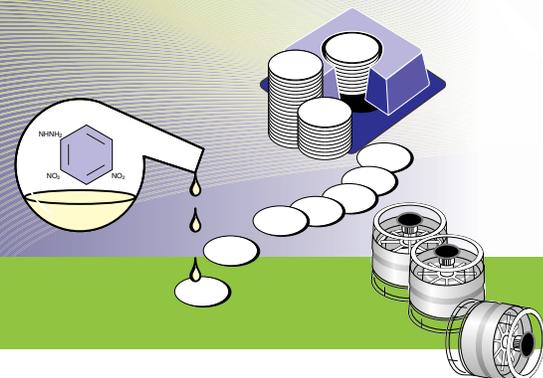


Coated Filters in Preloaded Cassettes



Development and Application

SKC Coated Filters are treated with a method-specified derivatization reagent and loaded into filter cassettes. Using SKC Coated Filters makes sampling reactive compounds faster, easier, and safer as there are no liquids to evaporate or spill or glass to break. Because filter cassettes are small and lightweight, they allow convenient personal sampling. Simply unplug the lightweight cassette, insert it into an SKC Filter Cassette Holder, and clip to a worker's collar. Use coated filters to collect compounds that exist as an aerosol or mist or for some higher boiling vapors. Flow rates typically are greater than 1 L/min and sampling times range from 15 minutes to one hour. Most coated filter samples are extracted in solvents and analyzed at a lab by gas or liquid chromatography. SKC offers treated and coated filters to meet a variety of OSHA, NIOSH, ASTM, and international agency methods. See *Coated Filter Selection Guide*.

Collection of Isocyanates

SKC offers two coated filters with different loading levels for collecting isocyanates using OSHA Method 42 or 47. OSHA's National Emphasis Program (NEP) has also determined a standard operating procedure for isocyanate sampling, field extraction, and sample shipment protocol (*listed in OSHA Directive CPL 03-00-017*).

Filter Cat. No. 225-9013 contains a 1.0-mg loading of 1-(2-pyridyl) piperazine (1-2 PP) with a three-month freezer shelf-life. This filter is appropriate for both OSHA methods.

Filter Cat. No. 225-9002 contains a 2.0-mg loading of 1-2 PP. The excess reagent on the Cat. No. 225-9002 filter increases sample stability and freezer shelf-life to six months. The excess reagent may present analytical problems during derivative separation. This filter traps both vapor and aerosol phases. Coated Filter Cat. No. 225-9002 can be used for both OSHA methods.

ISO-CHEK Isocyanate Sampling System

Suitable for most isocyanates, the ISO-CHEK® employs a two-stage filter arrangement that results in the simultaneous collection and separation of vapor from aerosol at the point of collection. The filter that collects the vapor phase is treated with 9-(N-methylaminomethyl) anthracene (MAMA) reagent that is highly stable to minimize storage and handling requirements. See ordering information on page 2. For more information, go to www.skinc.com/instructions/1637.pdf.

► Economical

► Ready to use

- Preloaded into cassettes with end plugs and shrink bands

► Time-saving

► Convenient alternative to impinger wet chemistry methods

► No cumbersome collection liquids or glass

► Easy personal sampling

► Meet agency method specifications

► Small package size for short shelf-life product

► Custom coated filters available

Collection of Sulfur Dioxide

SKC Filter Cat. No. 225-9005 is a modification of NIOSH 6004. This single 3-piece cassette replaces two 2-piece cassettes in series following the 1993 NIOSH revisions. Reference: Lorberau, C., "Determination of Gaseous and Particulate Fluorides by Ion Chromatographic Analysis," *Appl. Occup. and Env. Hyg.*, Vol. 8, No. 9, 1993, pp. 775-784.

SKC Limited Warranty and Return Policy

SKC products are subject to the SKC Limited Warranty and Return Policy, which provides SKC's sole liability and the buyer's exclusive remedy. To view the complete SKC Limited Warranty and Return Policy, go to <http://www.skinc.com/warranty>.

Coated Filters in Preloaded Cassettes

Coated Filter Selection Guide

Chemical	Method	Filter; Coating Preloaded in Cassettes (37-mm)	Cassette with shrink bands	Cat. No. *	Qty.
Acetic anhydride	OSHA 82	2 Glass Fiber filters; 1-(2-pyridyl) piperazine	4-piece, 37 mm	225-9009 §	10
Acetic anhydride	OSHA 102	2 Glass Fiber filters; veratrylamine and di-n-octyl phthalate	4-piece, 37 mm	225-9010 §	10
4-Aminobiphenyl	OSHA 93	2 Glass Fiber filters; sulfuric acid	3-piece, 37 mm	225-9004	10
Aniline	NIOSH 2017 †	2 Glass Fiber filters; sulfuric acid	3-piece, 37 mm	225-9004 †	10
Arsenic, volatile compounds	OSHA ID-1006	1 MCE filter and plastic pad; untreated and 1 cellulose support pad; sodium carbonate	3-piece, 37 mm	225-9001	10
Benzidine	OSHA 65	2 Glass Fiber filters; sulfuric acid	3-piece, 37 mm	225-9004	10
Bromine, Chlorine	NIOSH 6011	1 25-mm PTFE pre-filter and polypropylene support; 1 25-mm specially cleaned silver membrane and polypropylene support (in 25-mm cassette)	3-piece, 25 mm	225-9006	5
Crotonaldehyde	OSHA 81	2 Glass Fiber filters; 2,4-dinitrophenylhydrazine and phosphoric acid	3-piece, 37 mm	225-9019 §	10
o-Dianisidine	OSHA 71	2 Glass Fiber filters; sulfuric acid	3-piece, 37 mm	225-9004	10
3,3'-Dichlorobenzidine	OSHA 65	2 Glass Fiber filters; sulfuric acid	3-piece, 37 mm	225-9004	10
Diisocyanates (HDI; 2,6-TDI; 2,4-TDI)	ASTM D5836 Δ OSHA 42 †	1 Glass Fiber filter and cellulose support; 1-(2-pyridyl)piperazine †	3-piece, 37 mm	225-9013 §† 225-9002 §	10
Diphenylamine	OSHA 78	2 Glass Fiber filters; sulfuric acid	3-piece, 37 mm	225-9004	10
Fluorides	OSHA ID-110 NIOSH 7902 ASTM D4765	1 MCE filter and plastic pad; untreated and 1 cellulose support pad; sodium carbonate	3-piece, 37 mm	225-9001 #	10
Fluorides, particulate	NIOSH 7906	2 Nitrocellulose filters; 1 coated with sodium carbonate, 1 uncoated	3-piece, 37 mm	225-9031	10
Glutaraldehyde	OSHA 64	2 Glass Fiber filters; 2,4-dinitrophenylhydrazine and phosphoric acid	4-piece, 37 mm	225-9003 §	10
Glyoxal	For IFV	2 25-mm Glass Fiber filters; 2,4-dinitrophenylhydrazine (filters only, in jar)		225-9036 §	10
Hydrazine	OSHA 108	2 Glass Fiber filters; sulfuric acid	3-piece, 37 mm	225-9012	10
Hydrofluoric acid	NIOSH 7906	2 Nitrocellulose filters; 1 coated with sodium carbonate, 1 uncoated	3-piece, 37 mm	225-9031	10
Hydrogen bromide	NIOSH 7907	2 Quartz filters (R-100); 1 coated with sodium carbonate, 1 uncoated	3-piece, 37 mm	225-9032	10
Hydrogen chloride	NIOSH 7907	2 Quartz filters (R-100); 1 coated with sodium carbonate, 1 uncoated	3-piece, 37 mm	225-9032	10
Hydrogen peroxide	NON 57* OSHA 1019	2 25-mm Quartz filters (R-100); titanium oxysulfate hydrate (in 25-mm cassette)	2-piece, 25 mm	225-9030 *	10
Isocyanates	ASTM ‡	1 PTFE filter; 1 Glass Fiber filter treated with MAMA	3-piece, 37 mm	225-9022 225-9022A	12 36
Isocyanates (HDI, MDI, TDI, IPDI, HDI-BT, HDI-IC)	Oregon-OSHA 1010	1 13-mm Glass Fiber filter; MAMA (in 13-mm Swinnex holder) (also requires impinger)	2-piece, 13 mm Swinnex	225-9029 §	5
Isocyanates (HDI; 2,6-TDI; 2,4-TDI)	ASTM D5836 Δ OSHA 42 †	1 Glass Fiber filter and cellulose support; 1-(2-pyridyl)piperazine †	3-piece, 37 mm	225-9013 §† 225-9002 §	10
Isocyanates, organic	MDHS 25/3 (UK)	1 25-mm AE Glass Fiber filter; methoxyphenyl piperazine (filters only, in jar)	Special order	225-9011 §	5
n-Isopropylaniline	OSHA 78	2 Glass Fiber filters; sulfuric acid	3-piece, 37 mm	225-9004	10
Maleic anhydride	OSHA 86	2 Glass Fiber filters; veratrylamine	3-piece, 37 mm	225-9021 §	10
Maleic anhydride	For IFV	1 25-mm Glass Fiber filter; veratrylamine (filters only, in jar)		225-9028 §	10
Mercaptans (methyl-, ethyl-, n-butyl-, and phenyl-)	NIOSH 2542 OSHA 26	1 Glass Fiber filter; mercuric acetate	2-piece, 37 mm	225-9007 §	10
4,4'-Methylene bis (2-chloroaniline) (MOCA)	OSHA 71	2 Glass Fiber filters; sulfuric acid	3-piece, 37 mm	225-9004	10
4,4'-Methylene bis (phenyl isocyanate) (MDI)	OSHA 47 †	1 Glass Fiber filter and cellulose support; 1-(2-pyridyl)piperazine	3-piece, 37 mm	225-9013 §† 225-9002 §	10
4,4'-Methylenedianiline	OSHA 57 † NIOSH 5029	2 Glass Fiber filters; sulfuric acid	3-piece, 37 mm	225-9004	10
1-Naphthylamine, 2-naphthylamine	OSHA 93	2 Glass Fiber filters; sulfuric acid	3-piece, 37 mm	225-9004	10
Nitric acid	NIOSH 7907	2 Quartz filters (R-100); 1 coated with sodium carbonate, 1 uncoated	3-piece, 37 mm	225-9032	10
Nitrobenzene	NIOSH 2017 †	2 Glass Fiber filters; sulfuric acid	3-piece, 37 mm	225-9004 †	10
Ozone	OSHA ID-214	2 Glass Fiber filters; nitrite-impregnated	3-piece, 37 mm	225-9014 §	10
Phenylenediamine (o-, m-, p-)	OSHA 87	2 Glass Fiber filters; sulfuric acid	3-piece, 37 mm	225-9004	10
Phosphine	OSHA 1003	1 Glass Fiber filter; 1 polyester filter treated with mercuric chloride	3-piece, 37 mm	225-9018 †§	10
Phosphoric acid	NIOSH 7908	1 Quartz filter (Tissuquartz)	2-piece, 37 mm	225-9033	10
Phthalic anhydride	OSHA 90	2 Glass Fiber filters; veratrylamine	4-piece, 37 mm	225-9034 §	10
Sulfur dioxide	NIOSH 6004 (modified)	1 MCE pre-filter and support/1 cellulose filter and support; sodium carbonate	3-piece, 37 mm	225-9005	10
Sulfuric acid	NIOSH 7908	1 Quartz filter (Tissuquartz)	2-piece, 37 mm	225-9033	10
2,4-Toluenediamine	OSHA 65	2 Glass Fiber filters; sulfuric acid	3-piece, 37 mm	225-9004	10
2,6-Toluenediamine	OSHA 65	2 Glass Fiber filters; sulfuric acid	3-piece, 37 mm	225-9004	10
o-Tolidine	OSHA 71	2 Glass Fiber filters; sulfuric acid	3-piece, 37 mm	225-9004	10
Toluene-2,4-diisocyanate and toluene-2,6-diisocyanate	For IFV	1 25-mm Glass Fiber filter; 1-(2-pyridyl)piperazine (filters only, in jar)		225-9035 §	10
o-Toluidine	NIOSH 2017 †	2 Glass Fiber filters; sulfuric acid	3-piece, 37 mm	225-9004 †	10
Toluidine (o-, m-, p-)	OSHA 73	2 Glass Fiber filters; sulfuric acid	3-piece, 37 mm	225-9004	10
Trimellitic anhydride	OSHA 98	2 Glass Fiber filters; veratrylamine and di-n-octyl phthalate	4-piece, 37 mm	225-9010 §	10
1,3,5-Triglycidyl isocyanurate (TGI)	OSHA PV2055	1 Glass Fiber filter; hydrobromic acid	2-piece, 37 mm	225-9027 §	10
Valeraldehyde	OSHA 85	3 Glass Fiber filters; 2,4-dinitrophenylhydrazine and phosphoric acid	3-piece, 37 mm	225-9020 §	10
m-Xylenediamine (m-XDA, p-XDA)	OSHA 105	2 Glass Fiber filters; sulfuric acid	3-piece, 37 mm	225-9004	10

* Coated filters have a limited shelf-life.

† Custom order due to very limited shelf-life

Δ ASTM D5836 and D5932 for 2,4-TDI, 2,6-TDI only

§ Storage below 39.2 F (4 C) required

¥ Also requires Sorbent Tube Cat. No. 226-15

Collects both vapor and aerosol phases of fluorides

* Also requires Sorbent Tube Cat. No. 226-193-UC or 226-199-UC for simultaneous, separate sampling of peracetic acid

