high-purity standards

Industrial Hygiene and Air Monitoring Standards

ISO 9001:2015 Registered • ISO/IEC 17025:2005 Accredited • ISO 17034:2016 Accredited

Industrial Hygiene and Air Monitoring Standards

- Address the need of quality control or method development
- Used with industrial hygiene methods including, NIOSH Methods 7300, 7500 and 1000 Series, OSHA Method 91, ASTM Standard D7035, ISO Standard 15202-1 and 15202-2, and CEN (EN) Standard 13890
- Products included in our ISO 9001:2015, ISO/IEC 17025:2005 and ISO 17034:2015 scope of accreditation

Absorbent Tubes & Diffusive Samplers

Organic solvent analytes are gravimetrically applied to tubes or passive sampler badges containing charcoal sorbents. Following manufacture, products are desorbed and tested using OSHA/NIOSH methods established for applicable components. Second source certified reference materials are used to validate concentration.

To order a standard, please provide the following information:

- Analytes of interest
- Analyte mass per tube or badge
- If ordering a diffusive sampler, indicate brand of package: 3M, Assay Technology or SKC
- Quantity of spiked tubes/badges and blanks

Contact us at 843.767.7900 or toll free at 866.767.4771 or via email to info@highpuritystandards.com. You can also visit our website at highpuritystandards.com.

Silica for XRD/IR Analysis

TMFM-Crystalline Silica

We offer standards of alpha-Quartz or Cristobalite on PVC filters in concentrations ranging from 10 µg/filter to 500 µg/filter for the alpha-Quartz and 5 µg/filter to 250 µg/filter for the Cristobalite.

Available as custom products which may include background materials such as Coal Mine Dust, Talc, or Calcite.

Please contact Customer Service for details on concentrations and pricing.

Toxic Air Metals on Quartz Filter

Metals currently listed as Hazardous Air Pollutants (HAP) include: antimony, arsenic, beryllium, cadmium, chromium, cobalt, lead, manganese, mercury, nickel, and selenium. We have designed products that comply with EPA methods for Air Monitoring. The more popular filter media for these products include Quartz or PTFE-coated filters. Dissolved metals are applied to the selected filter media and tested against appropriate certified reference materials. These products are provided with an ISO 17034:2016 Certificate of Analysis.

To request varying components/concentrations and your choice of filter type (Quartz, MCE, PVC, PTFE-coated, or Acrylic), please contact us today to discuss your special mix needs.

Hexavalent Chromium on MCE or PVC Filters

This is a custom product due to the short stability period. Validation via Ion Chromatography or IC-ICP-MS is available. Please send custom specifications to info@highpuritystandards.com.

Clean Filters

To address the need for clean blank PVC filters, we offer two methods of cleaning PVC filters to remove specific contaminants.

1. A patented process to remove chromium or vanadium[1]
2. An in-house method to remove silicon

A Certificate of Analysis with the concentration per filter of the removed analyte is included with the product. Please contact us to submit an order for Clean Filters. Bulk pricing is available.

Clean Filters	
Description	**Part #**
Cleaned 37 mm PVC filters in quantities of 25	PVC37MMPC

[1] Licensed from the United States of America under U.S. Patent No. 8,415,452, Rubenstein, M. "Hexavalent chromium and total chromium removal from polyvinylchloride (PVC) polymers"

Industrial Hygiene and Ambient Air Analysis

The following trace metals on mixed cellulose ester are designed to meet QC requirements for Method 7300. Additional blanks are available.

Description	Part #
Trace metals on mixed cellulose ester; 10 spiked filters and 5 blanks	QC-TMFM-A through QC-TMFM-G

Components	QC-TMFM-A	QC-TMFM-B	QC-TMFM-C	QC-TMFM-D	QC-TMFM-E	QC-TMFM-F	QC-TMFM-G
	µg/filter	µg/filter	µg/filter	µg/filter	µg/filter	µg/filter	µg/filter
Aluminum	—	—	—	50	100	—	—
Arsenic	10	50	100	10	20	10	50
Barium	2.5	10	25	2.5	5	2.5	10
Beryllium	1	10	25	0.1	0.2	1	10
Cadmium	1	10	25	1	2	1	10
Chromium	2.5	10	25	2.5	5	2.5	10
Cobalt	2.5	10	25	2.5	5	2.5	10
Copper	2.5	25	50	2.5	5	2.5	25
Iron	2.5	25	50	2.5	5	2.5	25
Lead	2.5	25	50	2.5	5	2.5	25
Manganese	1	10	25	1	5	1	10
Nickel	2.5	10	25	2.5	5	2.5	10
Silver	1	5	10	1	2	1	5
Thallium	2.5	10	25	2.5	5	2.5	10
Uranium	—	—	—	—	—	2.5	5
Vanadium	2.5	10	25	2.5	5	2.5	10
Zinc	2.5	50	100	2.5	5	2.5	50

Beryllium Oxide

Beryllium Oxide is a toxic particulate material present in workplace samples that is known to be resistant to dissolution. These standards are available for method development or quality control checks. The source of the Beryllium Oxide applied to the filter is NIST SRM 1877 high-fired BeO powder. Blanks are supplied separately; see part # TMFM-CBEO-BLANK.

Beryllium Oxide Particulates on Filter		
Description	µg/filter	Part #
0.05 µg/filter of BeO as Be (2 filters)	0.05	TMFM-CBEO-0.05
0.1 µg/filter of BeO as Be (2 filters)	0.1	TMFM-CBEO-0.1
0.2 µg/filter of BeO as Be (2 filters)	0.2	TMFM-CBEO-0.2
0.5 µg/filter of BeO as Be (2 filters)	0.5	TMFM-CBEO-0.5
1 µg/filter of BeO as Be (2 filters)	1	TMFM-CBEO-1.0
2 µg/filter of BeO as Be (2 filters)	2	TMFM-CBEO-2.0
5 µg/filter of BeO as Be (2 filters)	5	TMFM-CBEO-5.0
10 µg/filter of BeO as Be (2 filters)	10	TMFM-CBEO-10.0
25 µg/filter of BeO as Be (2 filters)	25	TMFM-CBEO-25.0
Blanks (2 blanks)	—	TMFM-CBEO-BLANK

Custom Standard Quote Form

Contact Person: _____

Company Name: _____ Customer Number: _____

Email: _____

Telephone Number: _____ Fax Number: _____

Address Line 1: _____ Address Line 2: _____

City: _____ State: _____

Zip/Postal Code: _____ Country: _____

Mix Name: _____

Standards

Custom Industrial Hygiene Standards come in sets that include blanks. This portion of the form will provide specifications as to the number of spiked standards and the number and type of blanks.

Filter Media (for filters): _____

Diameter (for filters): _____ Pore Size (optional for filters): _____

Diffusive Badge Type (for diffusive samplers): _____

Sorbent Tube Type (for organic solvents on sorbent tubes): _____

Number of Standards per set:

Spiked: _____ Blank: _____

Type of Blank: _____

Total Number of Sets: _____

Elements/Components

You may add as many components to your custom blend as you wish. Metals are assumed to be dissolved, unless otherwise stated (ex. BeO solid, crystalline silica solid, etc). If requesting a crystalline silica standard, indicate the form (ex. alpha quartz, cristobalite, amorphous, etc). Include the mass units of each component concentration (ex. µg). Please provide a separate document for multiple components and attach with this quote form.

Element/Component: _____ CAS Number (for organic component) _____

Concentration (mass per media): _____ Concentration Unit: _____

Sample Preparation/Analytical Method: _____

Special Instructions

The custom standards will be prepared within the confines of a quality system that is ISO 9001:2015 registered and ISO/IEC 17025:2005 and ISO 17034:2016 accredited. Please indicate if the ISO 17034:2016 symbol is required for the Certificate of Analysis. Also describe any requirements for specific matrix or non-certified background material that will need to be applied. Please provide all special instructions on a separate piece of paper and attach with this quote form.

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