelers Industrial Hygiene Laboratory

AIR SAMPLING GUIDELINES
EFFECTIVE 9.5.23

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 4:00 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.

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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 and disposable respirable samplers).

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 4:00 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.

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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.

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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.

Bulk Sample Submissions

Bulk solid sample submissions for silica or asbestos analysis should be approximately 1 tablespoon loose sample or a 5 cm square solid piece. The sample should be homogeneous (uniform in color and texture) and collected in an unbreakable container. While collecting the sample, wear appropriate personal protection equipment and avoid creating dust. The material can be sprayed with a light mist of water to prevent dust or fiber release during sampling.

Label the container with a unique sample ID and double-bag it in a zip-top style bag. The bulk solid sample may be sent by regular shipping methods to the laboratory along with our sample Data Sheet. To prevent contamination of personal samples, bulk samples should be kept separate from personal samples when transporting and packaged in separate containers when shipping.

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

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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 4:00 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:

\$175.00

Hydrobromic acid	Nitric acid
Hydrochloric acid	Phosphoric acid
Sulfuric acid	

Aldehyde Scan:

\$255.00

Acetaldehyde	Crotonaldehyde
Benzaldehyde	Formaldehyde
Butyraldehyde	Glutaraldehyde

Metal Scan, 20 Elements:

\$200.00

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

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:

(NIOSH 5560, 16 compounds)

\$305.00

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

Metal Scan, Welding:

\$160.00

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

Metal Scan, Solder:

\$110.00

Antimony	Copper	Tin
Beryllium	Lead	Zinc oxide
Cadmium	Silver	

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	\$100.00	LC-ALD1	Sorbent Tubes: SKC 226-119 Coated silica gel tube followed by SKC 226-09 Charcoal tube	0.05 / 0.50	0.5	1 / 25	Keep media frozen before and after sampling. Ship samples cold overnight to the Lab. Sample by placing 2 tubes in holders connected together. The charcoal tube (closest to the pump) is disposed.	TIC-LC-01: Modified EPA IP-6A/NIOSH 2018
		DNPH1	Passive Sampler: Assay 571 Aldehyde Monitor		N	15-600 min	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 RN: 75-07-0								
Acetic Acid	\$70.00	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. Acetate salts will interfere. Use a PTFE prefilter if acetate salts are present.	TIC-IC-02: Modified NIOSH 2011
CAS RN: 64-19-7								
Acetoin	\$110.00	GC 8	Sorbent Tubes: SKC 226-183 Silica gel tubes - set of two separate tubes in series	0.05 / 0.20	N	3 / 9	Protect samples from light during and after sampling (wrap the tubes in aluminum foil). Sample by placing 2 tubes in holders connected together. After sampling: separate, cap and label tubes FRONT and BACK (closest to the pump). No interferences reported.	TIC-GC-84: Modified OSHA 1012
CAS RN: 513-86-0								
Acetone	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab. No interferences reported.	
CAS RN: 67-64-1								
Acetonitrile	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab. No interferences reported.	
CAS RN: 75-05-8								
Acetophenone	\$55.00	NONE	Sorbent Tubes: SKC 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. No interferences reported.	TIC-GC-43: Modified OSHA PV2003
CAS RN: 98-86-2								
Acid Scan, Inorganic	\$175.00	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-1745G
CAS RN: 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)	\$25.00

Particulate, quartz and cristobalite on the same air sample is \$120.00 per sample. Acid treatment to remove interferences is an additional \$40 per sample.

[2] **COMPATIBILITY CODES:** Compounds with the same "Compat. Code" may be collected together.
NONE indicates that the analyte must be sampled alone.

[3] **PASSIVE AND RESPIRABLE SAMPLERS:** Passive and/or respirable samplers will be billed when shipped from the Lab.
Assay Organic Vapor Monitors (OVM) are \$16.00 each, all other passive samplers are \$20 each.
Disposable respirable samplers (DRS) are \$17.00 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.

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INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

TRAVELERS J			Compat	Flow Rate (LPM)		Air Volume or	Special Instructions/Interferences [5]	Reference Method(s) [6]
Analyte	Price [1]	Code [2]	Media [3]	TWA	STEL	Sampling Time for Passive [4]		
Acrylamide	\$90.00	NONE	Filter & Tube: SKC 226-57 XAD-7 OVS	0.50 / 1.0	N	140 / 480	Refrigerate samples after collection and ship cold overnight to the Lab. The sampler contains a filter and sorbent material in a single tube.	TIC-LC-05: Modified OSHA PV2004
CAS RN: 79-06-1							No interferences reported.	
Acrylic acid	\$110.00	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 RN: 79-10-7							No interferences reported.	
Acrylonitrile	\$55.00	GC-U	Sorbent Tubes: SKC 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	120-720 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 107-13-1							No interferences reported.	
Aldehyde Scan	\$255.00	LC-ALD1	Sorbent Tubes: SKC 226-119 Coated silica gel tube followed by SKC 226-09 Charcoal tube	0.05	N	12 / 15	Keep media frozen before and after sampling. Ship samples cold overnight to the Lab. See specific aldehyde for CAS #s and instructions. Includes acetaldehyde, benzaldehyde, butyraldehyde, crotonaldehyde, formaldehyde and glutaraldehyde.	TIC-LC-01: Modified EPA IP-6A/NIOSH 2016/NIOSH 2018/NIOSH 2532
		DNPH1	Passive Sampler: Assay 571 Aldehyde Monitor		N	15-600 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the lab. Call for info regarding sampling other aldehydes.	
CAS RN: 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: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 107-18-6							No interferences reported.	
Allyl chloride	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab. Use Assay 525 TraceAir II OVM for STEL sampling.	
CAS RN: 107-05-1							No interferences reported.	
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 Prewieghed PVC filter. Respirable samples may be collected at a 2.0 LPM flow rate on a preweighed Disposable Respirable Sampler (DRS) – see Particulate, Respirable instructions.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
CAS RN: 7429-90-5							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)	\$25.00

Particulate, quartz and cristobalite on the same air sample is \$120.00 per sample. Acid treatment to remove interferences is an additional \$40 per sample.

[2] **COMPATIBILITY CODES:** Compounds with the same "Compat. Code" may be collected together.

NONE indicates that the analyte must be sampled alone.

[3] **PASSIVE AND RESPIRABLE SAMPLERS:** Passive and/or respirable samplers will be billed when shipped from the Lab. Assay Organic Vapor Monitors (OVM) are \$16.00 each, all other passive samplers are \$20 each.

Disposable respirable samplers (DRS) are \$17.00 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.

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INDUSTRIAL HYGIENE LABORATORY

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Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM) TWA STEL		Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
Aluminum in the presence of Tungsten	\$80.00	WINSOL	Filter: MCE Filter (37 mm)	1.0 / 3.0	N	480 / 960	Routine shipping. Request IN THE PRESENCE OF TUNGSTEN on the sampling data sheet. Tungsten can also be quantified if requested.	TIC-ICP-02: Modified OSHA ID-213
CAS RN: 7429-90-5								No interferences reported.
Aluminum - Water Soluble	\$36.00	ICP H2O	Filter: PVC Filter (37 mm) - Prew weighed	1.0 / 3.0	N	120 / 960	Routine shipping. Request WATER SOLUBLE ALUMINUM on the sampling data sheet.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
CAS RN: varies								All water soluble aluminum is included in the result.
Ammonia	\$64.00	NONE	Sorbent Tubes: SKC 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 min	Keep media cold before and after sampling. Ship samples cold overnight to the Lab.	
CAS RN: 7664-41-7								Large amounts of ammonium salts present in the sampling environment may interfere. Ethanolamine, propanolamine and isopropanolamine are interferences.
Ammonium chloride	\$64.00	NONE	Filter: PVC Filter (37 mm) - Prew weighed	1.0 / 2.0	2.0	16 / 960	Routine shipping.	TIC-IC-06: Modified OSHA ID-188
CAS RN: 12125-02-9								Samples can also be analyzed for Total Particulate upon request.
n-Amyl acetate	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 628-63-7								No interferences reported.
tert-Amyl methyl ether	\$55.00	GC-U	Sorbent Tubes: SKC 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 RN: 994-05-8								No interferences reported.
Aniline	\$90.00	NONE	Sorbent Tubes: SKC 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 RN: 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 RN: 7440-36-0								No interferences reported.
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 RN: 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 RN: 7440-38-2								Analysis by ICPMS - Other metals can be analyzed by ICP or ICPMS. This method is not suitable for arsenic trioxide (AsO3).

[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)	\$25.00

Particulate, quartz and cristobalite on the same air sample is \$120.00 per sample. Acid treatment to remove interferences is an additional \$40 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together.

NONE indicates that the analyte must be sampled alone.

[3] PASSIVE AND RESPIRABLE SAMPLERS: Passive and/or respirable samplers will be billed when shipped from the Lab. Assay Organic Vapor Monitors (OVM) are \$16.00 each, all other passive samplers are \$20 each.

Disposable respirable samplers (DRS) are \$17.00 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) TWA	STEL	Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
Arsenic trioxide, as As	\$90.00	NONE	Filter: SKC 225-9001 MCE Filter with coated pad	1.0 / 3.0	N	60 / 1000	Routine shipping.	TIC-ICP-MS-01: Modified NIOSH 7901
CAS RN: 1327-53-3							No interferences reported.	
Arsine	\$60.00	NONE	Sorbent Tubes: SKC 226-09 Charcoal tube	0.01 / 0.20	N	10 / 20	Routine shipping.	TIC-ICP-MS-04: Modified NIOSH 6001
CAS RN: 7784-42-1							No interferences reported.	
Asbestos in Bulk Materials	\$40.00	NONE	Small unbreakable container containing approx. 1 teaspoon of sample	NA	N	NA	Seal in an appropriate container inside double zip-top bags, 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 RN: varies							No interferences reported. Floor tiles and some matrices must be analyzed by TEM using a subcontracted lab for an additional cost.	
Asphalt Fumes as Benzene Solubles	\$90.00	NONE	Filter: PTFE Filter (37 mm) - Prew weighed	1.0 / 3.0	N	240 / 1400	Routine shipping. Total particulates are determined first (\$27), then an extraction is done (\$63) if the particulate weight gain is above 50 micrograms.	TIC-GRV-06: Modified NIOSH 5042
CAS RN: 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 RN: 7440-39-3							No interferences reported.	
Barium - Water Soluble	\$36.00	ICP H2O	Filter: PVC Filter (37 mm) - Prew weighed	1.0 / 3.0	N	30 / 960	Routine shipping. Request WATER SOLUBLE BARIUM on the sampling data sheet.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
CAS RN: varies							All water soluble barium is included in the result.	
Benzaldehyde	\$100.00	LC-ALD1	Sorbent Tubes: SKC 226-119 Coated silica gel tube followed by SKC 226-09 Charcoal tube	0.05 / 0.20	0.5	1 / 25	Keep media frozen before and after sampling. Ship samples cold overnight to the Lab. Sample by placing 2 tubes in holders connected together. The charcoal tube (closest to the pump) is disposed.	TIC-LC-01: Modified EPA IP-6A
		DNPH1	Passive Sampler: Assay 571 Aldehyde Monitor		N	15-600 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the lab. Call for info regarding sampling other aldehydes.	
CAS RN: 100-52-7							Other aldehydes, ketones and ozone react with and consume the DNPH. Ozone can degrade the aldehyde-DNPH derivative.	
Benzene	\$55.00	GC-U	Sorbent Tubes: SKC 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	300-720 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 71-43-2							No interferences reported.	
Benzophenone	\$95.00	NONE	Sorbent Tubes: SKC 226-110 Chromosorb 106 tube	0.20	N	25 / 48	Routine shipping.	TIC-GC-86: Modified OSHA PV2130
CAS RN: 119-61-9							No interferences reported.	
Benzoyl peroxide	\$95.00	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 RN: 94-36-0							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)	\$25.00

Particulate, quartz and cristobalite on the same air sample is \$120.00 per sample. Acid treatment to remove interferences is an additional \$40 per sample.

[2] **COMPATIBILITY CODES:** Compounds with the same "Compat. Code" may be collected together.
NONE indicates that the analyte must be sampled alone.

[3] **PASSIVE AND RESPIRABLE SAMPLERS:** Passive and/or respirable samplers will be billed when shipped from the Lab.
Assay Organic Vapor Monitors (OVM) are \$16.00 each, all other passive samplers are \$20 each.
Disposable respirable samplers (DRS) are \$17.00 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

TRAVELERS IH								
Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM) TWA	STEL	Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
Benzyl alcohol	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 100-51-6							No interferences reported.	
Benzyl chloride	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 100-44-7							No interferences reported.	
Beryllium and Compounds as Be (ICP)	\$36.00	ICP 001	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/m³ with 1260 liter air volume.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
CAS RN: 7440-41-7							No interferences reported.	
Beryllium and Compounds as Be (ICPMS)	\$55.00	ICP 001	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 RN: 7440-41-7							No interferences reported.	
Biphenyl	\$55.00	NONE	Sorbent Tubes: SKC 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 RN: 92-52-4							No interferences reported.	
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.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
CAS RN: 7440-69-9							All acid soluble bismuth compounds are quantified. Bismuth telluride can be sampled as total dust.	
Bisphenol A	\$90.00	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.	TIC-LC-28: Modified OSHA 1018
CAS RN: 80-05-7							No interferences reported.	
Boric acid	\$36.00	NONE	Filter: PVC Filter (37 mm) - Prewweighed	1.0 / 2.0	N	240 / 480	Routine shipping.	TIC-ICP-01: Modified NIOSH 7303
CAS RN: 10043-35-3							All acid soluble boron is included in the result.	
Bromine	\$90.00	IC 2	Filter: Silver Membrane Filter (25 mm)	0.30 / 1.0	1.0	80 / 360	Protect samples from light after collection.	TIC-IC-08: Modified NIOSH 6011
CAS RN: 7726-95-6							Other bromide compounds may interfere, note presence on the sampling data sheet.	

[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)	\$25.00

Particulate, quartz and cristobalite on the same air sample is \$120.00 per sample. Acid treatment to remove interferences is an additional \$40 per sample.

[2] **COMPATIBILITY CODES:** Compounds with the same "Compat. Code" may be collected together.

NONE indicates that the analyte must be sampled alone.

[3] **PASSIVE AND RESPIRABLE SAMPLERS:** Passive and/or respirable samplers will be billed when shipped from the Lab.

Assay Organic Vapor Monitors (OVM) are \$16.00 each, all other passive samplers are \$20 each.

Disposable respirable samplers (DRS) are \$17.00 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.

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INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

TRAVELERS J			Compat	Flow Rate (LPM)	Air Volume or			
Analyte	Price [1]	Code [2]	Media [3]	TWA	STEL	Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
1,3-Butadiene	\$77.00	NONE	Sorbent Tubes: SKC 226-37 Charcoal tubes - set of two separate tubes in series	0.01 / 0.50	0.2	12 / 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	240-720 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 106-99-0							No interferences reported.	
n-Butane	\$70.00	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.	TIC-GC-79: Modified OSHA PV2010
CAS RN: 106-97-8							Other compounds may interfere. Note any compounds present in the environment on the sampling data sheet.	
n-Butanol	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 71-36-3							No interferences reported.	
sec-Butanol	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 78-92-2							No interferences reported.	
tert-Butanol	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 75-65-0							No interferences reported.	
2-Butoxyethanol	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 111-76-2							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)	\$25.00

Particulate, quartz and cristobalite on the same air sample is \$120.00 per sample. Acid treatment to remove interferences is an additional \$40 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together.
NONE indicates that the analyte must be sampled alone.

[3] PASSIVE AND RESPIRABLE SAMPLERS: Passive and/or respirable samplers will be billed when shipped from the Lab.

Assay Organic Vapor Monitors (OVM) are \$16.00 each, all other passive samplers are \$20 each.

Disposable respirable samplers (DRS) are \$17.00 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

TRAVELERS J								
Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM) TWA	STEL	Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
2-Butoxyethyl acetate	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 112-07-2							No interferences reported.	
n-Butyl acetate	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 123-86-4							No interferences reported.	
sec-Butyl acetate	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 105-46-4							No interferences reported.	
tert-Butyl acetate	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 540-88-5							No interferences reported.	
n-Butyl acrylate	\$55.00	GC 4	Sorbent Tubes: SKC 226-73 Coated charcoal tube	0.05	N	10 / 12	Keep media cold before and after sampling. Ship samples cold overnight to the Lab.	TIC-GC-01: Modified OSHA PV2011
		GC-U	Passive Sampler: Assay 566 OVM		N	60-720 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 141-32-2							No interferences reported.	
n-Butyl glycidyl ether	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 2426-08-6							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)	\$25.00

Particulate, quartz and cristobalite on the same air sample is \$120.00 per sample. Acid treatment to remove interferences is an additional \$40 per sample.

[2] **COMPATIBILITY CODES:** Compounds with the same "Compat. Code" may be collected together.
NONE indicates that the analyte must be sampled alone.

[3] **PASSIVE AND RESPIRABLE SAMPLERS:** Passive and/or respirable samplers will be billed when shipped from the Lab.

Assay Organic Vapor Monitors (OVM) are \$16.00 each, all other passive samplers are \$20 each.

Disposable respirable samplers (DRS) are \$17.00 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.

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INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM) TWA	STEL	Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
Butyl mercaptan	\$115.00	GC-MER	Filter: SKC 225-9007 Mercaptan Filter	0.10 / 0.20	0.2	55 / 150	Keep media frozen and protected from light before and after sampling. Ship samples cold overnight to the Lab. Dimethyl disulfide, diethyl disulfide and dibutyl disulfide may interfere, note presence on the sampling data sheet.	TIC-GC-37: Modified NIOSH 2542
CAS RN: 109-79-5								
Butyraldehyde	\$100.00	LC-ALD1	Sorbent Tubes: SKC 226-119 Coated silica gel tube followed by SKC 226-09 Charcoal tube	0.05 / 0.20	N	2 / 15	Keep media frozen before and after sampling. Ship samples cold overnight to the Lab. Sample by placing 2 tubes in holders connected together. The charcoal tube (closest to the pump) is disposed.	TIC-LC-01: Modified EPA IP-6A
		DNPH1	Passive Sampler: Assay 571 Aldehyde Monitor		N	15-600 min	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 RN: 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 Prew weighed PVC filter. Respirable samples may be collected at a 2.0 LPM flow rate on a preweighed Disposable Respirable Sampler (DRS) – see Particulate, Respirable instructions.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
CAS RN: 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. All water soluble calcium compounds are included in the result.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
CAS RN: 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. All water soluble calcium compounds are included in the result.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
CAS RN: 1305-62-0								
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. All water soluble calcium compounds are included in the result.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
CAS RN: 1305-78-8								
Camphor, synthetic	\$55.00	GC 2	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab. Use Assay 525 TraceAir II OVM for STEL sampling. No interferences reported.	
CAS RN: 76-22-2								
Caprolactam	\$130.00	NONE	Filter & Tube: SKC 226-57 XAD-7 OVS	0.50 / 1.0	1.0	10 / 100	Refrigerate samples after collection and ship cold overnight to the Lab. The sampler contains a filter and sorbent material in a single tube. Specify dust and/or vapor on the sampling data sheet.	TIC-LC-31: Modified OSHA PV2012
CAS RN: 105-60-2								
Carbon Black, OSHA	\$90.00	NONE	Filter: PVC Filter (37 mm) - Prew weighed	1.0 / 2.0	N	300 / 960	Routine shipping. Total particulates are determined first (\$27), then an extraction is done (\$63) if the particulate weight gain is above 100 micrograms. Gravimetric method nonspecific, all particulate matter in the sampling environment is collected and quantified.	TIC-GRV-05: Modified OSHA ID-196
CAS RN: 1333-86-4								

[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)	\$25.00

Particulate, quartz and cristobalite on the same air sample is \$120.00 per sample. Acid treatment to remove interferences is an additional \$40 per sample.

[2] **COMPATIBILITY CODES:** Compounds with the same "Compat. Code" may be collected together.
NONE indicates that the analyte must be sampled alone.

[3] **PASSIVE AND RESPIRABLE SAMPLERS:** Passive and/or respirable samplers will be billed when shipped from the Lab. Assay Organic Vapor Monitors (OVM) are \$16.00 each, all other passive samplers are \$20 each. Disposable respirable samplers (DRS) are \$17.00 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			
Carbon disulfide	\$125.00	NONE	Sorbent Tubes: SKC 226-44 Drying tube followed by SKC 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
		NONE	Passive Sampler: Assay 566 OVM		N	325-720 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 75-15-0							No interferences reported.	
Carbon tetrachloride	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab. Use Assay 525 TraceAir II OVM for STEL sampling.	
CAS RN: 56-23-5							No interferences reported.	
Catechol	\$110.00	LC-PHE	Filter & Tube: SKC 226-57 XAD-7 OVS	0.05 / 1.0	N	6 / 100	Refrigerate samples after collection and ship cold overnight to the Lab. The sampler contains a filter and sorbent material in a single tube.	TIC-LC-30: Modified OSHA PV2014
CAS RN: 120-80-9							No interferences reported.	
Chlorine	\$90.00	IC 2	Filter: Silver Membrane Filter (25 mm)	0.30 / 1.0	1.0	35 / 360	Protect samples from light after collection.	TIC-IC-08: Modified NIOSH 6011
CAS RN: 7782-50-5							Other chloride compounds may interfere, note presence on the sampling data sheet.	
Chlorine dioxide	\$90.00	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.	TIC-IC-09: Modified OSHA ID-202
CAS RN: 10049-04-4							Chlorine will not interfere. Large amounts of chloride may interfere, note presence on the sampling data sheet.	
Chlorobenzene	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 108-90-7							No interferences reported.	
p-Chlorobenzotrifluoride	\$55.00	GC-U	Sorbent Tubes: SKC 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 RN: 98-56-6							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)	\$25.00

Particulate, quartz and cristobalite on the same air sample is \$120.00 per sample. Acid treatment to remove interferences is an additional \$40 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together.
NONE indicates that the analyte must be sampled alone.

[3] PASSIVE AND RESPIRABLE SAMPLERS: Passive and/or respirable samplers will be billed when shipped from the Lab.
Assay Organic Vapor Monitors (OVM) are \$16.00 each, all other passive samplers are \$20 each.
Disposable respirable samplers (DRS) are \$17.00 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.

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INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

TRAVELERS J		Compat		Flow Rate (LPM)		Air Volume or			
Analyte	Price [1]	Code [2]	Media [3]	TWA	STEL	Sampling Time	for Passive [4]	Special Instructions/Interferences [5]	Reference
Chlorobiphenyls (Arochlor 1242, 1248, 1254 or 1260)	\$110.00	NONE	Filter & Tube: Glass Fiber Filter followed by SKC 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 Aroclor (1248, 1260...).	TIC-GC-25: Modified NIOSH 5503
								Other halogenated compounds may interfere, note presence on the sampling data sheet.	
CAS RN: varies									
Chlorobromomethane	\$77.00	GC-U	Sorbent Tubes: SKC 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
								No interferences reported.	
CAS RN: 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
								No interferences reported.	
CAS RN: 75-45-6									
Chloroform	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.		
								No interferences reported.	
CAS RN: 67-66-3									
o-Chlorotoluene	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.		
								No interferences reported.	
CAS RN: 95-49-8									
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
								No interferences reported.	
CAS RN: 7440-47-3									
Chromium in the presence of Tungsten	\$80.00	WINSOL	Filter: MCE Filter (37 mm)	1.0 / 3.0	N	120 / 960		Routine shipping. Request IN THE PRESENCE OF TUNGSTEN on the sampling data sheet. Tungsten can also be quantified if requested.	TIC-ICP-02: Modified OSHA ID-213
								No interferences reported.	
CAS RN: 7440-47-3									
Chromium, Hexavalent (welding, foundry, plating)	\$78.00	NONE	Filter: PVC Filter (37 mm) - Prew weighed	1.0 / 2.0	3.0	480 / 960		Routine shipping. See also Chromium - Samples are acid digested and analyzed for total chromium.	TIC-IC-07: Modified OSHA ID-215
								Iron, nickel, copper and vanadium compounds may interfere, note presence on the sampling data sheet. All hexavalent chromium compounds will be included.	
CAS RN: 18540-29-9									

[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)	\$25.00

Particulate, quartz and cristobalite on the same air sample is \$120.00 per sample. Acid treatment to remove interferences is an additional \$40 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together.
NONE indicates that the analyte must be sampled alone.

[3] PASSIVE AND RESPIRABLE SAMPLERS: Passive and/or respirable samplers will be billed when shipped from the Lab.
Assay Organic Vapor Monitors (OVM) are \$16.00 each, all other passive samplers are \$20 each.
Disposable respirable samplers (DRS) are \$17.00 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.

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INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM) TWA	STEL	Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
Chromium, Hexavalent (painting)	\$100.00	NONE	Filter: PVC Filter (37 mm) - Prew weighed	1.0 / 2.0	3	800 / 960	Request HEXAVALENT CHROMIUM - PAINTING on the sampling data sheet. Ship overnight to the Lab. Iron, nickel, copper and vanadium compounds may interfere, note presence on the sampling data sheet. All hexavalent chromium compounds will be included.	TIC-IC-07: Modified OSHA ID- 215
CAS RN: 18540-29-9								
Coal Tar Pitch Volatiles (Benzene-Soluble Fraction)	\$255.00	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. Benzene-Soluble Fraction determined first (\$63), then for PAHs (\$192) if concentration is over the PEL. Compounds soluble in benzene may interfere, note presence on the sampling data sheet.	TIC-LC-02: Modified OSHA 58
CAS RN: varies								
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. No interferences reported.	TIC-ICP-01: Modified OSHA ID- 125G/NIOSH 7300
CAS RN: 7440-48-4								
Cobalt in the presence of Tungsten	\$80.00	WINSOL	Filter: MCE Filter (37 mm)	1.0 / 3.0	N	480 / 960	Routine shipping. Request IN THE PRESENCE OF TUNGSTEN on the sampling data sheet. Tungsten can also be quantified if requested.	TIC-ICP-02: Modified OSHA ID- 213
CAS RN: 7440-48-4								
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 Prew weighed PVC filter. Respirable samples may be collected at a 2.0 LPM flow rate on a pre weighed Disposable Respirable Sampler (DRS) – see Particulate, Respirable instructions. No interferences reported.	TIC-ICP-01: Modified OSHA ID- 125G/NIOSH 7300
CAS RN: 7440-50-8								
Copper in the presence of Tungsten	\$80.00	WINSOL	Filter: MCE Filter (37 mm)	1.0 / 3.0	N	120 / 960	Routine shipping. Request IN THE PRESENCE OF TUNGSTEN on the sampling data sheet. Tungsten can also be quantified if requested.	TIC-ICP-02: Modified OSHA ID- 213
CAS RN: 7440-50-8								
Cresol, all isomers	\$80.00	LC-PHE	Sorbent Tubes: SKC 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 data sheet.	TIC-LC-22: Modified OSHA 32
CAS RN: 1319-77-3								
Cristobalite, Respirable	\$75.00	XRD	Filter: Disposable Respirable Sampler (DRS)	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). Respirable samplers (DRS) are billed \$17 each when shipped. Note interferences on the sampling data sheet: mica, potash, feldspar, zircon, graphite, aluminosilicate, calcite. High dust loading may increase the MRL. If needed, acid treatment to remove interferences is an additional \$40 per sample.	TIC-XRD-01: Modified NIOSH 7500
CAS RN: 14464-46-1								

[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)	\$25.00

Particulate, quartz and cristobalite on the same air sample is \$120.00 per sample. Acid treatment to remove interferences is an additional \$40 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together.
NONE indicates that the analyte must be sampled alone.

[3] PASSIVE AND RESPIRABLE SAMPLERS: Passive and/or respirable samplers will be billed when shipped from the Lab.
Assay Organic Vapor Monitors (OVM) are \$16.00 each, all other passive samplers are \$20 each.
Disposable respirable samplers (DRS) are \$17.00 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

TRAVELERS J			Compat	Flow Rate (LPM)	Air Volume or			
Analyte	Price [1]	Code [2]	Media [3]	TWA	STEL	Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
Crotonaldehyde	\$100.00	LC-ALD1	Sorbent Tubes: SKC 226-119 Coated silica gel tube followed by SKC 226-09 Charcoal tube	0.05 / 0.20	0.5	2 / 15	Keep media frozen before and after sampling. Ship samples cold overnight to the Lab. Sample by placing 2 tubes in holders connected together. The charcoal tube (closest to the pump) is disposed.	TIC-LC-01: Modified EPA IP-6A
		DNPH1	Passive Sampler: Assay 571 Aldehyde Monitor		N	30-600 min	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 RN: 4170-30-3								
Cumene	\$55.00	GC-U	Sorbent Tubes: SKC 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.	TIC-GC-86: Modified NIOSH 1501
		GC-U	Passive Sampler: Assay 566 OVM		N	60-720 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
		No interferences reported.						
CAS RN: 98-82-8								
Cyanide Salts as CN	\$80.00	NONE	Filter: PVC Filter (37 mm)	0.50 / 1.0	N	30 / 480	SHIP OVERNIGHT immediately after sampling. Cyanide salt samples should be analyzed within 5 days of collection, RUSH ANALYSIS FEES MAY APPLY.	TIC-IC-12: Modified OSHA ID-120
		All particulate cyanide compounds are detected. Particulate and gaseous cyanide can be collected together on a PVC filter followed by an SKC 226-210 tube - see Hydrogen cyanide.						
		No interferences reported.						
CAS RN: 57-12-5								
Cyclohexane	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
		No interferences reported.						
CAS RN: 110-82-7								
Cyclohexanol	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
		No interferences reported.						
CAS RN: 108-93-0								
Cyclohexanone	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
		No interferences reported.						
CAS RN: 108-94-1								

[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)	\$25.00

Particulate, quartz and cristobalite on the same air sample is \$120.00 per sample. Acid treatment to remove interferences is an additional \$40 per sample.

[2] **COMPATIBILITY CODES:** Compounds with the same "Compat. Code" may be collected together.

NONE indicates that the analyte must be sampled alone.

[3] **PASSIVE AND RESPIRABLE SAMPLERS:** Passive and/or respirable samplers will be billed when shipped from the Lab.

Assay Organic Vapor Monitors (OVM) are \$16.00 each, all other passive samplers are \$20 each.

Disposable respirable samplers (DRS) are \$17.00 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.

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IH Helpline: 800-842-0355

TRAVELERS J								
Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM) TWA	STEL	Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
Cyclohexene	\$55.00	GC-U	Sorbent Tubes: SKC 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	30-720 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 110-83-8							No interferences reported.	
Cyclohexylamine	\$90.00	AMINE2	Sorbent Tubes: SKC 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 RN: 108-91-8							Other amine compounds may interfere, note presence on the sampling data sheet.	
Cyclopentane	\$55.00	GC-U	Sorbent Tubes: SKC 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 RN: 287-92-3							No interferences reported.	
Desflurane	\$77.00	NONE	Sorbent Tubes: SKC 226-83 Anasorb 747 tube	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 min	Bring sampler to AMBIENT TEMPERATURE before sampling. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 57041-67-5							No interferences reported.	
Diacetone alcohol	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 123-42-2							No interferences reported.	
Diacetyl	\$110.00	GC 8	Sorbent Tubes: SKC 226-183 Silica gel tubes - set of two separate tubes in series	0.05 / 0.20	0.2	6 / 9	Protect samples from light during and after sampling (wrap the tubes in aluminum foil). Sample by placing 2 tubes in holders connected together. After sampling: separate, cap and label tubes FRONT and BACK (closest to the pump).	TIC-GC-84: Modified OSHA 1012
CAS RN: 431-03-8							No interferences reported.	
2,6-Di-tert-butyl-p-cresol	\$80.00	NONE	Filter & Tube: SKC 226-57 XAD-7 OVS	1.0	N	100	Refrigerate samples after collection and ship cold overnight to the Lab. The sampler contains a filter and sorbent material in a single tube.	TIC-GC-52: Modified OSHA PV2108
CAS RN: 128-37-0							No interferences reported.	
Dibutyl phthalate	\$80.00	GCPH	Filter & Tube: SKC 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.	TIC-GC-27: Modified OSHA 104
CAS RN: 84-74-2							Other phthalates will collect, note presence on the sampling data sheet.	

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Organic Solvents	\$35.00	Acids/Anions	\$44.00	Metals by ICP	\$28.00
Isocyanates	\$60.00	Aldehydes	\$60.00	Silica (see below)	\$25.00

Particulate, quartz and cristobalite on the same air sample is \$120.00 per sample. Acid treatment to remove interferences is an additional \$40 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together.

NONE indicates that the analyte must be sampled alone.

[3] PASSIVE AND RESPIRABLE SAMPLERS: Passive and/or respirable samplers will be billed when shipped from the Lab.

Assay Organic Vapor Monitors (OVM) are \$16.00 each, all other passive samplers are \$20 each.

Disposable respirable samplers (DRS) are \$17.00 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-Dichlorobenzene	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 95-50-1							No interferences reported.	
p-Dichlorobenzene	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 106-46-7							No interferences reported.	
Dichlorodifluoromethane	\$77.00	GC 74	Sorbent Tubes: Tandem SKC 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 RN: 75-71-8							No interferences reported.	
1,1-Dichloroethane	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 75-34-3							No interferences reported.	
1,2-Dichloroethane	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 107-06-2							No interferences reported.	
1,1-Dichloroethylene	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 75-35-4							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)	\$25.00

Particulate, quartz and cristobalite on the same air sample is \$120.00 per sample. Acid treatment to remove interferences is an additional \$40 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together.

NONE indicates that the analyte must be sampled alone.

[3] PASSIVE AND RESPIRABLE SAMPLERS: Passive and/or respirable samplers will be billed when shipped from the Lab.

Assay Organic Vapor Monitors (OVM) are \$16.00 each, all other passive samplers are \$20 each.

Disposable respirable samplers (DRS) are \$17.00 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-Dichloroethylene (cis and trans isomers)	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab. n-Propyl bromide may interfere, note presence on the sampling data sheet. Isomers (cis and trans) are combined in a single result.	
CAS RN: 540-59-0								
Diethanolamine	\$100.00	IC 2	Sorbent Tubes: SKC 226-98 Coated XAD-7 tube	0.20	N	50 / 96	Routine shipping.	TIC-IC-11: Modified NIOSH 3509
CAS RN: 111-42-2								
Diethylamine	\$110.00	AMINE3	Sorbent Tubes: SKC 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 41
CAS RN: 109-89-7								
Diethylbenzenes (o-, m-, and p- isomers)	\$55.00	GC-U	Sorbent Tubes: SKC 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 RN: 25340-17-4								
Diethylene glycol	\$80.00	GC 12	Filter & Tube: SKC 226-57 XAD-7 OVS	0.50 / 2.0	N	25 / 60	Refrigerate samples after collection and ship cold overnight to the Lab. The sampler contains a filter and sorbent material in a single tube.	TIC-GC-17: Modified NIOSH 5523
CAS RN: 111-46-6								
Diethylene glycol monobutyl ether	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 112-34-5								
Diethylene glycol monobutyl ether acetate	\$55.00	GC-U	Sorbent Tubes: SKC 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 RN: 124-17-4								
Diethylene glycol monoethyl ether	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 111-90-0								
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)	\$25.00

Particulate, quartz and cristobalite on the same air sample is \$120.00 per sample. Acid treatment to remove interferences is an additional \$40 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together.

NONE indicates that the analyte must be sampled alone.

[3] PASSIVE AND RESPIRABLE SAMPLERS: Passive and/or respirable samplers will be billed when shipped from the Lab.

Assay Organic Vapor Monitors (OVM) are \$16.00 each, all other passive samplers are \$20 each.

Disposable respirable samplers (DRS) are \$17.00 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

TRAVELERS J			Compat	Flow Rate (LPM)		Air Volume or	Special Instructions/Interferences [5]	Reference Method(s) [6]
Analyte	Price [1]	Code [2]	Media [3]	TWA	STEL	Sampling Time for Passive [4]		
Diethylene glycol monoethyl ether acetate	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 112-15-2							No interferences reported.	
Diethylene glycol monomethyl ether	\$55.00	GC-U	Sorbent Tubes: SKC 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
							No interferences reported.	
CAS RN: 111-77-3							No interferences reported.	
Diethylene triamine	\$110.00	NONE	Sorbent Tubes: SKC 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
							No interferences reported.	
CAS RN: 111-40-0							Other amine compounds may interfere, note presence on the sampling data sheet.	
Di-(2-ethylhexyl) phthalate	\$80.00	GCPH	Filter & Tube: SKC 226-56 Tenax OVS	0.50 / 1.0	N	240 / 600	Refrigerate samples after collection and ship cold overnight to the Lab. The sampler contains a filter and sorbent material in a single tube.	TIC-GC-27: Modified OSHA 104
							Other phthalates will collect, note presence on the sampling data sheet.	
CAS RN: 117-81-7							No interferences reported.	
Diisobutyl ketone	\$55.00	GC-U	Sorbent Tubes: SKC 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	
CAS RN: 108-83-8							No interferences reported.	
1,2-Dimethoxyethane	\$55.00	GC-U	Sorbent Tubes: SKC 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	
CAS RN: 110-71-4							Isopropyl alcohol, dichloromethane and dimethyl ether may interfere, note presence on the sampling data sheet.	
Dimethyl acetamide	\$64.00	GC 12	Sorbent Tubes: SKC 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	
CAS RN: 127-19-5							No interferences reported.	

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Organic Solvents	\$35.00	Acids/Anions	\$44.00	Metals by ICP	\$28.00
Isocyanates	\$60.00	Aldehydes	\$60.00	Silica (see below)	\$25.00

Particulate, quartz and cristobalite on the same air sample is \$120.00 per sample. Acid treatment to remove interferences is an additional \$40 per sample.

[2] **COMPATIBILITY CODES:** Compounds with the same "Compat. Code" may be collected together.
NONE indicates that the analyte must be sampled alone.

[3] **PASSIVE AND RESPIRABLE SAMPLERS:** Passive and/or respirable samplers will be billed when shipped from the Lab.
Assay Organic Vapor Monitors (OVM) are \$16.00 each, all other passive samplers are \$20 each.
Disposable respirable samplers (DRS) are \$17.00 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.

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INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

TRAVELERS J			Compat	Flow Rate (LPM)		Air Volume or	Special Instructions/Interferences [5]	Reference Method(s) [6]
Analyte	Price [1]	Code [2]	Media [3]	TWA	STEL	Sampling Time for Passive [4]		
Dimethylamine	\$110.00	NONE	Sorbent Tubes: SKC 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
CAS RN: 124-40-3							Other amine compounds may interfere, note presence on the sampling data sheet.	
Dimethyl disulfide	\$125.00	GC-U	Sorbent Tubes: SKC 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
CAS RN: 624-92-0							No interferences reported.	
Dimethylformamide	\$64.00	GC 12	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 68-12-2							No interferences reported.	
Dimethyl phthalate	\$80.00	GCPH	Filter & Tube: SKC 226-56 Tenax OVS	0.50 / 1.0	N	50 / 300	Refrigerate samples after collection and ship cold overnight to the Lab. The sampler contains a filter and sorbent material in a single tube.	TIC-GC-27: Modified OSHA 104
CAS RN: 131-11-3							Other phthalates will collect, note presence on the sampling data sheet.	
Dimethyl sulfide	\$125.00	GC-U	Sorbent Tubes: SKC 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 RN: 75-18-3							No interferences reported.	
Di-n-octyl phthalate	\$80.00	GCPH	Filter & Tube: SKC 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.	TIC-GC-27: Modified OSHA 104
CAS RN: 117-84-0							Other phthalates will collect, note presence on the sampling data sheet.	
1,4-Dioxane	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 123-91-1							No interferences reported.	
1,3-Dioxolane	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 646-06-0							No interferences reported.	

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Organic Solvents	\$35.00	Acids/Anions	\$44.00	Metals by ICP	\$28.00
Isocyanates	\$60.00	Aldehydes	\$60.00	Silica (see below)	\$25.00

Particulate, quartz and cristobalite on the same air sample is \$120.00 per sample. Acid treatment to remove interferences is an additional \$40 per sample.

[2] **COMPATIBILITY CODES:** Compounds with the same "Compat. Code" may be collected together.

NONE indicates that the analyte must be sampled alone.

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NA = not applicable.

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

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INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

TRAVELERS J			Compat	Flow Rate (LPM)		Air Volume or	Special Instructions/Interferences [5]	Reference
Analyte	Price [1]	Code [2]	Media [3]	TWA	STEL	Sampling Time for Passive [4]		Method(s) [6]
Dipropylene glycol methyl ether	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 34590-94-8							No interferences reported.	
Dipropylene glycol methyl ether acetate	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 88917-22-0							No interferences reported.	
Divinyl benzene	\$60.00	GC 11	Sorbent Tubes: SKC 226-73 Coated charcoal tube	0.01 / 0.05	N	2 / 18	Keep media cold before and after sampling. Ship samples cold overnight to the Lab.	TIC-GC-86: Modified OSHA 89
CAS RN: 1321-74-0							No interferences reported.	
Enflurane	\$77.00	AnestCS2	Sorbent Tubes: SKC 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 min	Bring sampler to AMBIENT TEMPERATURE before sampling. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab. Cannot quantify low enough for comparison to NIOSH REL.	
CAS RN: 13838-16-9							No interferences reported.	
Epichlorohydrin	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 106-89-8							No interferences reported.	
Ethanolamine	\$100.00	IC 2	Sorbent Tubes: SKC 226-98 Coated XAD-7 tube	0.20	0.2	50 / 96	Routine shipping.	TIC-IC-11: Modified NIOSH 3509
CAS RN: 141-43-5							Other amine compounds may interfere, note presence on the sampling data sheet.	
2-Ethoxyethanol	\$55.00	GC-U	Sorbent Tubes: SKC 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	120-720 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 110-80-5							No interferences reported.	

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Organic Solvents	\$35.00	Acids/Anions	\$44.00	Metals by ICP	\$28.00
Isocyanates	\$60.00	Aldehydes	\$60.00	Silica (see below)	\$25.00

Particulate, quartz and cristobalite on the same air sample is \$120.00 per sample. Acid treatment to remove interferences is an additional \$40 per sample.

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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.

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INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM) TWA	STEL	Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
2-Ethoxyethyl acetate	\$55.00	GC-U	Sorbent Tubes: SKC 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 RN: 111-15-9							No interferences reported.	
Ethyl acetate	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 141-78-6							No interferences reported.	
Ethyl acrylate	\$55.00	GC 4	Sorbent Tubes: SKC 226-73 Coated charcoal tube	0.01 / 0.05	0.05	6 / 12	Keep media cold before and after sampling. Ship samples cold overnight to the Lab.	TIC-GC-01: Modified OSHA 92
		GC-U	Passive Sampler: Assay 566 OVM		Y	30-720 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 140-88-5							No interferences reported.	
Ethyl alcohol	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 64-17-5							Dichloromethane (methylene chloride) may interfere, note presence on the sampling data sheet.	
Ethylamine	\$110.00	AMINE3	Sorbent Tubes: SKC 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 RN: 75-04-7							Other amine compounds may interfere, note presence on the sampling data sheet.	
Ethyl amyl ketone	\$55.00	GC-U	Sorbent Tubes: SKC 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 RN: 106-68-3							No interferences reported.	
Ethyl benzene	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 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)	\$25.00

Particulate, quartz and cristobalite on the same air sample is \$120.00 per sample. Acid treatment to remove interferences is an additional \$40 per sample.

[2] **COMPATIBILITY CODES:** Compounds with the same "Compat. Code" may be collected together.

NONE indicates that the analyte must be sampled alone.

[3] **PASSIVE AND RESPIRABLE SAMPLERS:** Passive and/or respirable samplers will be billed when shipped from the Lab.

Assay Organic Vapor Monitors (OVM) are \$16.00 each, all other passive samplers are \$20 each.

Disposable respirable samplers (DRS) are \$17.00 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.

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INDUSTRIAL HYGIENE LABORATORY

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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: SKC 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 RN: 106-35-4							No interferences reported.	
Ethyl cyanoacrylate	\$95.00	CYANO	Sorbent Tubes: SKC 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-GC-21: Modified OSHA 55
CAS RN: 7085-85-0							No interferences reported.	
Ethylenediamine	\$110.00	NONE	Sorbent Tubes: SKC 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 RN: 107-15-3							Other amine compounds may interfere, note presence on the sampling data sheet.	
Ethylene glycol	\$80.00	GC 12	Filter & Tube: SKC 226-57 XAD-7 OVS	0.50 / 2.0	2.0	20 / 60	Refrigerate samples after collection and ship cold overnight to the Lab. The sampler contains a filter and sorbent material in a single tube.	TIC-GC-17: Modified OSHA Stopgap / NIOSH 5523
CAS RN: 107-21-1							No interferences reported.	
Ethylene oxide	\$105.00	NONE	Sorbent Tubes: SKC 226-178 Coated Anasorb 747 tube	0.02 / 0.05	0.05	8 / 24	Keep media cold before and after sampling. Ship samples cold overnight to the Lab.	TIC-GC-34: Modified OSHA 1010
		NONE	Passive Sampler: SKC 575-005 EtO Sampler		N	180-480 min	Keep media cold before and after sampling. Ship samples cold overnight to the Lab.	
CAS RN: 75-21-8							2-Bromoethanol is a positive interference, note presence on the sampling data sheet.	
Ethyl ether	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 60-29-7							HCFCs or hexane may interfere, note presence on the sampling data sheet.	
Ethyl-3-ethoxypropionate	\$55.00	GC-U	Sorbent Tubes: SKC 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 RN: 763-69-9							No interferences reported.	
Ethyl formate	\$55.00	GC-U	Sorbent Tubes: SKC 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 RN: 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)	\$25.00

Particulate, quartz and cristobalite on the same air sample is \$120.00 per sample. Acid treatment to remove interferences is an additional \$40 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together. NONE indicates that the analyte must be sampled alone.

[3] PASSIVE AND RESPIRABLE SAMPLERS: Passive and/or respirable samplers will be billed when shipped from the Lab. Assay Organic Vapor Monitors (OVM) are \$16.00 each, all other passive samplers are \$20 each. Disposable respirable samplers (DRS) are \$17.00 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.

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INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

TRAVELERS J								
Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM) TWA	STEL	Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
Ethyl lactate	\$70.00	GC-9	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 97-64-3							No interferences reported.	
Ethyl methacrylate	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 97-63-2							No interferences reported.	
Ethyl silicate	\$60.00	NONE	Sorbent Tubes: SKC 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
CAS RN: 78-10-4							Other compounds may interfere. Note any compounds present in the environment on the sampling data sheet.	
Fibers, Total	\$35.00	NONE	Filter: Fiber Count Filter (PCM) non-conductive cowl (25 mm) - Open-	1.0 / 3.0	N	240 / 960	Routine shipping.	TIC-PCM-01: NIOSH 7400 Issue 3
CAS RN: varies							Fibers meeting the counting criteria will be included in the results. Avoid overloading the filter, accurate counts are not possible with overloaded filters.	
Fluoride Particulate as F, Insoluble	\$125.00	NONE	Filter: SKC 225-9001 MCE Filter with coated pad	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
CAS RN: varies							Caustic compounds such as NaOH or KOH may cause an interference at high levels.	
Fluoride Particulate as F, Soluble	\$70.00	NONE	Filter: SKC 225-9001 MCE Filter with coated pad	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 RN: varies							Caustic compounds such as NaOH or KOH may cause an interference at high levels.	
Formaldehyde	\$100.00	LC-ALD1	Sorbent Tubes: SKC 226-119 Coated silica gel tube followed by SKC 226-09 Charcoal tube	0.05 / 0.50	0.5	10 / 25	Keep media frozen before and after sampling. Ship samples cold overnight to the Lab. Sample by placing 2 tubes in holders connected together. The charcoal tube (closest to the pump) is disposed.	TIC-LC-01: Modified EPA IP-6A/NIOSH 2016
		DNPH1	Passive Sampler: Assay 571 Aldehyde Monitor		Y	180-600 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the lab. Call for info regarding sampling other aldehydes.	
CAS RN: 50-00-0							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)	\$25.00

Particulate, quartz and cristobalite on the same air sample is \$120.00 per sample. Acid treatment to remove interferences is an additional \$40 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together.
NONE indicates that the analyte must be sampled alone.

[3] PASSIVE AND RESPIRABLE SAMPLERS: Passive and/or respirable samplers will be billed when shipped from the Lab.
Assay Organic Vapor Monitors (OVM) are \$16.00 each, all other passive samplers are \$20 each.
Disposable respirable samplers (DRS) are \$17.00 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

TRAVELERS I								
Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM) TWA STEL		Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
Formic acid	\$70.00	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. Formate esters and formate salts may interfere, note presence on the sampling data sheet.	TIC-IC-02: Modified NIOSH 2011
CAS RN: 64-18-6								
Furfural	\$55.00	NONE	Sorbent Tubes: SKC 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. No interferences reported.	TIC-GC-86: Modified OSHA 72
CAS RN: 98-01-1								
Furfuryl alcohol	\$70.00	NONE	Sorbent Tubes: SKC 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. No interferences reported.	TIC-GC-42: Modified NIOSH 2505
CAS RN: 98-00-0								
Gasoline as Total Hydrocarbons	\$70.00	GC-U	Sorbent Tubes: SKC 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 min	
CAS RN: 8006-61-9								
Glutaraldehyde	\$100.00	LC-ALD1	Sorbent Tubes: SKC 226-119 Coated silica gel tube followed by SKC 226-09 Charcoal tube	0.05 / 0.50	0.5	1 / 30	Keep media frozen before and after sampling. Ship samples cold overnight to the Lab. Sample by placing 2 tubes in holders connected together. The charcoal tube (closest to the pump) is disposed.	TIC-LC-01: Modified EPA IP-6A/NIOSH 2532
		DNPH1	Passive Sampler: Assay 571 Aldehyde Monitor			N	180-600 min	
CAS RN: 111-30-8								
Halothane	\$77.00	AnestCS2	Sorbent Tubes: SKC 226-83 Anasorb 747 tube	0.05	0.05	6 / 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	180-480 min	
CAS RN: 151-67-7								
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)	\$25.00

Particulate, quartz and cristobalite on the same air sample is \$120.00 per sample. Acid treatment to remove interferences is an additional \$40 per sample.

[2] **COMPATIBILITY CODES:** Compounds with the same "Compat. Code" may be collected together.
NONE indicates that the analyte must be sampled alone.

[3] **PASSIVE AND RESPIRABLE SAMPLERS:** Passive and/or respirable samplers will be billed when shipped from the Lab. Assay Organic Vapor Monitors (OVM) are \$16.00 each, all other passive samplers are \$20 each. Disposable respirable samplers (DRS) are \$17.00 each.

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

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

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INDUSTRIAL HYGIENE LABORATORY

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TRAVELERS J			Compat	Flow Rate (LPM)		Air Volume or	Special Instructions/Interferences [5]	Reference Method(s) [6]
Analyte	Price [1]	Code [2]	Media [3]	TWA	STEL	Sampling Time for Passive [4]		
n-Heptane	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 142-82-5							No interferences reported.	
Hexachloroethane	\$55.00	GC-U	Sorbent Tubes: SKC 226-09 Charcoal tube	0.01 / 0.20	N	18 / 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
							No interferences reported.	
CAS RN: 67-72-1							No interferences reported.	
1,6-Hexamethylene diisocyanate	\$100.00	NCO	Filter: Isocyanate (NCO) Filter - Open-faced	0.50 / 1.0	1.0	120 / 240	Keep media cold before and after sampling. Before sampling: Remove the top of the 3-piece filter cassette (section w/o wagon wheel design). After sampling: Replace the top of the cassette and plugs. Ship samples cold overnight to the Lab.	TIC-LC-03: Modified OSHA 42
CAS RN: 822-06-0							Note presence of other isocyanates in the environment on the sampling data sheet.	
n-Hexane	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 110-54-3							HCFCs or ether may interfere, note presence on the sampling data sheet.	
Hexane (Other Isomers)	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: varies							Analysis does not include n-hexane. HCFCs or ether may interfere, note presence on the sampling data sheet.	
1,6-Hexanediol diacrylate	\$60.00	NONE	Sorbent Tubes: SKC 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 RN: 13048-33-4							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)	\$25.00

Particulate, quartz and cristobalite on the same air sample is \$120.00 per sample. Acid treatment to remove interferences is an additional \$40 per sample.

[2] **COMPATIBILITY CODES:** Compounds with the same "Compat. Code" may be collected together.
NONE indicates that the analyte must be sampled alone.

[3] **PASSIVE AND RESPIRABLE SAMPLERS:** Passive and/or respirable samplers will be billed when shipped from the Lab.
Assay Organic Vapor Monitors (OVM) are \$16.00 each, all other passive samplers are \$20 each.
Disposable respirable samplers (DRS) are \$17.00 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.

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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			
Hexylene glycol	\$80.00	NONE	Sorbent Tubes: SKC 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
		NONE	Passive Sampler: Assay 566 OVM		N	60-720 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 107-41-5							No interferences reported.	
Hydrazine	\$110.00	NONE	Filter: SKC 225-9012 or PDA Filter	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-GC-33: Modified OSHA 108
CAS RN: 302-01-2							Aromatic amines and monoethylhydrazine interfere, note presence on the sampling data sheet. Ammonia does not interfere.	
Hydrazoic acid	\$90.00	NONE	Sorbent Tubes: SKC 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 RN: 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	\$70.00	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- 1655G
CAS RN: 10035-10-6							Other bromide compounds may interfere, note presence on the sampling data sheet.	
Hydrogen chloride	\$70.00	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- 1745G
CAS RN: 7647-01-0							Other chloride compounds may interfere, note presence on the sampling data sheet.	
Hydrogen cyanide	\$85.00	NONE	Filter & Tube: PVC Filter followed by SKC 226-210 soda lime tube	0.05 / 0.2	0.2	15 / 120	Routine shipping. Particulate cyanide (cyanide salts) is collected on the PVC filter and can be analyzed for an additional charge - see Cyanide Salts as CN.	TIC-IC-12: Modified NIOSH 6017
CAS RN: 74-90-8							Hydrogen sulfide is a potential interference, note presence on the sampling data sheet. Cyanide salts decompose to hydrogen cyanide in moist air and may interfere.	
Hydrogen fluoride as F	\$70.00	NONE	Filter: SKC 225-9001 MCE Filter with coated pad	1.0 / 2.0	N	500 / 800	Request HYDROGEN FLUORIDE AS F on the sampling data sheet. Fluoride Particulate can also be analyzed (see Fluoride Particulate). Price listed is for Hydrogen Fluoride only.	TIC-IC-14: Modified OSHA ID- 110
CAS RN: 7664-39-3							Caustic compounds such as NaOH or KOH may cause an interference at high levels.	
Hydrogen peroxide	\$95.00	NONE	Filter: Hydrogen Peroxide (H2O2) Filter	1.0 / 2.0	N	60 / 240	Keep media cold before and after sampling. Protect samples from light after collection and ship samples cold overnight to the Lab.	TIC-IC-20: Modified OSHA 1019
CAS RN: 7722-84-1							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)	\$25.00

Particulate, quartz and cristobalite on the same air sample is \$120.00 per sample. Acid treatment to remove interferences is an additional \$40 per sample.

[2] **COMPATIBILITY CODES:** Compounds with the same "Compat. Code" may be collected together.

NONE indicates that the analyte must be sampled alone.

[3] **PASSIVE AND RESPIRABLE SAMPLERS:** Passive and/or respirable samplers will be billed when shipped from the Lab.

Assay Organic Vapor Monitors (OVM) are \$16.00 each, all other passive samplers are \$20 each.

Disposable respirable samplers (DRS) are \$17.00 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.

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INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM) TWA	STEL	Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
Hydrogen sulfide	\$70.00	NONE	Filter & Tube: PTFE Filter followed by ORBO 34 special charcoal tube	0.10 / 0.20	1.5	40 / 50	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. Sulfur dioxide (SO2) is a positive interference, note presence on the sampling data sheet. The filter removes particulate sulfates and is not normally analyzed, but it can be analyzed for particulate sulfates if requested.	TIC-IC-04: Modified NIOSH 6013
CAS RN: 7783-06-4								
Hydroquinone	\$90.00	NONE	Filter: MCE Filter (37 mm)	1.0 / 3.0	N	60 / 180	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 RN: 123-31-9								
2-Hydroxyethyl methacrylate	\$70.00	GC 9	Sorbent Tubes: SKC 226-09 Charcoal tube	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-71: Modified OSHA In House Method
CAS RN: 868-77-9								
Indium	\$36.00	ICP 001	Filter: MCE Filter (37 mm)	1.0 / 3.0	N	480 / 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 RN: 7440-74-6								
Iodine	\$65.00	NONE	Sorbent Tubes: SKC 226-80 Coated Anasorb 747 tube	0.50 / 1.0	1.0	60 / 240	Refrigerate samples after collection and ship cold overnight to the Lab. Iodide compounds may interfere, note presence on the sampling data sheet. Use a PTFE prefilter if iodide particulate is present. Loss of iodine has been noted when sampling in > 50% relative humidity.	TIC-IC-10: Modified OSHA ID-212
CAS RN: 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.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
CAS RN: 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 Prewieghed PVC filter. Respirable samples may be collected at a 2.0 LPM flow rate on a preweighed Disposable Respirable Sampler (DRS) – see Particulate, Respirable instructions.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
CAS RN: 1309-37-1								
Iron oxide as Fe2O3 in the presence of Tungsten	\$80.00	WINSOL	Filter: MCE Filter (37 mm)	1.0 / 3.0	N	120 / 960	Routine shipping. Request IN THE PRESENCE OF TUNGSTEN on the sampling data sheet. Tungsten can also be quantified if requested.	TIC-ICP-02: Modified OSHA ID-213
CAS RN: 1309-37-1								
Isoamyl acetate	\$55.00	GC-U	Sorbent Tubes: SKC 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
CAS RN: 123-92-2								

[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)	\$25.00

Particulate, quartz and cristobalite on the same air sample is \$120.00 per sample. Acid treatment to remove interferences is an additional \$40 per sample.

[2] **COMPATIBILITY CODES:** Compounds with the same "Compat. Code" may be collected together. NONE indicates that the analyte must be sampled alone.

[3] **PASSIVE AND RESPIRABLE SAMPLERS:** Passive and/or respirable samplers will be billed when shipped from the Lab. Assay Organic Vapor Monitors (OVM) are \$16.00 each, all other passive samplers are \$20 each. Disposable respirable samplers (DRS) are \$17.00 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.

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INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

TRAVELERS J				Flow Rate (LPM)		Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
Analyte	Price [1]	Compat Code [2]	Media [3]	TWA	STEL			
Isoamyl alcohol	\$55.00	GC-U	Sorbent Tubes: SKC 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.	TIC-GC-86: Modified NIOSH 1402
		GC-U	Passive Sampler: Assay 566 OVM		Y	15-720 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 123-51-3							No interferences reported.	
Isobutyl acetate	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 110-19-0							No interferences reported.	
Isobutyl alcohol	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 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 and after sampling. Before sampling: Remove the top of the 3-piece filter cassette (section w/o wagon wheel design). After sampling: Replace the top of the cassette and plugs. Ship samples cold overnight to the Lab.	TIC-LC-03: Modified OSHA 42/OSHA 47/OSHA PV2034
CAS RN: varies							Scan includes HDI, 2,4-TDI, 2,6-TDI, MDI and IPDI. Note presence of other isocyanates in the environment on the sampling data sheet.	
Isoflurane	\$77.00	AnestCS2	Sorbent Tubes: SKC 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 min	Bring sampler to AMBIENT TEMPERATURE before sampling. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 26675-46-7							No interferences reported.	
Isooctane	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 540-84-1							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)	\$25.00

Particulate, quartz and cristobalite on the same air sample is \$120.00 per sample. Acid treatment to remove interferences is an additional \$40 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together. NONE indicates that the analyte must be sampled alone.

[3] PASSIVE AND RESPIRABLE SAMPLERS: Passive and/or respirable samplers will be billed when shipped from the Lab.

Assay Organic Vapor Monitors (OVM) are \$16.00 each, all other passive samplers are \$20 each. Disposable respirable samplers (DRS) are \$17.00 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

TRAVELERS J								
Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM) TWA	STEL	Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
Isooctyl alcohol	\$55.00	GC-U	Sorbent Tubes: SKC 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 RN: 26952-21-6							No interferences reported.	
Isophorone	\$55.00	GC14	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 78-59-1							No interferences reported.	
Isophorone diisocyanate	\$100.00	NCO	Filter: Isocyanate (NCO) Filter - Open-faced	0.50 / 1.0	1.0	120 / 240	Keep media cold before and after sampling. Before sampling: Remove the top of the 3-piece filter cassette (section w/o wagon wheel design). After sampling: Replace the top of the cassette and plugs. Ship samples cold overnight to the Lab.	TIC-LC-03: Modified OSHA PV2034
CAS RN: 4098-71-9							Note presence of other isocyanates in the environment on the sampling data sheet.	
Isopropyl acetate	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 108-21-4							No interferences reported.	
Isopropyl alcohol	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 67-63-0							No interferences reported.	
Isopropyl ether	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 108-20-3							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)	\$25.00

Particulate, quartz and cristobalite on the same air sample is \$120.00 per sample. Acid treatment to remove interferences is an additional \$40 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together.
NONE indicates that the analyte must be sampled alone.

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[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.

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INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM) TWA	STEL	Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
Kerosene as Total Hydrocarbons	\$70.00	GC-U	Sorbent Tubes: SKC 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. Petroleum distillates (PDFs) contain several compounds, quantitation of individual compounds may not be possible. Specify the PDF on the sampling data sheet (VMP, Stoddard, etc.). Multiple PDFs are reported as Petroleum Distillate Fraction.	TIC-GC-86: Modified OSHA 48
CAS RN: 8008-20-6								
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 RN: 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. Large amount of other metals may interfere, note presence on the sampling data sheet.	TIC-ICP-01: Modified OSHA ID- 125G/NIOSH 7300
CAS RN: 7439-92-1								
d-Limonene	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 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 RN: 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 RN: 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 Prew weighed PVC filter. Respirable samples may be collected at a 2.0 LPM flow rate on a preweighed Disposable Respirable Sampler (DRS) – see Particulate, Respirable instructions.	TIC-ICP-01: Modified OSHA ID- 125G/NIOSH 7300
CAS RN: 7439-96-5							No interferences reported.	
Manganese in the presence of Tungsten	\$80.00	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 data sheet. Tungsten can also be quantified if requested.	TIC-ICP-02: Modified OSHA ID- 213
CAS RN: varies							No interferences reported.	
2-Mercaptoethanol	\$115.00	NONE	Sorbent Tubes: SKC 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 RN: 60-24-2							No interferences reported.	

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Organic Solvents	\$35.00	Acids/Anions	\$44.00	Metals by ICP	\$28.00
Isocyanates	\$60.00	Aldehydes	\$60.00	Silica (see below)	\$25.00

Particulate, quartz and cristobalite on the same air sample is \$120.00 per sample. Acid treatment to remove interferences is an additional \$40 per sample.

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Disposable respirable samplers (DRS) are \$17.00 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.

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INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM) TWA STEL		Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
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 RN: varies								No interferences reported.
Mercury Vapor	\$70.00	NONE	Sorbent Tubes: SKC 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 min	Routine shipping. Exposure time of 400 minutes will achieve a method reporting limit of 50% of the ACGIH TLV. Cannot quantify low enough for comparison to OSHA PEL.	
CAS RN: 7439-97-6								Other mercury compounds may interfere, note presence on the sampling data sheet.
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 numbers and Interferences. 20 element 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 1260 L is needed due to low exposure limit for Be.	TIC-ICP-01: Modified OSHA ID-121/NIOSH 7300
CAS RN: varies								No interferences reported.
Metal Scan, Solder	\$110.00	ICP 001	Filter: MCE Filter (37 mm)	1.0 / 3.0	3.0	960 / 1260	Routine shipping. See specific metals for CAS numbers and Interferences. Metal solder scan includes Sb,Be,Cd,Cu,Pb,Ag,Sn and ZnO. Minimum air volume of 1260 L is needed due to low exposure limit for Be.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
CAS RN: varies								No interferences reported.
Metal Scan, Welding	\$160.00	ICP 001	Filter: MCE Filter (37 mm)	1.0 / 3.0	3.0	1200 / 1260	Routine shipping. See specific metals for CAS numbers and Interferences. Welding fume scan includes Al, Sb,Be,Cd,Cr,Co,Cu,Fe2O3,Pb,Mn,Mo,Ni,V2O5 and ZnO. Minimum air volume of 1260 L is needed due to low exposure limit for Be.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
CAS RN: varies								No interferences reported.
Metal Working Fluids as Total Mass and Extractables	\$90.00	NONE	Filter: PTFE Filter (37 mm) - Prew weighed	2.0	N	960	Routine shipping. Total particulates are determined first (\$27), then an extraction is done (\$63) if the particulate weight gain is above 50 micrograms.	TIC-GRV-03: Modified NIOSH 5524/ASTM PS42-97
CAS RN: varies								No interferences reported.
Methacrylic acid	\$110.00	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 RN: 79-41-4								Other compounds may interfere. Note any compounds present in the environment on the sampling data sheet.
2-Methoxyethanol	\$55.00	GC-U	Sorbent Tubes: SKC 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 RN: 109-86-4								No interferences reported.

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Organic Solvents	\$35.00	Acids/Anions	\$44.00	Metals by ICP	\$28.00
Isocyanates	\$60.00	Aldehydes	\$60.00	Silica (see below)	\$25.00

Particulate, quartz and cristobalite on the same air sample is \$120.00 per sample. Acid treatment to remove interferences is an additional \$40 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together.
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[3] PASSIVE AND RESPIRABLE SAMPLERS: Passive and/or respirable samplers will be billed when shipped from the Lab.
Assay Organic Vapor Monitors (OVM) are \$16.00 each, all other passive samplers are \$20 each.
Disposable respirable samplers (DRS) are \$17.00 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.

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INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM) TWA STEL		Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
2-Methoxyethyl acetate	\$55.00	GC-U	Sorbent Tubes: SKC 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 RN: 110-49-6							No interferences reported.	
Methyl acetate	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 79-20-9							No interferences reported.	
Methyl acrylate	\$55.00	GC 4	Sorbent Tubes: SKC 226-73 Coated charcoal tube	0.01 / 0.05	N	3 / 12	Keep media cold before and after sampling. Ship samples cold overnight to the Lab.	TIC-GC-01: Modified OSHA 92
		GC-U	Passive Sampler: Assay 566 OVM		N	60-720 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 96-33-3							No interferences reported.	
Methyl alcohol	\$55.00	NONE	Sorbent Tubes: SKC 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 min	Bring sampler to AMBIENT TEMPERATURE before sampling. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 67-56-1							No interferences reported.	
Methylamine	\$110.00	AMINE3	Sorbent Tubes: SKC 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 RN: 74-89-5							Other amine compounds may interfere, note presence on the sampling data sheet.	
Methyl amyl alcohol	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 108-11-2							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)	\$25.00

Particulate, quartz and cristobalite on the same air sample is \$120.00 per sample. Acid treatment to remove interferences is an additional \$40 per sample.

[2] **COMPATIBILITY CODES:** Compounds with the same "Compat. Code" may be collected together.
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[3] **PASSIVE AND RESPIRABLE SAMPLERS:** Passive and/or respirable samplers will be billed when shipped from the Lab.
Assay Organic Vapor Monitors (OVM) are \$16.00 each, all other passive samplers are \$20 each.
Disposable respirable samplers (DRS) are \$17.00 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.

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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 n-amyl ketone	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 110-43-0								No interferences reported.
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 RN: 74-83-9								No interferences reported.
Methyl tert-butyl ether	\$55.00	NONE	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 1634-04-4								No interferences reported.
Methyl n-butyl ketone	\$55.00	GC-U	Sorbent Tubes: SKC 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, RUSH ANALYSIS FEES MAY APPLY.	TIC-GC-86: Modified NIOSH 1300
		GC-U	Passive Sampler: Assay 566 OVM		N	90-720 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab. Use Assay 525 TraceAir II OVM for STEL sampling.	
CAS RN: 591-78-6								No interferences reported.
Methyl-2-cyanoacrylate	\$95.00	CYANO	Sorbent Tubes: SKC 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 RN: 137-05-3								No interferences reported.
Methyl cyclohexane	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 108-87-2								No interferences reported.
Methylcyclohexanol	\$55.00	NONE	Sorbent Tubes: SKC 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 RN: 25639-42-3								No interferences reported.

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Organic Solvents	\$35.00	Acids/Anions	\$44.00	Metals by ICP	\$28.00
Isocyanates	\$60.00	Aldehydes	\$60.00	Silica (see below)	\$25.00

Particulate, quartz and cristobalite on the same air sample is \$120.00 per sample. Acid treatment to remove interferences is an additional \$40 per sample.

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[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) TWA	STEL	Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
4,4'-Methylenebis(2-chloroaniline)	\$100.00	NONE	Filter & Tube: SKC 226-99 Silica Gel OVS	0.50 / 1.0	N	160 / 240	Refrigerate samples after collection and ship cold overnight to the Lab. The sampler contains a filter and sorbent material in a single tube.	TIC-LC-35: Modified NIOSH 236
CAS RN: 101-14-4							No interferences reported.	
Methylene bis(4-cyclohexylisocyanate)	\$100.00	NONE	Filter: Isocyanate (NCO) Filter - Open-faced	0.50 / 1.0	N	100 / 240	Keep media cold before and after sampling. Before sampling: Remove the top of the 3-piece filter cassette (section w/o wagon wheel design). After sampling: Replace the top of the cassette and plugs. Ship samples cold overnight to the Lab.	TIC-LC-03: Modified OSHA PV2092
CAS RN: 5124-30-1							Note presence of other isocyanates in the environment on the sampling data sheet.	
Methylene bisphenyl diisocyanate	\$100.00	NCO	Filter: Isocyanate (NCO) Filter - Open-faced	0.50 / 1.0	1.0	100 / 240	Keep media cold before and after sampling. Before sampling: Remove the top of the 3-piece filter cassette (section w/o wagon wheel design). After sampling: Replace the top of the cassette and plugs. Ship samples cold overnight to the Lab.	TIC-LC-03: Modified OSHA 47
CAS RN: 101-68-8							Note presence of other isocyanates in the environment on the sampling data sheet.	
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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 75-09-2							Ethanol may interfere, note presence on the sampling data sheet.	
4,4'-Methylenedianiline	\$100.00	NONE	Filter: MDA Filter - Open-faced	1.0 / 2.0	N	100 / 1000	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.	TIC-LC-15: Modified NIOSH 5029
CAS RN: 101-77-9							4,4'-Diphenylmethane diisocyanate (MDI) will interfere, note presence on the sampling data sheet.	
Methyl ethyl ketone	\$55.00	GC14	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 78-93-3							No interferences reported.	
Methylethyl ketoxime	\$55.00	NONE	Sorbent Tubes: SKC 226-93 XAD-4 tube	0.1	N	5 / 10	Routine shipping.	TIC-GC-60: Modified OSHA In House Method
CAS RN: 96-29-7							No interferences reported.	
Methyl formate	\$60.00	NONE	Sorbent Tubes: SKC 226-83 Anasorb 747 tube	0.025 / 0.05	0.05	2.5 / 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-75: Modified OSHA PV2041
		GC-H	Passive Sampler: Assay 566 OVM		Y	15-240 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 107-31-3							No interferences reported.	

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Isocyanates	\$60.00	Aldehydes	\$60.00	Silica (see below)	\$25.00

Particulate, quartz and cristobalite on the same air sample is \$120.00 per sample. Acid treatment to remove interferences is an additional \$40 per sample.

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[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.

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INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM) TWA	STEL	Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
Methyl isoamyl acetate	\$55.00	GC-U	Sorbent Tubes: SKC 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 RN: 108-84-9							No interferences reported.	
Methyl isoamyl ketone	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 110-12-3							No interferences reported.	
Methyl isobutyl ketone	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 108-10-1							No interferences reported.	
Methyl isopropyl ketone	\$55.00	GC-U	Sorbent Tubes: SKC 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 RN: 563-80-4							No interferences reported.	
Methyl mercaptan	\$115.00	GC-MER	Filter: SKC 225-9007 Mercaptan Filter	0.01 / 0.20	0.2	20 / 150	Keep media frozen and protected from light before and after sampling. Ship samples cold overnight to the Lab.	TIC-GC-37: Modified NIOSH 2542
CAS RN: 74-93-1							Dimethyl disulfide, diethyl disulfide and dibutyl disulfide may interfere, note presence on the sampling data sheet.	
Methyl methacrylate	\$55.00	GC 11	Sorbent Tubes: SKC 226-73 Coated charcoal tube	0.01 / 0.05	0.05	1 / 3	Keep media cold before and after sampling. Ship samples cold overnight to the Lab.	TIC-GC-86: Modified OSHA 94
		GC-U	Passive Sampler: Assay 566 OVM		Y	15-720 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 80-62-6							No interferences reported.	
Methyl propyl ketone	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 107-87-9							No interferences reported.	

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Organic Solvents	\$35.00	Acids/Anions	\$44.00	Metals by ICP	\$28.00
Isocyanates	\$60.00	Aldehydes	\$60.00	Silica (see below)	\$25.00

Particulate, quartz and cristobalite on the same air sample is \$120.00 per sample. Acid treatment to remove interferences is an additional \$40 per sample.

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[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.

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INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

TRAVELERS								
Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM) TWA	STEL	Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
N-Methyl-2-pyrrolidinone	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 872-50-4							No interferences reported.	
Mineral Oils	\$90.00	NONE	Filter: PTFE Filter (37 mm) - Preweighed	2.0	N	960	Routine shipping. Total particulates are determined first (\$27), then an extraction is done (\$63) if the particulate weight gain is above 50 micrograms.	TIC-GRV-03: Modified NIOSH 5524/ASTM PS42- 97
CAS RN: varies							No interferences reported.	
Mineral Spirits as Total Hydrocarbons	\$70.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab. Petroleum distillates (PDFs) contain several compounds, quantitation of individual compounds may not be possible. Specify the PDF on the sampling data sheet (VMP, Stoddard, etc.). Multiple PDFs are reported as Petroleum Distillate Fraction.	
CAS RN: 64475-85-0							No interferences reported.	
Molybdenum	\$36.00	ICP 001	Filter: MCE Filter (37 mm)	1.0 / 3.0	N	15 / 960	Routine shipping. If Total particulate is also desired, sample using a Preweighed PVC filter. Respirable samples may be collected at a 2.0 LPM flow rate on a preweighed Disposable Respirable Sampler (DRS) – see Particulate, Respirable instructions.	TIC-ICP-01: Modified OSHA ID- 125G/NIOSH 7300
CAS RN: 7439-98-7							No interferences reported.	
Molybdenum in the presence of Tungsten	\$80.00	WINSOL	Filter: MCE Filter (37 mm)	1.0 / 3.0	N	240 / 960	Routine shipping. Request IN THE PRESENCE OF TUNGSTEN on the sampling data sheet. Tungsten can also be quantified if requested.	TIC-ICP-02: Modified OSHA ID- 213
CAS RN: 7439-98-7							No interferences reported.	
Morpholine	\$90.00	AMINE2	Sorbent Tubes: SKC 226-98 Coated XAD-7 tube	0.1	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 RN: 110-91-8							Other amine compounds may interfere, note presence on the sampling data sheet.	
Naphthalene	\$95.00	NONE	Sorbent Tubes: SKC 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 environment on the sampling data sheet.	TIC-GC-86: Modified OSHA 35
CAS RN: 91-20-3							No interferences reported.	
Nickel	\$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 RN: 7440-02-0							No interferences reported.	

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Isocyanates	\$60.00	Aldehydes	\$60.00	Silica (see below)	\$25.00

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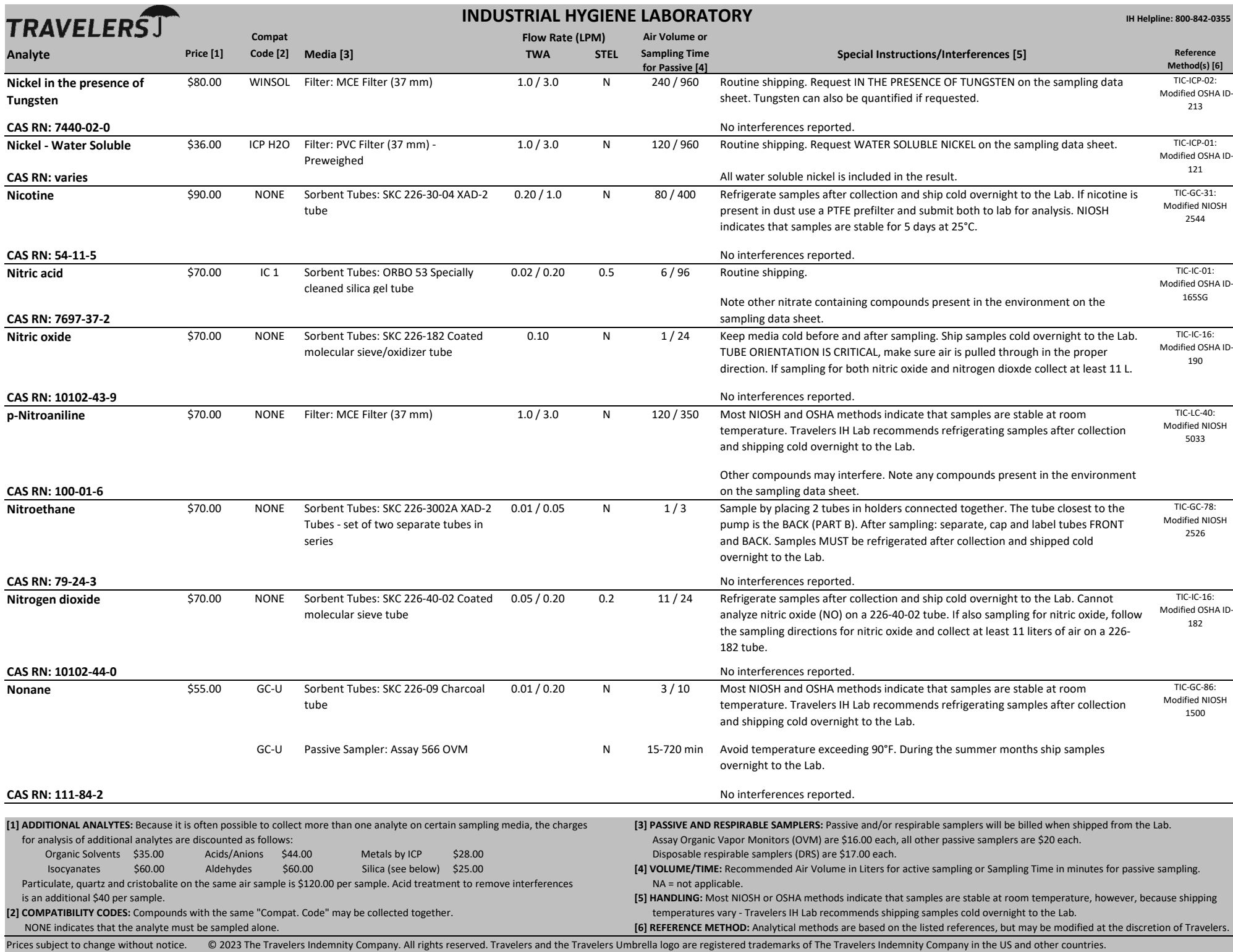
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NA = not applicable.

[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.

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INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

TRAVELERS J								
Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM) TWA	STEL	Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
Octane	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 111-65-9							No interferences reported.	
Oxalic acid	\$70.00	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 RN: 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. 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 RN: 10028-15-6							Sulfur dioxide gas and soluble particulate nitrate compounds may interfere, note presence on the sampling data sheet.	
Particulate, Inhalable	\$27.00	GRAV 003	Filter: Disposable Respirable Sampler (DRS) WITHOUT FOAM INSERT	2.0	N	960	Routine shipping. Flow rate of 2.0 liters per minute is CRITICAL. Disposable Respirable Samplers (DRS) MUST HAVE THE FOAM INSERT REMOVED AND DISCARDED prior to sampling for inhalable particulate. Respirable samplers (DRS) are billed \$17 each when shipped.	TIC-GRV-01: Modified NIOSH 0500
CAS RN: varies							Gravimetric method nonspecific, all particulate matter in the sampling environment is collected and quantified.	
Particulate, Respirable	\$27.00	GRAV 002	Filter: Disposable Respirable Sampler (DRS)	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 data sheet. Respirable samplers (DRS) are billed \$17 each when shipped.	TIC-GRV-01: Modified NIOSH 0600
CAS RN: varies							Gravimetric method nonspecific, all particulate matter in the sampling environment is collected and quantified.	
Particulate, Total	\$27.00	GRAV 001	Filter: PVC Filter (37 mm) - Prew weighed	1.0 / 2.0	N	200 / 960	Routine shipping.	TIC-GRV-01: Modified NIOSH 0500
CAS RN: varies							Gravimetric method nonspecific, all particulate matter in the sampling environment is collected and quantified.	
Pentachlorophenol	\$100.00	NONE	Sorbent Tubes: SKC 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 RN: 87-86-5							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)	\$25.00

Particulate, quartz and cristobalite on the same air sample is \$120.00 per sample. Acid treatment to remove interferences is an additional \$40 per sample.

[2] **COMPATIBILITY CODES:** Compounds with the same "Compat. Code" may be collected together.
NONE indicates that the analyte must be sampled alone.

[3] **PASSIVE AND RESPIRABLE SAMPLERS:** Passive and/or respirable samplers will be billed when shipped from the Lab.
Assay Organic Vapor Monitors (OVM) are \$16.00 each, all other passive samplers are \$20 each.
Disposable respirable samplers (DRS) are \$17.00 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.

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INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM) TWA	STEL	Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
Pentane	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 109-66-0							No interferences reported.	
2,3-Pentanedione	\$110.00	GC 8	Sorbent Tubes: SKC 226-183 Silica gel tubes - set of two separate tubes in series	0.05 / 0.20	N	3 / 9	Protect samples from light during and after sampling (wrap the tubes in aluminum foil). Sample by placing 2 tubes in holders connected together. After sampling: separate, cap and label tubes FRONT and BACK (closest to the pump).	TIC-GC-86: Modified OSHA 1012
CAS RN: 600-14-6							No interferences reported.	
Peracetic acid	\$110.00	NONE	Filter & Tube: Hydrogen peroxide filter followed by SKC 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.	TIC-LC-42: Modified INRS method
CAS RN: 79-21-0							No interferences reported. Peracetic acid and hydrogen peroxide can be sampled using the same sampling train.	
Petroleum distillate as Total Hydrocarbons	\$70.00	GC-U	Sorbent Tubes: SKC 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 OSHA 48
CAS RN: varies							Petroleum distillates (PDFs) contain several compounds, quantitation of individual compounds may not be possible. Specify the PDF on the sampling data sheet (VMP, Stoddard, etc.). Multiple PDFs are reported as Petroleum Distillate Fraction.	
Petroleum ether	\$70.00	GC-U	Sorbent Tubes: SKC 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.	TIC-GC-86: Modified NIOSH 1550
CAS RN: 8032-32-4							No interferences reported.	
Phenol	\$80.00	LC-PHE	Sorbent Tubes: SKC 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.	TIC-LC-22: Modified OSHA 32
CAS RN: 108-95-2							Other compounds may interfere. Note any compounds present in the environment on the sampling data sheet.	
4-Phenylcyclohexene	\$55.00	GC-U	Sorbent Tubes: SKC 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.	TIC-GC-86: Modified OSHA In House Method
CAS RN: 4994-16-5							No interferences reported.	
m-Phenylene diamine	\$110.00	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 RN: 108-45-2							Other amine compounds may interfere, note presence on the sampling data sheet.	

[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)	\$25.00

Particulate, quartz and cristobalite on the same air sample is \$120.00 per sample. Acid treatment to remove interferences is an additional \$40 per sample.

[2] **COMPATIBILITY CODES:** Compounds with the same "Compat. Code" may be collected together.
NONE indicates that the analyte must be sampled alone.

[3] **PASSIVE AND RESPIRABLE SAMPLERS:** Passive and/or respirable samplers will be billed when shipped from the Lab.
Assay Organic Vapor Monitors (OVM) are \$16.00 each, all other passive samplers are \$20 each.
Disposable respirable samplers (DRS) are \$17.00 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

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			
o-Phenylene diamine	\$110.00	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 RN: 95-54-5							Other amine compounds may interfere, note presence on the sampling data sheet.	
p-Phenylene diamine	\$110.00	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 RN: 106-50-3							Other amine compounds may interfere, note presence on the sampling data sheet.	
Phenyl ether vapor	\$55.00	NONE	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab. Use Assay 525 TraceAir II OVM for STEL sampling.	
CAS RN: 101-84-8							No interferences reported.	
Phenyl glycidyl ether	\$55.00	GC 1	Sorbent Tubes: SKC 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 RN: 122-60-1							No interferences reported.	
Phosphoric acid	\$70.00	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-1655G
							Any soluble phosphate compounds may interfere, note presence on the sampling data sheet.	
CAS RN: 7664-38-2							No interferences reported.	
Platinum, Metal	\$70.00	NONE	Filter: MCE Filter (37 mm)	1.0 / 3.0	N	240 / 1400	Routine shipping. Request PLATINUM METAL on the sampling data sheet.	TIC-ICP-01: Modified NIOSH 7303
CAS RN: 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 data sheet.	TIC-ICP-MS-07: Modified OSHA ID-1305G
CAS RN: varies							All water soluble platinum is included in the result.	
Polynuclear Aromatic Hydrocarbon Scan - NIOSH 5506	\$305.00	NONE	Filter & Tube: PTFE Filter followed by SKC 226-30-04 XAD-2 tube	1.0 / 2.0	N	200 / 1000	Collect samples 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. Individual PAHs may be requested at \$85.	TIC-LC-12: Modified NIOSH 5506
CAS RN: varies							No interferences reported. Scan includes 16 compounds.	
Potassium hydroxide	\$36.00	ICP H2O	Filter: PVC Filter (37 mm) - Preweighed	1.0 / 3.0	3.0	40 / 960	Routine shipping.	TIC-ICP-01: Modified OSHA ID-121
CAS RN: 1310-58-3							All water soluble potassium 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)	\$25.00

Particulate, quartz and cristobalite on the same air sample is \$120.00 per sample. Acid treatment to remove interferences is an additional \$40 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together. NONE indicates that the analyte must be sampled alone.

[3] PASSIVE AND RESPIRABLE SAMPLERS: Passive and/or respirable samplers will be billed when shipped from the Lab. Assay Organic Vapor Monitors (OVM) are \$16.00 each, all other passive samplers are \$20 each. Disposable respirable samplers (DRS) are \$17.00 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.

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INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

TRAVELERS J								
Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM) TWA	STEL	Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
Propane	\$70.00	CS2DB5	Sorbent Tubes: Tandem Carbosieve SIII tubes - 2 tubes in series	0.1	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. Other compounds may interfere. Note any compounds present in the environment on the sampling data sheet.	TIC-GC-79: Modified OSHA PV2077
CAS RN: 74-98-6								
Propionic acid	\$70.00	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. Other compounds may interfere. Note any compounds present in the environment on the sampling data sheet.	TIC-IC-02: Modified OSHA In House Method
CAS RN: 79-09-4								
2-Propoxyethanol	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 2807-30-9								
n-Propyl acetate	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 109-60-4								
n-Propyl alcohol	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 71-23-8								
n-Propyl bromide	\$55.00	GC-U	Sorbent Tubes: SKC 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
		GC-U	Passive Sampler: Assay 525 TraceAir II OVM		N	240-720 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 106-94-5								
							trans-1,2-Dichloroethylene may interfere, note presence on the sampling data sheet.	

[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)	\$25.00

Particulate, quartz and cristobalite on the same air sample is \$120.00 per sample. Acid treatment to remove interferences is an additional \$40 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together.
NONE indicates that the analyte must be sampled alone.

[3] PASSIVE AND RESPIRABLE SAMPLERS: Passive and/or respirable samplers will be billed when shipped from the Lab.
Assay Organic Vapor Monitors (OVM) are \$16.00 each, all other passive samplers are \$20 each.

Disposable respirable samplers (DRS) are \$17.00 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			
Propylene glycol	\$80.00	GC 12	Filter & Tube: SKC 226-57 XAD-7 OVS	0.50 / 2.0	N	25 / 60	Refrigerate samples after collection and ship cold overnight to the Lab. The sampler contains a filter and sorbent material in a single tube.	TIC-GC-17: Modified NIOSH 5523
CAS RN: 57-55-6							No interferences reported.	
Propylene glycol-1-methyl ether-2-acetate	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 108-65-6							No interferences reported.	
Propylene glycol monomethyl ether	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 107-98-2							No interferences reported.	
Propylene oxide	\$55.00	NONE	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 75-56-9							Acetone or isopropyl alcohol may interfere, note presence on the sampling data	
Pyrethrum	\$90.00	NONE	Filter: Glass Fiber Filter (37 mm)	1.0 / 3.0	N	15 / 400	Routine shipping.	TIC-LC-18: Modified NIOSH 5008
CAS RN: 8003-34-7							No interferences reported.	
Pyridine	\$55.00	GC-U	Sorbent Tubes: SKC 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 RN: 110-86-1							No interferences reported.	
Quartz, Respirable	\$75.00	XRD	Filter: Disposable Respirable Sampler (DRS)	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). Respirable samplers (DRS) are billed \$17 each when shipped.	TIC-XRD-01: Modified NIOSH 7500
CAS RN: 14808-60-7							Note interferences on the sampling data sheet: mica, potash, feldspar, zircon, graphite, aluminosilicate, calcite. High dust loading may increase the MRL. If needed, acid treatment to remove interferences is an additional \$40 per sample.	

[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)	\$25.00

Particulate, quartz and cristobalite on the same air sample is \$120.00 per sample. Acid treatment to remove interferences is an additional \$40 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together.
NONE indicates that the analyte must be sampled alone.

[3] PASSIVE AND RESPIRABLE SAMPLERS: Passive and/or respirable samplers will be billed when shipped from the Lab.
Assay Organic Vapor Monitors (OVM) are \$16.00 each, all other passive samplers are \$20 each.
Disposable respirable samplers (DRS) are \$17.00 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.

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Analyte	Price [1]	Compat Code [2]	Media [3]	Flow Rate (LPM) TWA	STEL	Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
Resorcinol	\$80.00	LC-PHE	Sorbent Tubes: SKC 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. Other compounds may interfere. Note any compounds present in the environment on the sampling data sheet.	TIC-LC-22: Modified OSHA 32
CAS RN: 108-46-3								
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 RN: 7782-49-2								No interferences reported.
Sevoflurane	\$77.00	AnestCS2	Sorbent Tubes: SKC 226-83 Anasorb 747 tube	0.05	N	1 / 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	30-480 min	Bring sampler to AMBIENT TEMPERATURE before sampling. Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 28523-86-6								No interferences reported.
Silica, Crystalline (see Quartz, Respirable)		XRD	Filter: Disposable Respirable Sampler (DRS)	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). Respirable samplers (DRS) are billed \$17 each when shipped. Note interferences on the sampling data sheet: mica, potash, feldspar, zircon, graphite, aluminosilicate, calcite. High dust loading may increase the MRL. If needed, acid treatment to remove interferences is an additional \$40 per sample.	TIC-XRD-01: Modified NIOSH 7500
CAS RN: 7631-86-9								
Silica, Crystalline Bulk	\$140.00	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 RN: 7631-86-9								Identify sample matrix. Give as much information as possible as to what other minerals are present.
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 data sheet.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
CAS RN: 7440-22-4								Result is for total silver.
Silver - Water Soluble	\$36.00	ICP H2O	Filter: PVC Filter (37 mm) - Preweighed	1.0 / 3.0	N	1200 / 1400	Routine shipping. Request WATER SOLUBLE SILVER on the sampling data sheet.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
CAS RN: varies								All water soluble silver is included in the result.
Sodium bisulfite	\$36.00	ICP H2O	Filter: PVC Filter (37 mm) - Preweighed	1.0 / 3.0	N	120 / 960	Routine shipping.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
CAS RN: 7631-90-5								All water soluble sodium is included in the result.
Sodium hydroxide	\$36.00	ICP H2O	Filter: PVC Filter (37 mm) - Preweighed	1.0 / 3.0	3.0	120 / 960	Routine shipping.	TIC-ICP-01: Modified OSHA ID-121
CAS RN: 1310-73-2								All water soluble sodium is included in the result.
Sodium - Water Soluble	\$36.00	ICP H2O	Filter: PVC Filter (37 mm) - Preweighed	1.0 / 3.0	N	120 / 960	Routine shipping.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
CAS RN: varies								All water soluble sodium 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)	\$25.00

Particulate, quartz and cristobalite on the same air sample is \$120.00 per sample. Acid treatment to remove interferences is an additional \$40 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together.
NONE indicates that the analyte must be sampled alone.

[3] PASSIVE AND RESPIRABLE SAMPLERS: Passive and/or respirable samplers will be billed when shipped from the Lab.
Assay Organic Vapor Monitors (OVM) are \$16.00 each, all other passive samplers are \$20 each.
Disposable respirable samplers (DRS) are \$17.00 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			
Stoddard solvent as Total Hydrocarbons	\$70.00	GC-U	Sorbent Tubes: SKC 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	90-720 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab. Petroleum distillates (PDFs) contain several compounds, quantitation of individual compounds may not be possible. Specify the PDF on the sampling data sheet (VMP, Stoddard, etc.). Multiple PDFs are reported as Petroleum Distillate Fraction.	
CAS RN: 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 RN: 7440-24-6								
Styrene monomer	\$55.00	GC 11	Sorbent Tubes: SKC 226-73 Coated charcoal tube	0.02 / 0.05	0.05	2 / 12	Keep media cold before and after sampling. Ship samples cold overnight to the Lab.	TIC-GC-86: Modified OSHA 89
		GC-U	Passive Sampler: Assay 566 OVM		Y	60-720 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
							No interferences reported.	
CAS RN: 100-42-5								
Sulfur dioxide	\$70.00	NONE	Filter: Sulfur Dioxide (SO2) Filter	0.50 / 1.5	1.5	60 / 200	Routine shipping.	TIC-IC-05: Modified NIOSH 6004
							Sulfur trioxide gas can act as a positive interference.	
CAS RN: 7446-09-5								
Sulfuric Acid	\$70.00	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
							Any soluble sulfate compound may interfere, note presence on the sampling data sheet.	
CAS RN: 7664-93-9								
1,1,2,2-Tetrachloroethane	\$55.00	GC-U	Sorbent Tubes: SKC 226-09 Charcoal tube	0.01 / 0.20	N	24 / 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
							No interferences reported.	
CAS RN: 79-34-5								
Tetrachloroethylene	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
							No interferences reported.	
CAS RN: 127-18-4								

[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) \$25.00 Particulate, quartz and cristobalite on the same air sample is \$120.00 per sample. Acid treatment to remove interferences is an additional \$40 per sample.				[3] PASSIVE AND RESPIRABLE SAMPLERS: Passive and/or respirable samplers will be billed when shipped from the Lab. Assay Organic Vapor Monitors (OVM) are \$16.00 each, all other passive samplers are \$20 each. Disposable respirable samplers (DRS) are \$17.00 each.			
[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together. NONE indicates that the analyte must be sampled alone.				[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) TWA	STEL	Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
Tetraethyl Lead, as Pb	\$100.00	NONE	Filter & Tube: Glass Fiber Filter followed by SKC 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. Other volatile lead compounds will interfere, note presence on the sampling data sheet.	TIC-ICP-12: Modified OSHA Stopgap
CAS RN: 78-00-2								
Tetrahydrofuran	\$55.00	GC-U	Sorbent Tubes: SKC 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-ICP-86: Modified NIOSH 1609
		GC-U	Passive Sampler: Assay 566 OVM		Y	15-720 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 109-99-9								
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 RN: 7440-28-0								
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 RN: 7440-31-5								
Tin, Organic Compounds as Sn	\$200.00	NONE	Filter & Tube: SKC 226-30-16 XAD-2 OVS	1.0 / 1.5	1.5	60 / 480	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. Inorganic tin and other organic tin compounds may interfere, note presence on the sampling data sheet. Results are not speciated and reported as total organic tin.	TIC-ICP-MS-05: Modified NIOSH 5504
CAS RN: varies								
Titanium	\$36.00	NONE	Filter: MCE Filter (37 mm)	1.0 / 3.0	2.0	240 / 960	Routine shipping. Titanium dioxide is reported as total particulates.	TIC-ICP-01: Modified OSHA ID-125G/NIOSH 7300
CAS RN: 7440-32-6								
Toluene	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 108-88-3								
Toluene-2,4-diisocyanate	\$100.00	NCO	Filter: Isocyanate (NCO) Filter - Open-faced	0.50 / 1.0	1.0	240	Keep media cold before and after sampling. Before sampling: Remove the top of the 3-piece filter cassette (section w/o wagon wheel design). After sampling: Replace the top of the cassette and plugs. Ship samples cold overnight to the Lab.	TIC-LC-03: Modified OSHA 42
CAS RN: 584-84-9								
Toluene-2,6-diisocyanate	\$100.00	NCO	Filter: Isocyanate (NCO) Filter - Open-faced	0.50 / 1.0	1.0	240	Keep media cold before and after sampling. Before sampling: Remove the top of the 3-piece filter cassette (section w/o wagon wheel design). After sampling: Replace the top of the cassette and plugs. Ship samples cold overnight to the Lab.	TIC-LC-03: Modified OSHA 42
CAS RN: 91-08-7								
Note presence of other isocyanates in the environment on the sampling data sheet.								

[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)	\$25.00

Particulate, quartz and cristobalite on the same air sample is \$120.00 per sample. Acid treatment to remove interferences is an additional \$40 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together.

NONE indicates that the analyte must be sampled alone.

[3] PASSIVE AND RESPIRABLE SAMPLERS: Passive and/or respirable samplers will be billed when shipped from the Lab.

Assay Organic Vapor Monitors (OVM) are \$16.00 each, all other passive samplers are \$20 each.

Disposable respirable samplers (DRS) are \$17.00 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) TWA	STEL	Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
Total Hydrocarbons	\$70.00	GC-U	Sorbent Tubes: SKC 226-09 Charcoal tube	0.05 / 0.20	0.2	6 / 12	Refrigerate samples after collection and ship samples cold overnight to the Lab. Request TOTAL HYDROCARBONS (AS TOLUENE if aromatic based compounds are predominant). Many organic solvents collect on charcoal and will be included in results. All peaks are summed and quantified as n-hexane (or toluene).	TIC-GC-86: In House Method
CAS RN: varies								
Tributyl phosphate	\$115.00	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. No interferences reported.	TIC-GC-39: Modified NIOSH 5034
CAS RN: 126-73-8								
Trichloroacetic acid	\$95.00	NONE	Sorbent Tubes: ORBO 53 Specially cleaned silica gel tube	0.20 / 0.50	N	10 / 18	Refrigerate samples after collection and ship cold overnight to the Lab. No interferences reported.	TIC-LC-38: Modified OSHA PV2017
CAS RN: 76-03-9								
1,1,1-Trichloroethane	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab. No interferences reported.	
CAS RN: 71-55-6								
1,1,2-Trichloroethane	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab. No interferences reported.	
CAS RN: 79-00-5								
Trichloroethylene	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab. No interferences reported.	
CAS RN: 79-01-6								
Trichlorofluoromethane	\$55.00	GC-U	Sorbent Tubes: SKC 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. No interferences reported.	TIC-GC-86: Modified NIOSH 1006

CAS RN: 75-69-4

[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)	\$25.00

Particulate, quartz and cristobalite on the same air sample is \$120.00 per sample. Acid treatment to remove interferences is an additional \$40 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together.

NONE indicates that the analyte must be sampled alone.

[3] PASSIVE AND RESPIRABLE SAMPLERS: Passive and/or respirable samplers will be billed when shipped from the Lab.

Assay Organic Vapor Monitors (OVM) are \$16.00 each, all other passive samplers are \$20 each.

Disposable respirable samplers (DRS) are \$17.00 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.

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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			
1,1,2-Trichloro-1,2,2-trifluoroethane	\$77.00	NONE	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
		CAS RN: 76-13-1						
Triethanolamine	\$100.00	IC 2	Sorbent Tubes: SKC 226-98 Coated XAD-7 tube	0.20	N	100 / 120	Routine shipping.	TIC-IC-11: Modified NIOSH 3509
CAS RN: 102-71-6							Other amine compounds may interfere, note presence on the sampling data sheet.	
Triethylamine	\$90.00	AMINE2	Sorbent Tubes: SKC 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 RN: 121-44-8							Other amine compounds may interfere, note presence on the sampling data sheet.	
Triethylenetetramine	\$110.00	NONE	Sorbent Tubes: SKC 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 RN: 112-24-3							No interferences reported.	
Triglycidyl isocyanurate	\$115.00	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 RN: 2451-62-9							No interferences reported.	
Trimethylamine	\$90.00	AMINE2	Sorbent Tubes: SKC 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 RN: 75-50-3							Other amine compounds may interfere, note presence on the sampling data sheet.	
Trimethyl benzenes, all isomers	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 25551-13-7							No interferences reported.	
Triphenyl phosphate	\$115.00	GC17	Filter: MCE Filter (37 mm)	1.0 / 3.0	N	18 / 400	Routine shipping.	TIC-GC-39: Modified NIOSH 5038
CAS RN: 115-86-6							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)	\$25.00

Particulate, quartz and cristobalite on the same air sample is \$120.00 per sample. Acid treatment to remove interferences is an additional \$40 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together.

NONE indicates that the analyte must be sampled alone.

[3] PASSIVE AND RESPIRABLE SAMPLERS: Passive and/or respirable samplers will be billed when shipped from the Lab. Assay Organic Vapor Monitors (OVM) are \$16.00 each, all other passive samplers are \$20 each. Disposable respirable samplers (DRS) are \$17.00 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.

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INDUSTRIAL HYGIENE LABORATORY

IH Helpline: 800-842-0355

TRAVELERS I		Compat		Flow Rate (LPM)		Air Volume or			
Analyte	Price [1]	Code [2]	Media [3]	TWA	STEL	Sampling Time	for Passive [4]	Special Instructions/Interferences [5]	Reference
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 Prewieghed PVC filter. Respirable samples may be collected at a 2.0 LPM flow rate on a preweighed Disposable Respirable Sampler (DRS) – see Particulate, Respirable instructions.	TIC-ICP-01: Modified NIOSH 7300
CAS RN: 7440-33-7									
Tungsten, Insoluble Compounds as W	\$80.00	WINSOL	Filter: MCE Filter (37 mm)	1.0 / 3.0	3.0	240 / 960		Routine shipping. Request INSOLUBLE TUNGSTEN on the sampling data sheet.	TIC-ICP-02: Modified OSHA ID- 213
CAS RN: varies									
Tungsten - Water Soluble	\$36.00	NONE	Filter: PVC Filter (37 mm) - Prewieghed	1.0 / 3.0	3.0	60 / 960		Routine shipping. Request WATER SOLUBLE TUNGSTEN on the sampling data sheet. All water soluble tungsten is included in the result.	TIC-ICP-02: Modified OSHA ID- 213
CAS RN: varies									
Turpentine as Total Hydrocarbons	\$70.00	GC-U	Sorbent Tubes: SKC 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 1551
CAS RN: 8006-64-2									
Vanadium	\$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.	TIC-ICP-01: Modified OSHA ID- 125G/NIOSH 7300
CAS RN: 7440-62-2									
Vanadium Pentoxide fume as V2O5	\$36.00	ICP 001	Filter: MCE Filter (37 mm)	1.0 / 3.0	N	1200		Routine shipping. If Total particulate is also desired, sample using a Prewieghed PVC filter. Respirable samples may be collected at a 2.0 LPM flow rate on a preweighed Disposable Respirable Sampler (DRS) – see Particulate, Respirable instructions.	TIC-ICP-01: Modified OSHA ID- 125G/NIOSH 7300
CAS RN: 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 min		Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab. Use Assay 525 TraceAir II OVM for STEL sampling.	
CAS RN: 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 min		Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 75-01-4									

[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)	\$25.00

Particulate, quartz and cristobalite on the same air sample is \$120.00 per sample. Acid treatment to remove interferences is an additional \$40 per sample.

[2] COMPATIBILITY CODES: Compounds with the same "Compat. Code" may be collected together.
NONE indicates that the analyte must be sampled alone.

[3] PASSIVE AND RESPIRABLE SAMPLERS: Passive and/or respirable samplers will be billed when shipped from the Lab.

Assay Organic Vapor Monitors (OVM) are \$16.00 each, all other passive samplers are \$20 each.
Disposable respirable samplers (DRS) are \$17.00 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) TWA	STEL	Air Volume or Sampling Time for Passive [4]	Special Instructions/Interferences [5]	Reference Method(s) [6]
Vinyl cyclohexene	\$55.00	GC-U	Sorbent Tubes: SKC 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 RN: 100-40-3							No interferences reported.	
N-Vinyl-2-pyrrolidone	\$70.00	GC-9	Sorbent Tubes: SKC 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
		GC-U	Passive Sampler: Assay 525 TraceAir II OVM		N	480-720 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 88-12-0							No interferences reported.	
Vinyl toluene	\$55.00	GC-U	Sorbent Tubes: SKC 226-09 Charcoal tube	0.01 / 0.20	0.2	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 1501
		GC-U	Passive Sampler: Assay 566 OVM		N	60-720 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 25013-15-4							No interferences reported.	
VM & P Naphtha as Total Hydrocarbons	\$70.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 8032-32-4							Petroleum distillates (PDFs) contain several compounds, quantitation of individual compounds may not be possible. Specify the PDF on the sampling data sheet (VMP, Stoddard, etc.). Multiple PDFs are reported as Petroleum Distillate Fraction.	
Volatile Organic Compounds by GCMS	\$200.00	NONE	Sorbent Tubes: SKC 226-09 Charcoal tube	0.01 / 0.20	N	3 / 90	Identification of up to 10 peaks (greater than response of 0.87 µg/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
CAS RN: varies							No interferences reported. Additional compounds can be quantified for an additional cost.	
Xylenes (o-,m- and p-isomers)	\$55.00	GC-U	Sorbent Tubes: SKC 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 min	Avoid temperature exceeding 90°F. During the summer months ship samples overnight to the Lab.	
CAS RN: 1330-20-7							No interferences reported.	

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Isocyanates	\$60.00	Aldehydes	\$60.00	Silica (see below)	\$25.00

Particulate, quartz and cristobalite on the same air sample is \$120.00 per sample. Acid treatment to remove interferences is an additional \$40 per sample.

[2] **COMPATIBILITY CODES:** Compounds with the same "Compat. Code" may be collected together. NONE indicates that the analyte must be sampled alone.

[3] **PASSIVE AND RESPIRABLE SAMPLERS:** Passive and/or respirable samplers will be billed when shipped from the Lab. Assay Organic Vapor Monitors (OVM) are \$16.00 each, all other passive samplers are \$20 each. Disposable respirable samplers (DRS) are \$17.00 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.

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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]
m-Xylylenediamine	\$110.00	NONE	Filter: PDA Filter or SKC 225-9012	NA	1.0	15	Routine shipping. The p-isomer (p-Xylenediamine) can also be collected and analyzed.	TIC-LC-39: Modified OSHA 105
CAS RN: 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 RN: 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 RN: 7440-66-6								No interferences reported.
Zinc chloride	\$36.00	ICP H2O	Filter: PVC Filter (37 mm) - Preweighed	1.0 / 3.0	3.0	60 / 960	Routine shipping.	TIC-ICP-01: Modified OSHA ID- 125G/NIOSH 7300
CAS RN: 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 at a 2.0 LPM flow rate on a preweighed Disposable Respirable Sampler (DRS) – see Particulate, Respirable instructions.	TIC-ICP-01: Modified OSHA ID- 125G/NIOSH 7300
CAS RN: 1314-13-2								Total zinc is quantified and reported as zinc oxide. May be sampled as total particulate as an option. Method cannot distinguish dust from fume and other zinc compounds may be detected.
Zinc oxide in the presence of Tungsten	\$80.00	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 data sheet. Tungsten can also be quantified if requested.	TIC-ICP-02: Modified OSHA ID- 213
CAS RN: 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 RN: 7440-67-7								No interferences reported.

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**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.

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

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

PLEASE SAVE THIS DATA SHEET FOR REFERENCE.



travelers.com

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