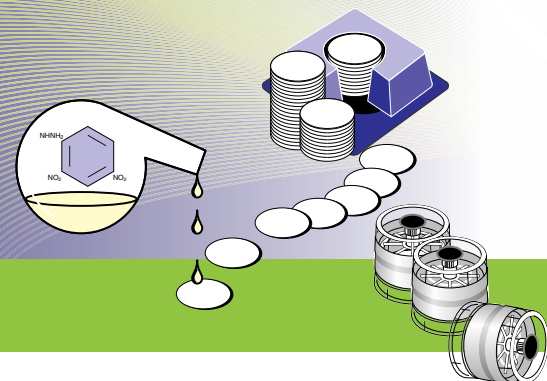


Coated Filters in Preloaded Cassettes



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-105 | 1 MCE filter and cellulose 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 §† | 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 cellulose 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) | | 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 | 12 |
| Isocyanates (HDI, MDI, TDI, IPDI, HDI-BT, HDI-C) | Oregon-OSHA 1010 | 1 13-mm Glass Fiber filter; MAMA (in 13-mm Swinnex holder) | 2-piece, 13 mm Swinnex | 225-9022A | 36 |
| 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 §† | 10 |
| Isocyanates, organic | MDHS 25/3 (U.K.) | 1 25-mm AE Glass Fiber filter; methoxyphenyl piperazine (filter only) | 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 (filter only) | | 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 §† | 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 and cellulose support; 1-(2-pyridyl)piperazine (filter only) | | 225-9035 § | 10 |
| o-Tolidine | NIOSH 2017 † | 2 Glass Fiber filters; sulfuric acid | 3-piece, 37 mm | 225-9004 † | 10 |
| Tolidine (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

