



Semivolatile Organic Certified Reference Materials

U.S. EPA Method 8270 and Appendix IX Target Compounds

- Prepared in the fewest solutions compatible with maximum shelf life; fewer ampuls to open mean fewer errors in preparation.
- Ready-to-use mixes to meet your lab's complete needs.
- Calibration mixes prepared in two independent lots for assured lot agreement and ordering convenience.
- Produced in our ISO-accredited labs to satisfy requirements for certified reference materials (CRMs).



RESTEK

Pure Chromatography

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Semivolatile Organic Certified Reference Materials

U.S. EPA Method 8270 and Appendix IX Target Compounds

U.S. Environmental Protection Agency (EPA) Method 8270 outlines the analysis of semivolatile organic pollutants in solid waste, soil, water, and air matrices using gas chromatography–mass spectrometry (GC-MS). Restek chemists have carefully reviewed this method and formulated analytical reference materials to include all of the most commonly calibrated compounds. Restek also offers all the necessary surrogate, internal standard, calibration check, matrix spike, and tuning mixtures. If your list contains compounds not in our comprehensive inventory, we will be happy to provide custom mixtures to meet your specific needs.



Calibration Mixes

Simplify semivolatiles calibration with our new MegaMix kits!

SVOC MegaMix 100 Kit (100 components)

- Streamline operations: kit contains 100 of the most frequently analyzed semivolatiles.
- Designed to make it easy to construct a 200 µg/mL working standard, allowing for wider calibration ranges, and reducing the need for sample dilution.
- Formulated for greater stability to ensure more accurate data.
- Available in two independently manufactured lots with verified lot-to-lot agreement, reducing uncertainty and improving quality.

Contains one ampul of each of the following: 8270 MegaMix (cat.# 31850); SVOC Additions standard (cat.# 31909); Benzoic acid (cat.# 31879)

Also available: SVOC MegaMix 150 kit (cat.# 31907) contains 150 of the most frequently analyzed semivolatiles.



Cat.# 31850—8270 MegaMix: 1000 µg/mL each in methylene chloride (3-methylphenol and 4-methylphenol at 500 µg/mL); 1 mL/ampul

Acenaphthene (83-32-9)
Acenaphthylene (208-96-8)
Aniline (62-53-3)
Anthracene (120-12-7)
Azobenzene (103-33-3)*
Benz[a]anthracene (56-55-3)
Benzo[a]pyrene (50-32-8)
Benzo[b]fluoranthene (205-99-2)
Benzo[g,h,i]perylene (191-24-2)
Benzo[k]fluoranthene (207-08-9)
Benzyl alcohol (100-51-6)
Benzyl butyl phthalate (85-68-7)
Bis(2-chloroethoxy)methane (111-91-1)
Bis(2-chloroethyl)ether (111-44-4)
Bis(2-ethylhexyl)adipate (103-23-1)
Bis(2-ethylhexyl)phthalate (117-81-7)
4-Bromophenyl phenyl ether (101-55-3)
Carbazole (86-74-8)
4-Chloroaniline (106-47-8)
4-Chloro-3-methylphenol (59-50-7)
2-Chloronaphthalene (91-58-7)
2-Chlorophenol (95-57-8)
4-Chlorophenyl phenyl ether (7005-72-3)
Chrysene (218-01-9)
Dibenz[a,h]anthracene (53-70-3)
Dibenzofuran (132-64-9)
1,2-Dichlorobenzene (95-50-1)

1,3-Dichlorobenzene (541-73-1)
1,4-Dichlorobenzene (106-46-7)
2,4-Dichlorophenol (120-83-2)
Diethylphthalate (84-66-2)
2,4-Dimethylphenol (105-67-9)
Dimethylphthalate (131-11-3)
Di-n-butyl phthalate (84-74-2)
1,2-Dinitrobenzene (528-29-0)
1,3-Dinitrobenzene (99-65-0)
1,4-Dinitrobenzene (100-25-4)
4,6-Dinitro-2-methylphenol (Dinitro-o-cresol) (534-52-1)
2,4-Dinitrophenol (51-28-5)
2,4-Dinitrotoluene (121-14-2)
2,6-Dinitrotoluene (606-20-2)
Di-n-octyl phthalate (117-84-0)
Diphenylamine (122-39-4)†
Fluoranthene (206-44-0)
Fluorene (86-73-7)
Hexachlorobenzene (118-74-1)
Hexachlorobutadiene (87-68-3)
Hexachlorocyclopentadiene (77-47-4)
Hexachloroethane (67-72-1)
Indeno[1,2,3-cd]pyrene (193-39-5)
Isophorone (78-59-1)
1-Methylnaphthalene (90-12-0)
2-Methylnaphthalene (91-57-6)
2-Methylphenol (o-cresol) (95-48-7)
3-Methylphenol (m-cresol) (108-39-4)
4-Methylphenol (p-cresol) (106-44-5)
Naphthalene (91-20-3)

2-Nitroaniline (88-74-4)
3-Nitroaniline (99-09-2)
4-Nitroaniline (100-01-6)
Nitrobenzene (98-95-3)
2-Nitrophenol (88-75-5)
4-Nitrophenol (100-02-7)
N-Nitrosodimethylamine (62-75-9)
N-Nitroso-di-n-propylamine (621-64-7)
2,2'-Oxybis(1-chloropropane) (108-60-1)
Pentachlorophenol (87-86-5)
Phenanthrene (85-01-8)
Phenol (108-95-2)
Pyrene (129-00-0)
Pyridine (110-86-1)
2,3,4,6-Tetrachlorophenol (58-90-2)
2,3,5,6-Tetrachlorophenol (935-95-5)
1,2,4-Trichlorobenzene (120-82-1)
2,4,5-Trichlorophenol (95-95-4)
2,4,6-Trichlorophenol (88-06-2)

*1,2-diphenylhydrazine (8270-listed analyte) decomposes to azobenzene (mix component) in the injector.
†N-nitrosodiphenylamine (8270-listed analyte) decomposes to diphenylamine (mix component) in the injector.

Cat.# 31909—SVOC Additions: 1000 µg/mL each in methylene chloride; 1 mL/ampul
Acrylamide (79-06-1)
Benzidine (92-87-5)

n-Decane (C10) (124-18-5)
Dibenz(a,h)acridine (226-36-8)
2,3-Dichloroaniline (608-27-5)
3,3'-Dichlorobenzidine (91-94-1)
Dimethoate (60-51-5)
Dinoseb (88-85-7)
Disulfoton (298-04-4)
Famphur (52-85-7)
n-Hexadecane (C16) (544-76-3)
Indene (95-13-6)
Methyl parathion (298-00-0)
6-Methylchrysene (1705-85-7)
4,4'-Methylene-bis(2-chloroaniline) (101-14-4)
n-Octadecane (C18) (593-45-3)
Parathion (ethyl parathion) (56-38-2)
Phorate (298-02-2)
Quinoline (91-22-5)
Sulfotepp (3689-24-5)
α-Terpineol (98-55-5)
o,o,o-Triethyl phosphorothioate (126-68-1)
Zalophus (thionazine) (297-97-2)

Cat.# 31879—Benzoic acid: 2000 µg/mL in methylene chloride; 1 mL/ampul
Benzoic acid (65-85-0)

Description	Conc. in Solvent	CRM?	Min Shelf Life on Ship Date	Max Shelf Life on Ship Date	Shipping Conditions	Storage Temp.	qty.	cat.#
SVOC MegaMix 100 kit	1 mL/ampul: 3 ampuls/kit	Yes	6 months	18 months	Ambient	0 °C or colder	kit	31908

Simplify semivolatiles calibration with our new MegaMix kits!



NEW!

SVOC MegaMix 150 Kit (150 components)

- Streamline operations: kit contains 150 of the most frequently analyzed semivolatiles.
- Designed to make it easy to construct a 200 µg/mL working standard, allowing for wider calibration ranges, and reducing the need for sample dilution.
- Formulated for greater stability to ensure more accurate data.
- Available in two independently manufactured lots with verified lot-to-lot agreement, reducing uncertainty and improving quality.

Contains one ampul of each of the following: 8270 MegaMix (cat.# 31850); SVOC Additions standard (cat.# 31909); Appendix IX mix #1, revised (cat.# 32459); Methapyrilene (cat.# 32460); Appendix IX mix #2 (cat.# 31806); Benzoic acid (cat.# 31879)

U.S. DEA-exempted formulation—no additional customer permits or licensing are required to purchase within the U.S.

Also available: SVOC MegaMix 100 kit (cat.# 31908) contains 100 of the most frequently analyzed semivolatiles (does not contain Appendix IX mixes or methapyrilene).

Cat.# 31850—8270 MegaMix: 1000 µg/mL each in methylene chloride (3-methylphenol and 4-methylphenol at 500 µg/mL); 1 mL/ampul
 Acenaphthene (83-32-9)
 Acenaphthylene (208-96-8)
 Aniline (62-53-3)
 Anthracene (120-12-7)
 Azobenzene (103-33-3)*
 Benz[a]anthracene (56-55-3)
 Benzo[a]pyrene (50-32-8)
 Benzo[b]fluoranthene (205-99-2)
 Benzo[g,h,i]perylene (191-24-2)
 Benzo[k]fluoranthene (207-08-9)
 Benzyl alcohol (100-51-6)
 Benzyl butyl phthalate (85-68-7)
 Bis(2-chloroethoxy)methane (111-91-1)
 Bis(2-chloroethyl)ether (111-44-4)
 Bis(2-ethylhexyl)adipate (103-23-1)
 Bis(2-ethylhexyl)phthalate (117-81-7)
 4-Bromophenyl phenyl ether (101-55-3)
 Carbazole (86-74-8)
 4-Chloroaniline (106-47-8)
 4-Chloro-3-methylphenol (59-50-7)
 2-Chloronaphthalene (91-58-7)
 2-Chlorophenol (95-57-8)
 4-Chlorophenyl phenyl ether (7005-72-3)
 Chrysene (218-01-9)
 Dibenz[a,h]anthracene (53-70-3)
 Dibenzofuran (132-64-9)
 1,2-Dichlorobenzene (95-50-1)
 1,3-Dichlorobenzene (541-73-1)
 1,4-Dichlorobenzene (106-46-7)
 2,4-Dichlorophenol (120-83-2)
 Diethylphthalate (84-66-2)
 2,4-Dimethylphenol (105-67-9)
 Dimethylphthalate (131-11-3)
 Di-n-butyl phthalate (84-74-2)
 1,2-Dinitrobenzene (528-29-0)
 1,3-Dinitrobenzene (99-65-0)
 1,4-Dinitrobenzene (100-25-4)
 4,6-Dinitro-2-methylphenol (Dinitro-o-cresol) (534-52-1)
 2,4-Dinitrophenol (51-28-5)
 2,4-Dinitrotoluene (121-14-2)
 2,6-Dinitrotoluene (606-20-2)

Di-n-octyl phthalate (117-84-0)
 Diphenylamine (122-39-4)†
 Fluoranthene (206-44-0)
 Fluorene (86-73-7)
 Hexachlorobenzene (118-74-1)
 Hexachlorobutadiene (87-68-3)
 Hexachlorocyclopentadiene (77-47-4)
 Hexachloroethane (67-72-1)
 Indeno[1,2,3-cd]pyrene (193-39-5)
 Isophorone (78-59-1)
 1-Methylnaphthalene (90-12-0)
 2-Methylnaphthalene (91-57-6)
 2-Methylphenol (o-cresol) (95-48-7)
 3-Methylphenol (m-cresol) (108-39-4)
 4-Methylphenol (p-cresol) (106-44-5)
 Naphthalene (91-20-3)
 2-Nitroaniline (88-74-4)
 3-Nitroaniline (99-09-2)
 4-Nitroaniline (100-01-6)
 Nitrobenzene (98-95-3)
 2-Nitrophenol (88-75-5)
 4-Nitrophenol (100-02-7)
 N-Nitrosodimethylamine (62-75-9)
 N-Nitroso-di-n-propylamine (621-64-7)
 2,2'-Oxybis(1-chloropropane) (108-60-1)
 Pentachlorophenol (87-86-5)
 Phenanthrene (85-01-8)
 Phenol (108-95-2)
 Pyrene (129-00-0)
 Pyridine (110-86-1)
 2,3,4,6-Tetrachlorophenol (58-90-2)
 2,3,5,6-Tetrachlorophenol (935-95-5)
 1,2,4-Trichlorobenzene (120-82-1)
 2,4,5-Trichlorophenol (95-95-4)
 2,4,6-Trichlorophenol (88-06-2)

*1,2-diphenylhydrazine (8270-listed analyte) decomposes to azobenzene (mix component) in the injector.
 †N-nitrosodiphenylamine (8270-listed analyte) decomposes to diphenylamine (mix component) in the injector.

Cat.# 31909—SVOC Additions; 1000 µg/mL each in methylene chloride; 1 mL/ampul
 Acrylamide (79-06-1)

Benidine (92-87-5)
 n-Decane (C10) (124-18-5)
 Dibenz(a,h)acridine (226-36-8)
 2,3-Dichloroaniline (608-27-5)
 3,3'-Dichlorobenzidine (91-94-1)
 Dimethoate (60-51-5)
 Dinoseb (88-85-7)
 Disulfoton (298-04-4)
 Famphur (52-85-7)
 n-Hexadecane (C16) (544-76-3)
 Indene (95-13-6)
 Methyl parathion (298-00-0)
 6-Methylchrysene (1705-85-7)
 4,4'-Methylene-bis(2-chloroaniline) (101-14-4)
 n-Octadecane (C18) (593-45-3)
 Parathion (ethyl parathion) (56-38-2)
 Phorate (298-02-2)
 Quinoline (91-22-5)
 Sulfotepp (3689-24-5)
 α-Terpineol (98-55-5)
 o,o,o-Triethyl phosphorothioate (126-68-1)
 Zalophus (thionazine) (297-97-2)

Cat.# 32459—Appendix IX mix #1, revised; 2000 µg/mL each in methylene chloride; 1 mL/ampul
 2-Acetylaminofluorene (53-96-3)
 4-Aminobiphenyl (92-67-1)
 p-Dimethylaminoazobenzene (60-11-7)
 3,3'-Dimethylbenzidine (o-tolidine) (119-93-7)
 α,α-Dimethylphenethylamine (phentermine) (122-09-8)
 1-Naphthylamine (1-aminonaphthalene) (134-32-7)
 2-Naphthylamine (2-aminonaphthalene) (91-59-8)
 N-Nitrosodibutylamine (924-16-3)
 N-Nitrosodiethylamine (55-18-5)
 N-Nitrosomethylethylamine (10595-95-6)
 N-Nitrosomorpholine (59-89-2)
 N-Nitrosopiperidine (100-75-4)
 N-Nitrosopyrrolidine (930-55-2)
 5-Nitro-o-toluidine (99-55-8)
 1,4-Phenylenediamine (106-50-3)
 2-Picoline (109-06-8)

o-Toluidine (95-53-4)

Cat.# 32460—Methapyrilene; 2000 µg/mL in methylene chloride; 1 mL/ampul
 Methapyrilene hydrochloride (135-23-9)

Cat.# 31806—Appendix IX mix #2; 1000 µg/mL each in methylene chloride; 1 mL/ampul
 Acetophenone (98-86-2)
 Aramite (140-57-8)
 Atrazine (1912-24-9)
 Benzaldehyde (100-52-7)
 Biphenyl (92-52-4)
 ε-Caprolactam (105-60-2)
 Chlorobenzilate (510-15-6)
 1-Chloronaphthalene (90-13-1)
 Diallate (2303-16-4)
 Dibenz[a,j]acridine (224-42-0)
 2,6-Dichlorophenol (87-65-0)
 7,12-Dimethylbenz[a]anthracene (57-97-6)
 1,4-Dioxane (123-91-1)
 Diphenyl ether (101-84-8)
 Ethyl methacrylate (97-63-2)
 Ethyl methanesulfonate (62-50-0)
 Hexachloropropene (1888-71-7)
 Isodrin (465-73-6)
 Isosafrole (cis & trans) (120-58-1)
 Kepone (143-50-0)
 3-Methylcholanthrene (56-49-5)
 Methyl methanesulfonate (66-27-3)
 1,4-Naphthoquinone (130-15-4)
 4-Nitroquinoline-N-oxide (56-57-5)
 Pentachlorobenzene (608-93-5)
 Pentachloroethane (76-01-7)
 Pentachloronitrobenzene (Quintozone) (82-68-8)
 Phenacetin (62-44-2)
 Propylamide (23950-58-5)
 Safrole (94-59-7)
 1,2,4,5-Tetrachlorobenzene (95-94-3)
 1,3,5-Trinitrobenzene (99-35-4)

Cat.# 31879—Benzoic acid; 2000 µg/mL in methylene chloride; 1 mL/ampul
 Benzoic acid (65-85-0)

Description	Conc. in Solvent	CRM?	DEA Status	Min Shelf Life on Ship Date	Max Shelf Life on Ship Date	Shipping Conditions	Storage Temp.	qty.	cat.#
SVOC MegaMix 150 kit	1 mL/ampul; 6 ampuls/kit	Yes	Exempt	6 months	18 months	Ambient	0 °C or colder	kit	31907

ordering notes

Ships under Restek's USDOT explosives approval.

8270 MegaMix Standard (76 components)

Acenaphthene (83-32-9)	4-Bromophenyl phenyl ether (101-55-3)	Dimethylphthalate (131-11-3)	Indeno[1,2,3-cd]pyrene (193-39-5)	(621-64-7)
Acenaphthylene (208-96-8)	Carbazole (86-74-8)	Di- <i>n</i> -butyl phthalate (84-74-2)	Isophorone (78-59-1)	2,2'-Oxybis(1-chloropropane) (108-60-1)
Aniline (62-53-3)	4-Chloroaniline (106-47-8)	1,2-Dinitrobenzene (528-29-0)	1-Methylnaphthalene (90-12-0)	Pentachlorophenol (87-86-5)
Anthracene (120-12-7)	4-Chloro-3-methylphenol (59-50-7)	1,3-Dinitrobenzene (99-65-0)	2-Methylnaphthalene (91-57-6)	Phenanthrene (85-01-8)
Azobenzene (103-33-3)*	2-Chloronaphthalene (91-58-7)	1,4-Dinitrobenzene (100-25-4)	2-Methylphenol (<i>o</i> -cresol) (95-48-7)	Phenol (108-95-2)
Benz[a]anthracene (56-55-3)	2-Chlorophenol (95-57-8)	4,6-Dinitro-2-methylphenol (Dinitro- <i>o</i> -cresol) (534-52-1)	3-Methylphenol (<i>m</i> -cresol) (108-39-4)	Pyrene (129-00-0)
Benzo[a]pyrene (50-32-8)	4-Chlorophenyl phenyl ether (7005-72-3)	2,4-Dinitrophenol (51-28-5)	4-Methylphenol (<i>p</i> -cresol) (106-44-5)	Pyridine (110-86-1)
Benzo[b]fluoranthene (205-99-2)	Chrysene (218-01-9)	2,4-Dinitrotoluene (121-14-2)	Naphthalene (91-20-3)	2,3,4,6-Tetrachlorophenol (58-90-2)
Benzo[g,h,i]perylene (191-24-2)	Dibenz[a,h]anthracene (53-70-3)	Di- <i>n</i> -octyl phthalate (117-84-0)	2-Nitroaniline (88-74-4)	2,3,5,6-Tetrachlorophenol (935-95-5)
Benzo[k]fluoranthene (207-08-9)	Dibenzofuran (132-64-9)	Fluoranthene (206-44-0)	3-Nitroaniline (99-09-2)	1,2,4-Trichlorobenzene (120-82-1)
Benzyl alcohol (100-51-6)	1,2-Dichlorobenzene (95-50-1)	Fluorene (86-73-7)	4-Nitroaniline (100-01-6)	2,4,5-Trichlorophenol (95-95-4)
Benzyl butyl phthalate (85-68-7)	1,3-Dichlorobenzene (541-73-1)	Hexachlorobenzene (118-74-1)	Nitrobenzene (98-95-3)	2,4,6-Trichlorophenol (88-06-2)
Bis(2-chloroethoxy)methane (111-91-1)	1,4-Dichlorobenzene (106-46-7)	Hexachlorobutadiene (87-68-3)	2-Nitrophenol (88-75-5)	
Bis(2-chloroethyl)ether (111-44-4)	2,4-Dichlorophenol (120-83-2)	Hexachlorocyclopentadiene (77-47-4)	4-Nitrophenol (100-02-7)	
Bis(2-ethylhexyl)adipate (103-23-1)	Diethylphthalate (84-66-2)	Hexachloroethane (67-72-1)	N-Nitrosodimethylamine (62-75-9)	
Bis(2-ethylhexyl)phthalate (117-81-7)	2,4-Dimethylphenol (105-67-9)		N-Nitroso-di- <i>n</i> -propylamine	

Conc. in Solvent	CRM?	Min Shelf Life on Ship Date	Max Shelf Life on Ship Date	Shipping Conditions	Storage Temp.	qty.	cat.#
1000 µg/mL each in methylene chloride (3-methylphenol and 4-methylphenol at 500 µg/mL); 1 mL/ampul	Yes	6 months	18 months	Ambient	0 °C or colder	ea.	31850

*1,2-diphenylhydrazine (8270-listed analyte) decomposes to azobenzene (mix component) in the injector.

†N-nitrosodiphenylamine (8270-listed analyte) decomposes to diphenylamine (mix component) in the injector.

SVOC Additions Standard (23 components)

Acrylamide (79-06-1)	Dinoseb (88-85-7)	4,4'-Methylene-bis(2-chloroaniline) (101-14-4)	Sulfatepp (3689-24-5)
Benzidine (92-87-5)	Disulfoton (298-04-4)	<i>n</i> -Octadecane (C18) (593-45-3)	α-Terpineol (98-55-5)
<i>n</i> -Decane (C10) (124-18-5)	Famphur (52-85-7)	Parathion (ethyl parathion) (56-38-2)	o,o,o-Triethyl phosphorothioate (126-68-1)
Dibenz(a,h)acridine (226-36-8)	<i>n</i> -Hexadecane (C16) (544-76-3)	Phorate (298-02-2)	Zalophus (thionazine) (297-97-2)
2,3-Dichloroaniline (608-27-5)	Indene (95-13-6)	Quinoline (91-22-5)	
3,3'-Dichlorobenzidine (91-94-1)	Methyl parathion (298-00-0)		
Dimethoate (60-51-5)	6-Methylchrysene (1705-85-7)		

Conc. in Solvent	CRM?	Min Shelf Life on Ship Date	Max Shelf Life on Ship Date	Shipping Conditions	Storage Temp.	qty.	cat.#
1000 µg/mL; methylene chloride; 1 mL/ampul	Yes	6 months	24 months	Ambient	0 °C or colder	ea.	31909



8270 Matrix Spike Mix (76 components)

Same list as 8270 MegaMix (above)

Conc. in Solvent	CRM?	Min Shelf Life on Ship Date	Max Shelf Life on Ship Date	Shipping Conditions	Storage Temp.	qty.	cat.#
200 µg/mL each in methanol:methylene chloride (80:20) (3-methylphenol and 4-methylphenol at 100 µg/mL); 10 mL/ampul	Yes	6 months		Ambient	0 °C or colder	15-pk.	31687-15
200 µg/mL each in methanol:methylene chloride (80:20) (3-methylphenol and 4-methylphenol at 100 µg/mL); 10 mL/ampul	Yes	6 months	18 months	Ambient	0 °C or colder	ea.	33073

*1,2-diphenylhydrazine (8270-listed analyte) decomposes to azobenzene (mix component) in the injector.

†N-nitrosodiphenylamine (8270-listed analyte) decomposes to diphenylamine (mix component) in the injector.

605 Benzidines Calibration Mix (2 components)

Benztidine (92-87-5) 3,3'-Dichlorobenzidine (91-94-1)

Conc. in Solvent	CRM?	Min Shelf Life on Ship Date	Max Shelf Life on Ship Date	Shipping Conditions	Storage Temp.	qty.	cat.#
2000 µg/mL each in methanol; 1 mL/ampul	Yes	6 months	55 months	Ambient	10 °C or colder	ea.	31030
2000 µg/mL each in methylene chloride; 1 mL/ampul	Yes	6 months	55 months	Ambient	10 °C or colder	ea.	31834

8270 Benztidines Mix (3 components)

Benztidine (92-87-5) 3,3'-Dichlorobenzidine (91-94-1) 3,3'-Dimethylbenztidine (*o*-tolidine) (119-93-7)

Conc. in Solvent	CRM?	Min Shelf Life on Ship Date	Max Shelf Life on Ship Date	Shipping Conditions	Storage Temp.	qty.	cat.#
2000 µg/mL each in methanol; 1 mL/ampul	Yes	6 months	55 months	Ambient	10 °C or colder	ea.	31688
2000 µg/mL each in methylene chloride; 1 mL/ampul	Yes	6 months	55 months	Ambient	10 °C or colder	ea.	31852

Easier calibration!

8270 MegaMix and 8270 Matrix Spike Mix include 3-methylphenol and 4-methylphenol at 1/2x concentration of other components.

Calibration Mixes (cont.)

Benzoic Acid

Benzoic acid (65-85-0)

Description	CAS #	Conc. in Solvent	CRM?	Min Shelf Life on Ship Date	Max Shelf Life on Ship Date	Shipping Conditions	Storage Temp.	qty.	cat.#
Benzoic acid	65-85-0	2000 µg/mL in methylene chloride; 1 mL/ampul	Yes	6 months	48 months	Ambient	10 °C or colder	ea.	31879

Appendix IX Mix #1, Revised

(17 components)

Note: Methapyrilene is not included in this revised standard.

2-Acetylaminofluorene (53-96-3)	2-Naphthylamine (2-aminonaphthalene) (91-59-8)	N-Nitrosopyrrolidine (930-55-2)
4-Aminobiphenyl (92-67-1)	N-Nitrosodibutylamine (924-16-3)	5-Nitro- <i>o</i> -toluidine (99-55-8)
<i>p</i> -Dimethylaminoazobenzene (60-11-7)	N-Nitrosodiethylamine (55-18-5)	1,4-Phenylenediamine (106-50-3)
3,3'-Dimethylbenzidine (<i>o</i> -tolidine) (119-93-7)	N-Nitrosomethylethylamine (10595-95-6)	2-Picoline (109-06-8)
α,α -Dimethylphenethylamine (phentermine) (122-09-8)	N-Nitrosomorpholine (59-89-2)	<i>o</i> -Toluidine (95-53-4)
1-Naphthylamine (1-aminonaphthalene) (134-32-7)	N-Nitrosopiperidine (100-75-4)	

Conc. in Solvent	CRM?	DEA Status	Min Shelf Life on Ship Date	Max Shelf Life on Ship Date	Shipping Conditions	Storage Temp.	qty.	cat.#
2000 µg/mL each in methylene chloride; 1 mL/ampul	Yes	Exempt	6 months	55 months	Ambient	0 °C or colder	ea.	32459

Methapyrilene Standard

Methapyrilene hydrochloride (135-23-9)

Description	CAS #	Conc. in Solvent	CRM?	Min Shelf Life on Ship Date	Max Shelf Life on Ship Date	Shipping Conditions	Storage Temp.	qty.	cat.#
Methapyrilene hydrochloride	135-23-9	2000 µg/mL in methylene chloride; 1 mL/ampul	Yes	6 months	18 months	Ambient	0 °C or colder	ea.	32460

Appendix IX Mix #2

(32 components)

Acetophenone (98-86-2)	7,12-Dimethylbenz[a]anthracene (57-97-6)	1,4-Naphthoquinone (130-15-4)
Aramite (140-57-8)	1,4-Dioxane (123-91-1)	4-Nitroquinoline-N-oxide (56-57-5)
Atrazine (1912-24-9)	Diphenyl ether (101-84-8)	Pentachlorobenzene (608-93-5)
Benzaldehyde (100-52-7)	Ethyl methacrylate (97-63-2)	Pentachloroethane (76-01-7)
Biphenyl (92-52-4)	Ethyl methanesulfonate (62-50-0)	Pentachloronitrobenzene (Quintozone) (82-68-8)
ϵ -Caprolactam (105-60-2)	Hexachloropropene (1888-71-7)	Phenacetin (62-44-2)
Chlorobenzilate (510-15-6)	Isodrin (465-73-6)	Propylamide (23950-58-5)
1-Chloronaphthalene (90-13-1)	Isosafrole (<i>cis</i> & <i>trans</i>) (120-58-1)	Safrole (94-59-7)
Diallate (2303-16-4)	Kepone (143-50-0)	1,2,4,5-Tetrachlorobenzene (95-94-3)
Dibenz[a,j]acridine (224-42-0)	3-Methylcholanthrene (56-49-5)	1,3,5-Trinitrobenzene (99-35-4)
2,6-Dichlorophenol (87-65-0)	Methyl methanesulfonate (66-27-3)	

Conc. in Solvent	CRM?	Min Shelf Life on Ship Date	Max Shelf Life on Ship Date	Shipping Conditions	Storage Temp.	qty.	cat.#
1000 µg/mL each in methylene chloride; 1 mL/ampul	Yes	6 months	18 months	Ambient	0 °C or colder	ea.	31806



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Organophosphorus Pesticide Mix, 8270/Appendix IX

(9 components)

Dimethoate (60-51-5)
Disulfoton (298-04-4)
Famphur (52-85-7)

Methyl parathion (298-00-0)
O,O,O-Triethyl phosphorothioate
(126-68-1)

Parathion (ethyl parathion) (56-38-2)
Phorate (298-02-2)

Sulfotepp (3689-24-5)
Zinophos (thionazine) (297-97-2)

Conc. in Solvent	CRM?	Min Shelf Life on Ship Date	Max Shelf Life on Ship Date	Shipping Conditions	Storage Temp.	qty.	cat.#
2000 µg/mL in methylene chloride; 1 mL/ampul	Yes	6 months	18 months	Ambient	10 °C or colder	ea.	32419

Organochlorine Pesticide Mix AB # 3

(20 components)

Aldrin (309-00-2)
α-BHC (319-84-6)
β-BHC (319-85-7)
γ-BHC (Lindane) (58-89-9)
δ-BHC (319-86-8)

cis-Chlordane (5103-71-9)
trans-Chlordane (5103-74-2)
4,4'-DDD (72-54-8)
4,4'-DDE (72-55-9)
4,4'-DDT (50-29-3)

Dieldrin (60-57-1)
Endosulfan I (959-98-8)
Endosulfan II (33213-65-9)
Endosulfan sulfate (1031-07-8)
Endrin (72-20-8)

Endrin aldehyde (7421-93-4)
Endrin ketone (53494-70-5)
Heptachlor (76-44-8)
Heptachlor epoxide (isomer B)
(1024-57-3)

Methoxychlor (72-43-5)

Conc. in Solvent	CRM?	Min Shelf Life on Ship Date	Max Shelf Life on Ship Date	Shipping Conditions	Storage Temp.	qty.	cat.#
2000 µg/mL each in hexane:toluene (1:1); 1 mL/ampul	Yes	6 months	52 months	Ambient	10 °C or colder	ea.	32415

8270/Appendix IX Kit

Contains 1 mL each of these mixtures.

31850: 8270 MegaMix Standard

31834: 605 Benzidines Calibration Mix

32459: Appendix IX Mix #1, Revised (Note: methapyrilene is not included in this revised standard.)

32460: Methapyrilene Standard

31806: Appendix IX Mix #2

Description	CRM?	Min Shelf Life on Ship Date	Max Shelf Life on Ship Date	Shipping Conditions	Storage Temp.	qty.	cat.#
8270/Appendix IX Kit	Yes	6 months	18 months	Ambient	0 °C or colder	kit	31815

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*Please have CAS# available to ensure correct identification.



SV Internal Standard Mix

(6 components)

Acenaphthene-d10 (15067-26-2)
Chrysene-d12 (1719-03-5)1,4-Dichlorobenzene-d4 (3855-82-1)
Naphthalene-d8 (1146-65-2)Perylene-d12 (1520-96-3)
Phenanthrene-d10 (1517-22-2)

Conc. in Solvent	CRM?	Min Shelf Life on Ship Date	Max Shelf Life on Ship Date	Shipping Conditions	Storage Temp.	qty.	cat.#
2000 µg/mL each in methylene chloride; 1 mL/ampul	Yes	6 months	71 months	Ambient	10 °C or colder	ea.	31206
	Yes	6 months		Ambient	10 °C or colder	15-pk.	31206-15
	Yes	6 months		Ambient	10 °C or colder	25-pk.	31206-25
4000 µg/mL each in methylene chloride; 1 mL/ampul	Yes	6 months	71 months	Ambient	10 °C or colder	ea.	31006
	Yes	6 months		Ambient	10 °C or colder	15-pk.	31006-15
	Yes	6 months		Ambient	10 °C or colder	25-pk.	31006-25

Revised SV Internal Standard Mix

(7 components)

Acenaphthene-d10 (15067-26-2)
Chrysene-d12 (1719-03-5)
1,4-Dichlorobenzene-d4 (3855-82-1)1,4-Dioxane-d8 (17647-74-4)
Naphthalene-d8 (1146-65-2)
Perylene-d12 (1520-96-3)

Phenanthrene-d10 (1517-22-2)

Conc. in Solvent	CRM?	Min Shelf Life on Ship Date	Max Shelf Life on Ship Date	Shipping Conditions	Storage Temp.	qty.	cat.#
2000 µg/mL each in methylene chloride; 1 mL/ampul	Yes	6 months	71 months	Ambient	10 °C or colder	ea.	31885
4000 µg/mL each in methylene chloride; 1 mL/ampul	Yes	6 months	71 months	Ambient	10 °C or colder	ea.	31886

B/N Surrogate Mix (4/89 SOW)

(3 components)

2-Fluorobiphenyl (321-60-8)

Nitrobenzene-d5 (4165-60-0)

p-Terphenyl-d14 (1718-51-0)

Conc. in Solvent	CRM?	Min Shelf Life on Ship Date	Max Shelf Life on Ship Date	Shipping Conditions	Storage Temp.	qty.	cat.#
1000 µg/mL each in methylene chloride; 1 mL/ampul	Yes	6 months	71 months	Ambient	10 °C or colder	ea.	31024
5000 µg/mL each in methylene chloride; 1 mL/ampul	Yes	6 months	71 months	Ambient	10 °C or colder	ea.	31062
5000 µg/mL each in methylene chloride; 5 mL/ampul	Yes	6 months	71 months	Ambient	10 °C or colder	ea.	31086
5000 µg/mL each in methylene chloride; 10 mL/ampul	Yes	6 months	71 months	Ambient	10 °C or colder	ea.	33028

Revised B/N Surrogate Mix

(4 components)

2-Fluorobiphenyl (321-60-8)

Nitrobenzene-d5 (4165-60-0)

p-Terphenyl-d14 (1718-51-0)

Pyrene-d10 (1718-52-1)

Conc. in Solvent	CRM?	Min Shelf Life on Ship Date	Max Shelf Life on Ship Date	Shipping Conditions	Storage Temp.	qty.	cat.#
1000 µg/mL each in methylene chloride; 1 mL/ampul	Yes	6 months	78 months	Ambient	10 °C or colder	ea.	31887
5000 µg/mL each in methylene chloride; 1 mL/ampul	Yes	6 months	71 months	Ambient	10 °C or colder	ea.	31888
5000 µg/mL each in methylene chloride; 5 mL/ampul	Yes	6 months	71 months	Ambient	10 °C or colder	ea.	31889

Acid Surrogate Mix (4/89 SOW)

(3 components)

2-Fluorophenol (367-12-4)

Phenol-d6 (13127-88-3)

2,4,6-Tribromophenol (118-79-6)

Conc. in Solvent	CRM?	Min Shelf Life on Ship Date	Max Shelf Life on Ship Date	Shipping Conditions	Storage Temp.	qty.	cat.#
2000 µg/mL each in methanol; 1 mL/ampul	Yes	6 months	45 months	Ambient	10 °C or colder	ea.	31025
10,000 µg/mL each in methanol; 1 mL/ampul	Yes	6 months	60 months	Ambient	10 °C or colder	ea.	31063
10,000 µg/mL each in methanol; 5 mL/ampul	Yes	6 months	96 months	Ambient	10 °C or colder	ea.	31087
10,000 µg/mL each in methanol; 10 mL/ampul	Yes	6 months	96 months	Ambient	10 °C or colder	ea.	33029

B/N Matrix Spike Mix

(6 components)

Acenaphthene (83-32-9)

2,4-Dinitrotoluene (121-14-2)

Pyrene (129-00-0)

1,4-Dichlorobenzene (106-46-7)

N-Nitroso-di-*n*-propylamine (621-64-7)

1,2,4-Trichlorobenzene (120-82-1)

Conc. in Solvent	CRM?	Min Shelf Life on Ship Date	Max Shelf Life on Ship Date	Shipping Conditions	Storage Temp.	qty.	cat.#
1000 µg/mL each in methanol; 1 mL/ampul	Yes	6 months	55 months	Ambient	10 °C or colder	ea.	31004
5000 µg/mL each in methanol; 1 mL/ampul	Yes	6 months	36 months	Ambient	10 °C or colder	ea.	31074
5000 µg/mL each in methanol; 5 mL/ampul	Yes	6 months	36 months	Ambient	10 °C or colder	ea.	31084

Acid Matrix Spike Mix

(5 components)

4-Chloro-3-methylphenol (59-50-7)

4-Nitrophenol (100-02-7)

Phenol (108-95-2)

2-Chlorophenol (95-57-8)

Pentachlorophenol (87-86-5)

Conc. in Solvent	CRM?	Min Shelf Life on Ship Date	Max Shelf Life on Ship Date	Shipping Conditions	Storage Temp.	qty.	cat.#
2000 µg/mL each in methanol; 1 mL/ampul	Yes	6 months	39 months	Ambient	10 °C or colder	ea.	31014
7500 µg/mL each in methanol; 5 mL/ampul	Yes	6 months	36 months	Ambient	10 °C or colder	ea.	31085
10,000 µg/mL each in methanol; 1 mL/ampul	Yes	6 months	39 months	Ambient	10 °C or colder	ea.	31061
10,000 µg/mL each in methanol; 5 mL/ampul	Yes	6 months	85 months	Ambient	10 °C or colder	ea.	31071

GC-MS Tuning Mixture

(4 components)

Benzidine (92-87-5)

DFTPP (decafluorotriphenylphosphine) (5074-71-5)

4,4'-DDT (50-29-3)

Pentachlorophenol (87-86-5)

Conc. in Solvent	CRM?	Min Shelf Life on Ship Date	Max Shelf Life on Ship Date	Shipping Conditions	Storage Temp.	qty.	cat.#
1000 µg/mL each in methylene chloride; 1 mL/ampul	Yes	6 months	36 months	Ambient	10 °C or colder	ea.	31615

SV Tuning Compound (DFTPP (decafluorotriphenylphosphine))

DFTPP (decafluorotriphenylphosphine) (5074-71-5)

Description	CAS #	Conc. in Solvent	CRM?	Min Shelf Life on Ship Date	Max Shelf Life on Ship Date	Shipping Conditions	Storage Temp.	qty.	cat. #
DFTPP (decafluorotriphenylphosphine)	5074-71-5	2500 µg/mL in methylene chloride; 1 mL/ampul	Yes	6 months	36 months	Ambient	10 °C or colder	ea.	31001

PFTBA (MS Tuning Compound)

Perfluorotributylamine (PFTBA) (311-89-7)

Description	CAS #	Conc. in Solvent	CRM?	Min Shelf Life on Ship Date	Max Shelf Life on Ship Date	Shipping Conditions	Storage Temp.	Data pack available?	qty.	cat. #
Perfluorotributylamine (PFTBA)	311-89-7	Neat; 1 mL/ampul	No	6 months	55 months	Ambient	0 °C or colder	No	ea.	30482

8270 B/N Calibration Check Mix

(7 components)

Acenaphthene (83-32-9) 1,4-Dichlorobenzene (106-46-7) Diphenylamine (122-39-4) Hexachlorobutadiene (87-68-3)
 Benzo[a]pyrene (50-32-8) Di-*n*-octyl phthalate (117-84-0) Fluoranthene (206-44-0)

Conc. in Solvent	CRM?	Min Shelf Life on Ship Date	Max Shelf Life on Ship Date	Shipping Conditions	Storage Temp.	qty.	cat. #
2000 µg/mL each in methylene chloride; 1 mL/ampul	Yes	6 months	36 months	Ambient	10 °C or colder	ea.	31616

8270 Acid Calibration Check Mix

(6 components)

4-Chloro-3-methylphenol (59-50-7) 2-Nitrophenol (88-75-5) Phenol (108-95-2)
 2,4-Dichlorophenol (120-83-2) Pentachlorophenol (87-86-5) 2,4,6-Trichlorophenol (88-06-2)

Conc. in Solvent	CRM?	Min Shelf Life on Ship Date	Max Shelf Life on Ship Date	Shipping Conditions	Storage Temp.	qty.	cat. #
2000 µg/mL each in methylene chloride; 1 mL/ampul	Yes	6 months	36 months	Ambient	10 °C or colder	ea.	31617

SV System Performance Check Mix (SPCC)

(4 components)

2,4-Dinitrophenol (51-28-5) 4-Nitrophenol (100-02-7)
 Hexachlorocyclopentadiene (77-47-4) N-Nitroso-di-*n*-propylamine (621-64-7)

Conc. in Solvent	CRM?	Min Shelf Life on Ship Date	Max Shelf Life on Ship Date	Shipping Conditions	Storage Temp.	qty.	cat. #
2000 µg/mL each in methylene chloride; 1 mL/ampul	Yes	6 months	24 months	Ambient	10 °C or colder	ea.	31689

Calibration Mixes by Compound Class

8270 Calibration Mix #1 (19 components)

Benzoic acid (65-85-0)	4,6-Dinitro-2-methylphenol (Dinitro- <i>o</i> -cresol) (534-52-1)	2-Nitrophenol (88-75-5)
4-Chloro-3-methylphenol (59-50-7)	2,4-Dinitrophenol (51-28-5)	4-Nitrophenol (100-02-7)
2-Chlorophenol (95-57-8)	Dinoseb (88-85-7)	Pentachlorophenol (87-86-5)
2,4-Dichlorophenol (120-83-2)	2-Methylphenol (<i>o</i> -cresol) (95-48-7)	Phenol (108-95-2)
2,6-Dichlorophenol (87-65-0)	3-Methylphenol (<i>m</i> -cresol) (108-39-4)	2,3,4,6-Tetrachlorophenol (58-90-2)
2,4-Dimethylphenol (105-67-9)	4-Methylphenol (<i>p</i> -cresol) (106-44-5)	2,4,5-Trichlorophenol (95-95-4)
		2,4,6-Trichlorophenol (88-06-2)

Conc. in Solvent	CRM?	Min Shelf Life on Ship Date	Max Shelf Life on Ship Date	Shipping Conditions	Storage Temp.	qty.	cat.#
2000 µg/mL each in methylene chloride; 1 mL/ampul	Yes	6 months	39 months	Ambient	10 °C or colder	ea.	31618

8270 Calibration Mix #2 (11 components)

Aniline (62-53-3)	Diphenylamine (122-39-4)*	N-Nitrosodimethylamine (62-75-9)
Benzidine (92-87-5)	2-Nitroaniline (88-74-4)	N-Nitroso-di- <i>n</i> -propylamine (621-64-7)
4-Chloroaniline (106-47-8)	3-Nitroaniline (99-09-2)	Pyridine (110-86-1)
3,3'-Dichlorobenzidine (91-94-1)	4-Nitroaniline (100-01-6)	

Conc. in Solvent	CRM?	Min Shelf Life on Ship Date	Max Shelf Life on Ship Date	Shipping Conditions	Storage Temp.	qty.	cat.#
2000 µg/mL each in methylene chloride:methanol (85:15); 1 mL/ampul	Yes	6 months	24 months	Ambient	10 °C or colder	ea.	31619

*N-nitrosodiphenylamine (8270-listed analyte) decomposes to diphenylamine (mix component) in the injector.

8270 Calibration Mix #3 (23 components)

Aramite (140-57-8)	1,3-Dichlorobenzene (541-73-1)	Isodrin (465-73-6)
Bis(2-chloroethyl)ether (111-44-4)	1,4-Dichlorobenzene (106-46-7)	Kepone (143-50-0)
Bis(2-chloroethoxy)methane (111-91-1)	1,3-Dinitrobenzene (99-65-0)	2,2'-Oxybis(1-chloropropane) (108-60-1)
4-Bromophenyl phenyl ether (101-55-3)	Hexachlorobenzene (118-74-1)	Pentachlorobenzene (608-93-5)
Chlorobenzilate (510-15-6)	Hexachlorobutadiene (87-68-3)	Pentachloronitrobenzene (Quintozene) (82-68-8)
2-Chloronaphthalene (91-58-7)	Hexachlorocyclopentadiene (77-47-4)	1,2,4,5-Tetrachlorobenzene (95-94-3)
4-Chlorophenyl phenyl ether (7005-72-3)	Hexachloroethane (67-72-1)	1,2,4-Trichlorobenzene (120-82-1)
1,2-Dichlorobenzene (95-50-1)	Hexachloropropene (1888-71-7)	

Conc. in Solvent	CRM?	Min Shelf Life on Ship Date	Max Shelf Life on Ship Date	Shipping Conditions	Storage Temp.	qty.	cat.#
2000 µg/mL each in methylene chloride; 1 mL/ampul	Yes	6 months	36 months	Ambient	0 °C or colder	ea.	31620

8270 Calibration Mix #4 (22 components)

Acetophenone (98-86-2)	Di- <i>n</i> -butyl phthalate (84-74-2)	1,4-Naphthoquinone (130-15-4)
Azobenzene (103-33-3)*	Di- <i>n</i> -octyl phthalate (117-84-0)	Nitrobenzene (98-95-3)
Benzyl alcohol (100-51-6)	2,4-Dinitrotoluene (121-14-2)	4-Nitroquinoline-N-oxide (56-57-5)
Bis(2-ethylhexyl)phthalate (117-81-7)	2,6-Dinitrotoluene (606-20-2)	Phenacetin (62-44-2)
Benzyl butyl phthalate (85-68-7)	Ethyl methanesulfonate (62-50-0)	Safrole (94-59-7)
Dibenzofuran (132-64-9)	Isophorone (78-59-1)	1,3,5-Trinitrobenzene (99-35-4)
Diethylphthalate (84-66-2)	Isosafrole (<i>cis</i> & <i>trans</i>) (120-58-1)	
Dimethylphthalate (131-11-3)	Methyl methanesulfonate (66-27-3)	

Conc. in Solvent	CRM?	Min Shelf Life on Ship Date	Max Shelf Life on Ship Date	Shipping Conditions	Storage Temp.	qty.	cat.#
2000 µg/mL each in methylene chloride; 1 mL/ampul	Yes	6 months	38 months	Ambient	10 °C or colder	ea.	31621

*1,2-diphenylhydrazine (8270-listed analyte) decomposes to azobenzene (mix component) in the injector.

8270 Calibration Mix #6 (10 components)

Diallate (<i>cis</i> & <i>trans</i>) (2303-16-4)	Methyl parathion (298-00-0)	O,O,O-Triethyl phosphorothioate (126-68-1)
Dimethoate (60-51-5)	Parathion (ethyl parathion) (56-38-2)	Zinophos (Thionazine) (297-97-2)
Disulfoton (298-04-4)	Phorate (298-02-2)	
Famphur (52-85-7)	Propyzamide (23950-58-5)	

Conc. in Solvent	CRM?	Min Shelf Life on Ship Date	Max Shelf Life on Ship Date	Shipping Conditions	Storage Temp.	qty.	cat.#
2000 µg/mL each in methylene chloride; 1 mL/ampul	Yes	6 months	36 months	Ambient	10 °C or colder	ea.	31623



tech tip

Restek's certified reference standards are formulated with a balance of product stability and user convenience in mind. Short shelf life standards, such as vinyl acetate and acrolein, should be ordered fresh as needed. Contact us to learn about the cost savings and convenience of setting up a standing/blanket orders for all of your custom and catalog reference standards needs.

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Calibration Mixes by Compound Class *(cont.)*

8270 Calibration Kit (2000 µg/mL)

Contains 1 mL each of these mixtures.
31618: 8270 Calibration Mix #1
31619: 8270 Calibration Mix #2
31620: 8270 Calibration Mix #3

31621: 8270 Calibration Mix #4
31995: 8270 Calibration Mix #5, Revised
31996: 3-Methylcholanthrene Standard

ordering notes

Ships under Restek's USDOT explosives approval.

Description	CRM?	Min Shelf Life on Ship Date	Shipping Conditions	Storage Temp.	qty.	cat.#
8270 Calibration Kit	Yes	3 months	Ambient	0 °C or colder	kit	31626

Aroclor Solutions

Aroclor standards may exhibit lot-to-lot variation.

Description	CAS #	Conc. in Solvent	CRM?	Min Shelf Life on Ship Date	Max Shelf Life on Ship Date	Shipping Conditions	Storage Temp.	qty.	cat.#
Aroclor 1016	12674-11-2	1000 µg/mL in hexane; 1 mL/ampul	Yes	6 months	75 months	Ambient	25 °C nominal	ea.	32006
	12674-11-2	200 µg/mL in isooctane; 1 mL/ampul	Yes	6 months	75 months	Ambient	25 °C nominal	ea.	32064
	12674-11-2	50 mg/kg in transformer oil (PCB-free); 1 mL/ampul	Yes	6 months	75 months	Ambient	25 °C nominal	ea.	32075
	12674-11-2	500 mg/kg in transformer oil (PCB-free); 1 mL/ampul	Yes	6 months	75 months	Ambient	25 °C nominal	ea.	32076
Aroclor 1221	11104-28-2	1000 µg/mL in hexane; 1 mL/ampul	Yes	6 months	75 months	Ambient	25 °C nominal	ea.	32007
	11104-28-2	200 µg/mL in isooctane; 1 mL/ampul	Yes	6 months	75 months	Ambient	25 °C nominal	ea.	32065
	11104-28-2	50 mg/kg in transformer oil (PCB-free); 1 mL/ampul	Yes	6 months	75 months	Ambient	25 °C nominal	ea.	32077
	11104-28-2	500 mg/kg in transformer oil (PCB-free); 1 mL/ampul	Yes	6 months	75 months	Ambient	25 °C nominal	ea.	32078
Aroclor 1232	11141-16-5	1000 µg/mL in hexane; 1 mL/ampul	Yes	6 months	75 months	Ambient	25 °C nominal	ea.	32008
	11141-16-5	200 µg/mL in isooctane; 1 mL/ampul	Yes	6 months	75 months	Ambient	25 °C nominal	ea.	32066
	11141-16-5	50 mg/kg in transformer oil (PCB-free); 1 mL/ampul	Yes	6 months	75 months	Ambient	25 °C nominal	ea.	32079
	11141-16-5	500 mg/kg in transformer oil (PCB-free); 1 mL/ampul	Yes	6 months	75 months	Ambient	25 °C nominal	ea.	32080
Aroclor 1242	53469-21-9	1000 µg/mL in hexane; 1 mL/ampul	Yes	6 months	75 months	Ambient	25 °C nominal	ea.	32009
	53469-21-9	200 µg/mL in isooctane; 1 mL/ampul	Yes	6 months	75 months	Ambient	25 °C nominal	ea.	32067
	53469-21-9	50 mg/kg in transformer oil (PCB-free); 1 mL/ampul	Yes	6 months	75 months	Ambient	25 °C nominal	ea.	32081
	53469-21-9	500 mg/kg in transformer oil (PCB-free); 1 mL/ampul	Yes	6 months	75 months	Ambient	25 °C nominal	ea.	32082
Aroclor 1248	12672-29-6	1000 µg/mL in hexane; 1 mL/ampul	Yes	6 months	75 months	Ambient	25 °C nominal	ea.	32010
	12672-29-6	200 µg/mL in isooctane; 1 mL/ampul	Yes	6 months	75 months	Ambient	25 °C nominal	ea.	32068
	12672-29-6	50 mg/kg in transformer oil (PCB-free); 1 mL/ampul	Yes	6 months	75 months	Ambient	25 °C nominal	ea.	32083
	12672-29-6	500 mg/kg in transformer oil (PCB-free); 1 mL/ampul	Yes	6 months	75 months	Ambient	25 °C nominal	ea.	32084
Aroclor 1254	11097-69-1	1000 µg/mL in hexane; 1 mL/ampul	Yes	6 months	75 months	Ambient	25 °C nominal	ea.	32011
	11097-69-1	200 µg/mL in isooctane; 1 mL/ampul	Yes	6 months	75 months	Ambient	25 °C nominal	ea.	32069
	11097-69-1	50 mg/kg in transformer oil (PCB-free); 1 mL/ampul	Yes	6 months	75 months	Ambient	25 °C nominal	ea.	32085
	11097-69-1	500 mg/kg in transformer oil (PCB-free); 1 mL/ampul	Yes	6 months	75 months	Ambient	25 °C nominal	ea.	32086
Aroclor 1260	11096-82-5	1000 µg/mL in hexane; 1 mL/ampul	Yes	6 months	75 months	Ambient	25 °C nominal	ea.	32012
	11096-82-5	200 µg/mL in isooctane; 1 mL/ampul	Yes	6 months	75 months	Ambient	25 °C nominal	ea.	32070
	11096-82-5	50 mg/kg in transformer oil (PCB-free); 1 mL/ampul	Yes	6 months	75 months	Ambient	25 °C nominal	ea.	32087
	11096-82-5	500 mg/kg in transformer oil (PCB-free); 1 mL/ampul	Yes	6 months	75 months	Ambient	25 °C nominal	ea.	32088
Aroclor 1262	37324-23-5	1000 µg/mL in hexane; 1 mL/ampul	Yes	6 months	75 months	Ambient	25 °C nominal	ea.	32409
Aroclor 1268	11100-14-4	1000 µg/mL in hexane; 1 mL/ampul	Yes	6 months	75 months	Ambient	25 °C nominal	ea.	32410
Aroclor 1016/1260		1000 µg/mL in hexane; 1 mL/ampul	Yes	6 months	75 months	Ambient	25 °C nominal	ea.	32039
		200 µg/mL in isooctane; 1 mL/ampul	Yes	6 months	75 months	Ambient	25 °C nominal	ea.	32299
		400 µg/mL each in acetone; 1 mL/ampul	Yes	6 months	75 months	Ambient	10 °C or colder	ea.	32456

Note: We test our transformer oil solvent to ensure that it is PCB-free.



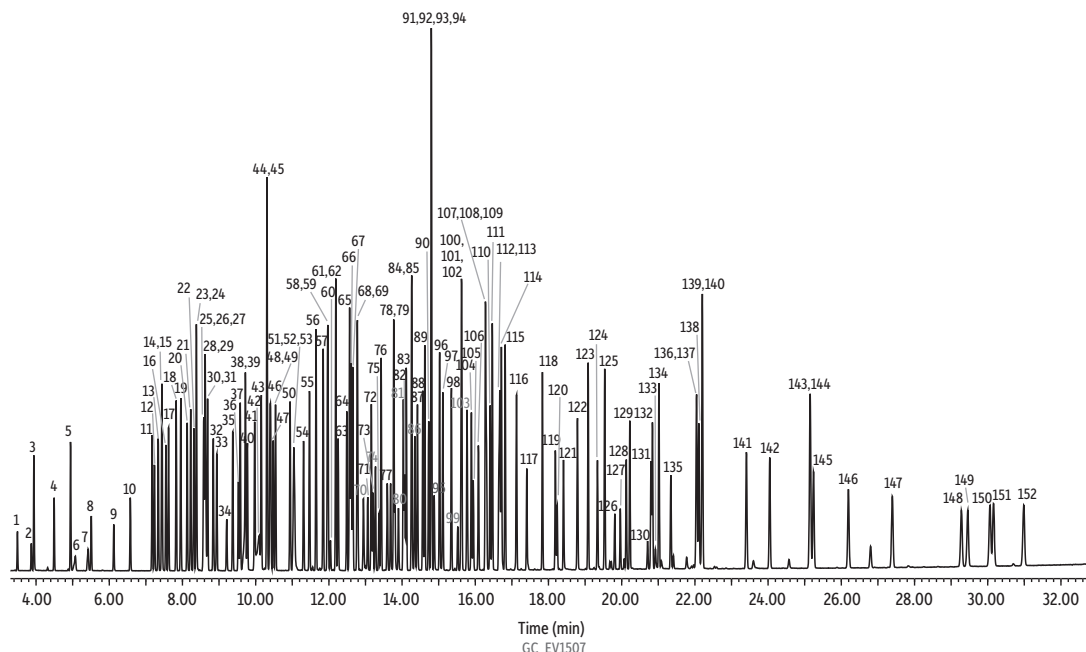
please note

We test our transformer oil solvent to ensure that it is PCB-free.

To view and download chromatograms on certificates of analysis (CofA) for recently produced lots, visit www.restek.com/documentation and then enter the cat.# and serial #.

Before ordering, contact Restek Customer Service to confirm lot availability.

Semivolatiles SVOC MegaMix 150 Kit on Rxi-SVOCms



Peaks	t _r (min)	Peaks	t _r (min)	Peaks	t _r (min)	Peaks	t _r (min)	Peaks	t _r (min)
1. 1,4-Dioxane	3.494	32. Hexachloroethane	8.845	63. 2,4,5-Trichlorophenol	12.256	94. 4-Nitroaniline	14.812	125. Pyrene	19.539
2. N-Nitrosodimethylamine	3.874	33. Nitrobenzene	8.941	64. Safrrole	12.492	95. 4,6-Dinitro-2-methylphenol	14.879	126. Aramite I	19.813
3. Pyridine	3.943	34. N-Nitrosopiperidine	9.211	65. Biphenyl	12.57	96. Diphenylamine	15.028	127. Aramite II	19.965
4. Ethyl methacrylate	4.497	35. Isophorone	9.377	66. 2-Chloronaphthalene	12.61	97. Azobenzene	15.116	128. p-(Dimethylamino)	
5. 2-Picoline	4.945	36. 2-Nitrophenol	9.532	67. 1-Chloronaphthalene	12.655	98. Sulfotep	15.349	azobenzene	20.128
6. N-Nitrosomethylthylamine	5.074	37. 2,4-Dimethylphenol	9.582	68. Diphenyl ether	12.778	99. 1,3,5-Trinitrobenzene	15.523	129. Chlorobenzilate	20.224
7. Acrylamide	5.427	38. Benzoic acid	9.693	69. 2-Nitroaniline	12.793	100. Phorate	15.63	130. Famphur	20.711
8. Methyl methanesulfonate	5.511	39. O,O-Diethyl phosphorothioate	9.723	70. 1,4-Naphthoquinone	12.946	101. Phenacetin	15.631	131. 3,3'-Dimethylbenzidine	20.803
9. N-Nitrosodiethylamine	6.127	40. Bis(2-chloroethoxy)methane	9.777	71. 1,2-Dinitrobenzene	13.063	102. Diallylate	15.634	132. Benzyl butyl phthalate	20.842
10. Ethyl methanesulfonate	6.579	41. 2,4-Dichlorophenol	9.976	72. Dimethyl phthalate	13.162	103. 4-Bromophenyl phenyl ether	15.776	133. Kepone	20.924
11. Benzaldehyde	7.174	42. Phentertine	10.099	73. 1,3-Dinitrobenzene	13.209	104. Hexachlorobenzene	15.896	134. Bis(2-ethylhexyl) adipate	21.02
12. Phenol	7.238	43. 1,2,4-Trichlorobenzene	10.156	74. 2,6-Dinitrotoluene	13.274	105. Dimethoate	15.948	135. 2-(Acetylamino)fluorene	21.345
13. Aniline	7.342	44. Naphthalene	10.313	75. 1,4-Dinitrobenzene	13.372	106. Atrazine	16.089	136. 3,3'-Dichlorobenzidine	22.042
14. Bis(2-chloroethyl) ether	7.434	45. a-Terpineol	10.315	76. Acenaphthylene	13.431	107. 4-Aminobiphenyl	16.284	137. 4,4'-Methylene-bis	
15. Pentachloroethane	7.448	46. 4-Chloroaniline	10.939	77. 3-Nitroaniline	13.6	108. Pentachloronitrobenzene	16.277	(2-chloroaniline)	22.054
16. 2-Chlorophenol	7.55	47. 2,6-Dichlorophenol	10.414	78. Acenaphthene	13.775	109. Pentachlorophenol	16.311	138. Benz[a]anthracene	22.11
17. Decane	7.623	48. Hexachloropropene	10.481	79. 2,4-Dinitrophenol	13.808	110. Propylamide	16.408	139. Chrysene	22.201
18. 1,3-Dichlorobenzene	7.832	49. Hexachlorobutadiene	10.546	80. 4-Nitrophenol	13.904	111. Octadecane	16.468	140. Bis(2-ethylhexyl) phthalate	22.209
19. 1,4-Dichlorobenzene	7.957	50. Quinoline	10.943	81. Pentachlorobenzene	14.038	112. Dinoseb	16.648	141. 6-Methylchrysene	23.411
20. Benzyl alcohol	8.132	51. Caprolactam	11.029	82. 2,4-Dinitrotoluene	14.073	113. Disulfoton	16.673	142. Di-n-octyl phthalate	24.047
21. 1,2-Dichlorobenzene	8.227	52. N-Nitrosodibutylamine	11.047	83. Dibenzofuran	14.118	114. Phenanthrene	16.716	143. Benzo[b]fluoranthene	25.155
22. 2-Methylphenol	8.314	53. 1,4-Phenylenediamine	11.067	84. 1-Naphthylamine	14.265	115. Anthracene	16.819	144. 7,12-Dimethylbenz[a]	
23. Indene	8.384	54. 4-Chloro-3-methylphenol	11.312	85. 2,3,5,6-Tetrachlorophenol	14.266	116. Carbazole	17.128	anthracene	25.147
24. 2,2'-oxybis(1-chloropropane)	8.384	55. Isosafrole I	11.472	86. 2,3,4,6-Tetrachlorophenol	14.35	117. Methyl parathion	17.41	145. Benzo[k]fluoranthene	25.243
25. N-Nitrosopyrrolidine	8.571	56. 2-Methylnaphthalene	11.653	87. 2-Naphthylamine	14.422	118. di-n-Butyl phthalate	17.837	146. Benzo[a]pyrene	26.197
26. 4-Methylphenol	8.583	57. 1-Methylnaphthalene	11.846	88. Diethyl Phthalate	14.57	119. Ethyl parathion	18.191	147. 3-Methylcholanthrene	27.396
27. 4-Methylphenol	8.583	58. Hexachlorocyclopentadiene	11.963	89. Hexadecane	14.622	120. 4-Nitroquinoline N-oxide	18.239	148. Dibenz(a,h)acridine	29.284
28. N-Nitrosodi-N-propylamine	8.618	59. 1,2,4,5-Tetrachlorobenzene	11.98	90. Zinophos	14.729	121. Methapyrilene	18.413	149. Dibenz[a,j]acridine	29.458
29. Acetophenone	8.625	60. Isosafrole II	12.045	91. Fluorene	14.801	122. Isodrin	18.794	150. Indeno[1,2,3-cd]pyrene	30.064
30. N-Nitrosomorpholine	8.644	61. 2,3-Dichloroaniline	12.191	92. 4-Chlorophenyl phenyl ether	14.803	123. Fluoranthene	19.087	151. Dibenz[a,h]anthracene	30.162
31. o-Toluidine	8.689	62. 2,4,6-Trichlorophenol	12.191	93. 5-Nitro-O-toluidine	14.806	124. Benzidine	19.341	152. Benzo[ghi]perylene	30.987

Column Rxi-SVOCms, 30 m, 0.25 mm ID, 0.50 µm (cat.# 16638)
Standard/Sample SVOC MegaMix 150 kit (cat.# 31907)
Diluent: Dichloromethane
Conc.: 20 µg/mL (2 ng on-column)
Injection
Inj. Vol.: 1 µL split (split ratio 10:1)
Liner: Topaz 4.0 mm ID single taper inlet liner w/ wool (cat.# 23303)
Inj. Temp.: 250 °C
Oven
Oven Temp.: 60 °C (hold 1 min) to 285 °C at 16 °C/min to 305 °C at 1.65 °C/min to 330 °C at 8.8 °C/min (hold 4.55 min)
Carrier Gas
Flow Rate: He, constant flow
Detector MS
Mode: Scan
Scan Program:

Group	Start Time (min)	Scan Range (amu)	Scan Rate (scans/sec)
1	2.0	50-500	3.6

Transfer Line Temp.: 280 °C
Analyzer Type: Quadrupole

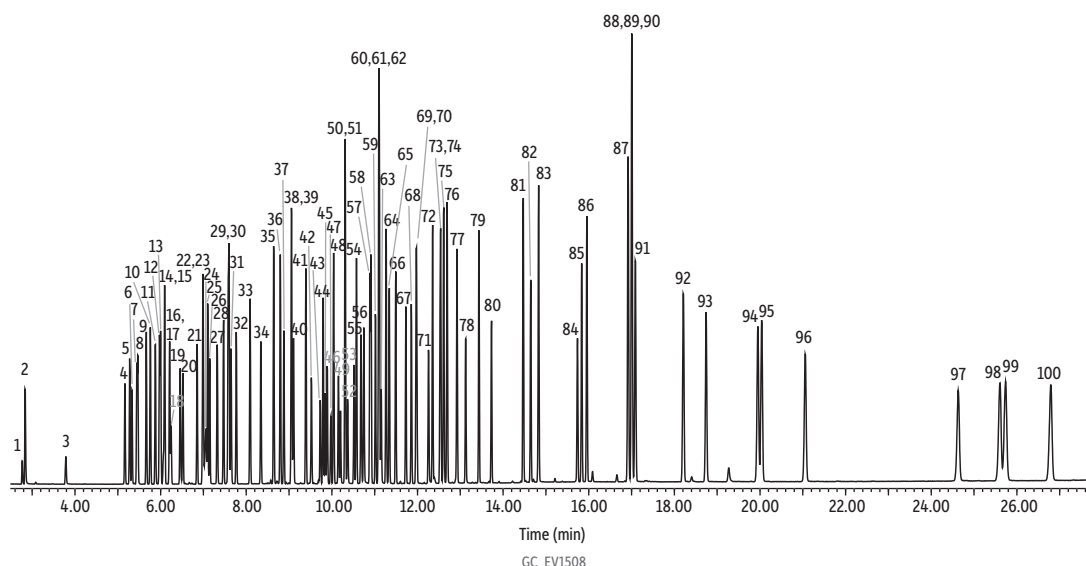
Source Type: Inert
Drawout Plate: 6 mm ID
Source Temp.: 330 °C
Quad Temp.: 180 °C
Electron Energy: 70 eV
Solvent Delay Time: 2 min
Tune Type: DFTPP
Ionization Mode: EI
Instrument Agilent 7890A GC & 5975C MSD
Sample Preparation Solutions were mixed and diluted to 20 ppm with dichloromethane in amber 2 mL, 9 mm short-cap, screw-thread vials (cat.# 21143) and sealed with 2.0 mL, 9 mm short-cap, screw-vial closures (cat.# 23842). The SVOC MegaMix 150 kit (cat.# 31907) contains one ampul each of the following standards.

Notes

- 8270 MegaMix (cat.# 31850)
- SVOC Additions standard (cat.# 31909)
- Appendix IX mix #1, revised (cat.# 32459)
- Methapyrilene (cat.# 32460)
- Appendix IX mix #2 (cat.# 31806)
- Benzoic acid (cat.# 31879)

Acknowledgement Chris Rattray

Semivolatiles SVOC MegaMix 100 Kit on Rxi-SVOCms



Column Rxi-SVOCms, 30 m, 0.25 mm ID, 0.50 µm (cat.# 16638)
Standard/Sample SVOC MegaMix 100 kit (cat.# 31908)
Diluent: Dichloromethane
Conc.: 20 µg/mL (2 ng on-column)
Injection
Inj. Vol.: 1 µL split (split ratio 10:1)
Liner: Topaz 4.0 mm ID single taper inlet liner w/ wool (cat.# 23303)
Inj. Temp.: 250 °C
Oven
Oven Temp.: 60 °C (hold 1 min) to 285 °C at 16 °C/min to 305 °C at 1.65 °C/min to 330 °C at 8.8 °C/min (hold 4.55 min)
Carrier Gas He, constant flow
Flow Rate: 1.2 mL/min
Detector MS
Mode: Scan
Scan Program:

Group	Start Time (min)	Scan Range (amu)	Scan Rate (scans/sec)
1	2.0	50-500	3.6

Transfer Line Temp.: 280 °C
Analyzer Type: Quadrupole
Source Type: Inert
Drawout Plate: 6 mm ID
Source Temp.: 330 °C
Quad Temp.: 180 °C
Electron Energy: 70 eV
Solvent Delay Time: 2 min
Tune Type: DFTPP
Ionization Mode: EI

Instrument Agilent 7890A GC & 5975C MSD
Sample Preparation Solutions were mixed and diluted to 20 ppm with dichloromethane in amber 2 mL, 9 mm short-cap, screw-thread vials (cat.# 21143) and sealed with 2.0 mL, 9 mm short-cap, screw-vial closures (cat.# 23842).

Notes The SVOC MegaMix 100 kit (cat.# 31908) contains one ampul each of the following standards.
 • 8270 MegaMix (cat.# 31850)
 • SVOC Additions standard (cat.# 31909)
 • Benzoic acid (cat.# 31879)

Acknowledgement Chris Rattray

Peaks	t _r (min)	Peaks	t _r (min)
1. N-Nitrosodimethylamine	2.771	51. 2,4-Dinitrophenol	10.312
2. Pyridine	2.839	52. 4-Nitrophenol	10.371
3. Acrylamide	3.789	53. 2,4-Dinitrotoluene	10.52
4. Phenol	5.169	54. Dibenzofuran	10.577
5. Aniline	5.281	55. 2,3,5,6-Tetrachlorophenol	10.683
6. Bis(2-chloroethyl) ether	5.334	56. 2,3,4,6-Tetrachlorophenol	10.75
7. 2-Chlorophenol	5.449	57. Diethyl phthalate	10.892
8. Decane	5.469	58. Hexadecane	10.917
9. 1,3-Dichlorobenzene	5.668	59. Zinophos	11.021
10. 1,4-Dichlorobenzene	5.762	60. 4-Nitroaniline	11.103
11. Benzyl alcohol	5.879	61. Fluorene	11.105
12. 1,2-Dichlorobenzene	5.977	62. 4-Chlorophenyl phenyl ether	11.105
13. 2-Methylphenol	6.002	63. 4,6-Dinitro-2-methylphenol	11.155
14. 2,2'-Oxybis(1-chloropropane)	6.072	64. Diphenylamine	11.269
15. Indene	6.095	65. Azobenzene	11.343
16. 3-Methylphenol	6.212	66. Sulfotep	11.494
17. 4-Methylphenol	6.212	67. Phorate	11.73
18. N-Nitroso-di-n-propylamine	6.247	68. 4-Bromophenyl phenyl ether	11.86
19. Hexachloroethane	6.46	69. Dimethoate	11.976
20. Nitrobenzene	6.523	70. Hexachlorobenzene	11.976
21. Isophorone	6.855	71. Pentachlorophenol	12.26
22. 2-Nitrophenol	6.985	72. Octadecane	12.355
23. 2,4-Dimethylphenol	6.993	73. Disulfoton	12.542
24. Benzoic acid	7.061	74. Dinoseb	12.542
25. O,O,O-Triethyl phosphorothioate	7.102	75. Phenanthrene	12.615
26. Bis(2-chloroethoxy)methane	7.149	76. Anthracene	12.695
27. 2,4-Dichlorophenol	7.326	77. Carbazole	12.925
28. 1,2,4-Trichlorobenzene	7.473	78. Methyl parathion	13.128
29. α-Terpineol	7.597	79. di-n-Butyl phthalate	13.438
30. Naphthalene	7.597	80. Ethyl Parathion	13.73
31. 4-Chloroaniline	7.648	81. Fluoranthene	14.472
32. Hexachlorobutadiene	7.771	82. Benzidine	14.648
33. Quinoline	8.093	83. Pyrene	14.832
34. 4-Chloro-3-methylphenol	8.344	84. Famphur	15.739
35. 2-Methylnaphthalene	8.644	85. Benzyl butyl phthalate	15.838
36. 1-Methylnaphthalene	8.798	86. Bis(2-ethylhexyl) adipate	15.958
37. Hexachlorocyclopentadiene	8.881	87. 3,3'-Dichlorobenzidine	16.922
38. 2,3-Dichloroaniline	9.059	88. 4,4-Methylene-bis(2-chloroaniline)	17.009
39. 2,4,6-Trichlorophenol	9.059	89. Benz[a]anthracene	17.009
40. 2,4,5-Trichlorophenol	9.107	90. Di-n-octyl phthalate	17.011
41. 2-Chloronaphthalene	9.396	91. Chrysene	17.092
42. 2-Nitroaniline	9.526	92. 6-Methylchrysene	18.212
43. 1,2-Dinitrobenzene	9.732	93. Bis(2-ethylhexyl) phthalate	18.744
44. Dimethyl phthalate	9.797	94. Benzo[b]fluoranthene	19.953
45. 1,3-Dinitrobenzene	9.847	95. Benzo[k]fluoranthene	20.043
46. 2,6-Dinitrotoluene	9.895	96. Benzo[a]pyrene	21.06
47. 1,4-Dinitrobenzene	9.978	97. Dibenz[a,h]acridine	24.633
48. Acenaphthylene	10.044	98. Indeno[1,2,3-cd]pyrene	25.607
49. 3-Nitroaniline	10.156	99. Dibenz[a,h]anthracene	25.739
50. Acenaphthene	10.312	100. Benzo[ghi]perylene	26.795

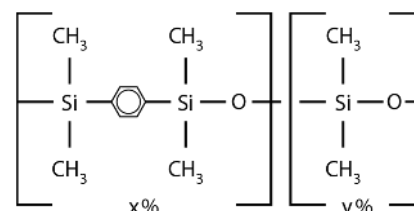
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Rxi-SVOCms Columns (fused silica)

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ID	df	Length	Temp. Limits	Modification	qty.	Similar to Part #	cat.#
0.15 mm	0.15 µm	20 m	to 340/340 °C		ea.		46616
0.18 mm	0.18 µm	20 m	to 340/340 °C		ea.	Phenomenex 7FD-G027-08	46602
	0.36 µm	20 m	to 330/340 °C		ea.	Agilent 121-9723; Phenomenex 7FD-G027-53	46604
	0.25 µm	15 m	to 340/340 °C		ea.	Phenomenex 7EG-G027-11	16620
0.25 mm	0.25 µm	30 m	to 340/340 °C		ea.	Agilent 122-9732; Phenomenex 7HG-G027-11	16623
	0.50 µm	30 m	to 330/340 °C		ea.	Agilent 122-9736; Phenomenex 7HG-G027-17	16638
0.32 mm	0.25 µm	30 m	to 340/340 °C		ea.	Phenomenex 7HM-G027-11	16624
	0.50 µm	30 m	to 330/340 °C		ea.		16639
	0.25 µm	15 m	to 340/340 °C	w/10 m, 0.25 mm ID Rxi guard column pre-connected w/SilTite µ-Union connector	ea.		16620-375
0.25 mm	0.25 µm	30 m	to 340/340 °C	w/5 m, 0.25 mm ID Rxi guard column pre-connected w/SilTite µ-Union connector	ea.		16623-371
	0.50 µm	30 m	to 330/340 °C	w/5 m, 0.25 mm ID Rxi guard column pre-connected w/SilTite µ-Union connector	ea.		16638-371



ordering notes

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