

Analyze a Full 82-Component EPA List Using Just Three Ampuls

With New EPA 524.3 Certified Reference Materials!



In support of the U.S. Safe Drinking Water Act (SDWA), Restek has formulated a complete set of EPA 524.3 reference standards for the monitoring of purgeable organic compounds in drinking water—using as few as three ampuls! This collection of certified reference materials (CRMs) also covers the seven volatile organic compounds (VOCs) included in the Unregulated Contaminant Monitoring Rule 3 (UCMR3), which requires monitoring of all public drinking water systems with 10,000 or more customers.

- Full 82-component EPA 524.3 list using as few as three ampuls—reduce prep time and chances for error or contamination. (See Figure 1 on page 2!)
- EPA 524.3 VOA MegaMix® ampul includes oxygenates group—no need to order separately.
- Volatile gases prepared separately—replace shorter-life components without wasting money on full list.
- Two options for internal and surrogate standards—separate or combined mix.
- Certified reference materials (CRMs) manufactured and QC-tested in Restek's ISO-accredited labs—satisfy your ISO requirements.
- Also ideal for surface water and groundwater testing.



Simplify your analyses and start saving with our new EPA 524.3 reference standards.



Figure 1: 5 ppb Volatiles in Drinking Water on Rtx®-VMS by EPA 524.3

Peaks

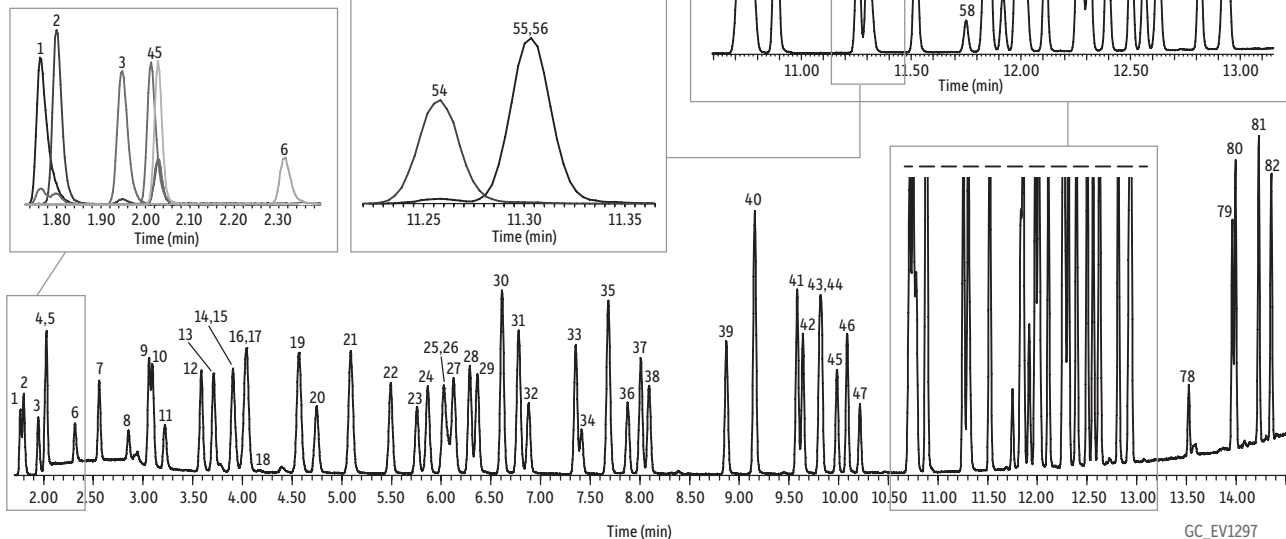
- | | | | |
|--|--|---------------------------------|-----------------------------------|
| 1. Dichlorodifluoromethane** | 23. Bromochloromethane* | 46. 1,3-Dichloropropane* | 65. 4-Chlorotoluene* |
| 2. Chlorodifluoromethane** | 24. Chloroform* | 47. 1,2-Dibromoethane* | 66. <i>tert</i> -Butylbenzene* |
| 3. Chloromethane** | 25. Carbon tetrachloride* | 48. Chlorobenzene-d5† | 67. Pentachloroethane* |
| 4. Vinyl chloride** | 26. Tetrahydrofuran* | 49. Chlorobenzene* | 68. 1,2,4-Trimethylbenzene* |
| 5. 1,3-Butadiene** | 27. 1,1,1-Trichloroethane* | 50. Ethylbenzene* | 69. <i>sec</i> -Butylbenzene* |
| 6. Bromomethane** | 28. 1,1-Dichloropropene* | 51. 1,1,1,2-Tetrachloroethane* | 70. 4-Isopropyltoluene* |
| 7. Trichlorofluoromethane** | 29. 1-Chlorobutane* | 52. <i>m</i> -Xylene* | 71. 1,3-Dichlorobenzene* |
| 8. Diethyl ether* | 30. Benzene* | 53. <i>p</i> -Xylene* | 72. 1,4-Dichlorobenzene-D4† |
| 9. 1,1-Dichloroethene* | 31. <i>tert</i> -Amyl methyl ether (TAME)* | 54. <i>o</i> -Xylene* | 73. 1,4-Dichlorobenzene* |
| 10. Carbon disulfide* | 32. 1,2-Dichloroethane* | 55. Styrene* | 74. <i>n</i> -Butylbenzene* |
| 11. Methyl iodide* | 33. Trichloroethene* | 56. Bromoform* | 75. Hexachloroethane* |
| 12. Allyl chloride* | 34. 1,4-Difluorobenzene† | 57. Isopropylbenzene* | 76. 1,2-Dichlorobenzene-D4 (SS)†† |
| 13. Methylene chloride* | 35. <i>tert</i> -Amyl ethyl ether (TAE)* | 58. 4-Bromofluorobenzene (SS)†† | 77. 1,2-Dichlorobenzene* |
| 14. <i>trans</i> -1,2-Dichloroethene* | 36. Dibromomethane* | 59. Bromobenzene* | 78. 1,2-Dibromo-3-chloropropane* |
| 15. Methyl acetate* | 37. 1,2-Dichloropropane* | 60. <i>n</i> -Propylbenzene* | 79. Hexachlorobutadiene* |
| 16. MTBE-d3 (SS)†† | 38. Bromodichloromethane* | 61. 1,1,2,2-Tetrachloroethane* | 80. 1,2,4-Trichlorobenzene* |
| 17. MTBE* | 39. <i>cis</i> -1,3-Dichloropropene* | 62. 2-Chlorotoluene* | 81. Naphthalene* |
| 18. <i>tert</i> -Butyl alcohol (TBA)* | 40. Toluene* | 63. 1,3,5-Trimethylbenzene* | 82. 1,2,3-Trichlorobenzene* |
| 19. Diisopropyl ether (DIPE)* | 41. Tetrachloroethene* | 64. 1,2,3-Trichloropropane* | |
| 20. 1,1-Dichloroethane* | 42. <i>trans</i> -1,3-Dichloropropene* | | |
| 21. <i>tert</i> -Butyl ethyl ether (ETBE)* | 43. 1,1,2-Trichloroethane* | | |
| 22. <i>cis</i> -1,2-Dichloroethene* | 44. Ethyl methacrylate* | | |
| | 45. Dibromochloromethane* | | |

Compound List Key

- * In VOA MegaMix® Mix (cat.# 30013)
- ** In Gas Calibration Mix (cat.# 30014)
- † In Internal Standard Mix (cat.# 30015) & Internal Standard/Surrogate Mix (cat.# 30017)
- †† In Surrogate Standard Mix (cat.# 30016) & Internal Standard/Surrogate Mix (cat.# 30017)

Analyze a full 82-component EPA 524.3 list using as few as three ampuls!

Rtx®-VMS columns resolve *o*-xylene and styrene!



For complete conditions, visit www.restek.com and enter chromatogram GC_EV1297 in the search function.

For EPA 524.3 analysis, Restek recommends...

EPA 524.3 Reference Standards

See Figure 1 for compound lists.

524.3 VOA MegaMix (69 components)

2,000 µg/mL each in P&T methanol, 1 mL/ampul
cat.# 30013 (ea.)

524.3 Gas Calibration Mix (7 components)

2,000 µg/mL each in P&T methanol, 1 mL/ampul
cat.# 30014 (ea.)

524.3 Internal Standard Mix (3 components)

2,000 µg/mL each in P&T methanol, 1 mL/ampul
cat.# 30015 (ea.)

524.3 Surrogate Standard (3 components)

2,000 µg/mL each in P&T methanol, 1 mL/ampul
cat.# 30016 (ea.)

524.3 Internal Standard/Surrogate Mix (6 components)

2,000 µg/mL each in P&T methanol, 1 mL/ampul
cat.# 30017 (ea.)

Manual Microliter Syringes

- Economical.
- Removable needles; replacement needles available at www.restek.com
- Each syringe plunger and barrel assembly is manufactured as one working unit; components are not interchangeable or individually replaceable.

Volume	Needle Gauge	Needle Length	Point Style	SGE		qty.	Restek cat.#
				Model	cat.#		
5 µL	26	50 mm	2	5R**	001050	ea.	24701
10 µL	26	50 mm	2	10R**	002050	ea.	24703
25 µL	25	50 mm	2	25R	003050	ea.	24705
100 µL	25	50 mm	2	100R	005050	ea.	24709
250 µL	25	50 mm	2	250R	006050	ea.	24711

**With plunger protection.

Rtx®-VMS Columns (fused silica) (proprietary Crossbond® phase)

- Application-specific columns for volatile organic pollutants by GC-MS.
- Stable to 260 °C.
- No known equivalent phases.

Description	temp. limits	qty.	cat.#
30 m, 0.25 mm ID, 1.40 µm	-40 to 240/260 °C	ea.	19915



Sky™ 1.0 mm ID Straight Inlet Liner

for Agilent GCs equipped with split/splitless inlets

RESTEK			
ID x OD x Length	qty.	cat.#	
Straight, Sky Technology, Borosilicate Glass			
1.0 mm x 6.3 mm x 78.5 mm	ea.	23333.1	
1.0 mm x 6.3 mm x 78.5 mm	5-pk.	23333.5	
1.0 mm x 6.3 mm x 78.5 mm	25-pk.	23333.25	

PTFE Tip, Gas-Tight Syringes

- Suitable for gases or liquids, for maximum inertness.
- High accuracy of dispensed volumes.
- Interchangeable barrels, plungers, and tips extend performance and increase cost-effectiveness.

Volume	Needle Term.	Needle Gauge	SGE Model	cat.#	Restek	
					qty.	cat.#
5 mL	LL	*	5MDR-LL-GT	008760	ea.	24757
50 mL	LL	*	50MR-LL-GT	009660	ea.	24761

*Syringes are equipped with a luer-lock fitting instead of a needle; if needed, needles sold separately at www.restek.com

Mininert® Precision Sampling Valves for Vials

Mininert® valves are very convenient for repetitive sampling and limit content exposure to the silicon septum.

Description	Type	Thread Size	qty.	cat.#
Mininert Precision Sampling Valves	Screw-Thread	13 mm/425	12-pk.	24900
Replacement Septa			50-pk.	24906



4.0 mL WISP 48 Screw-Thread Step Vials (15 x 45 mm, 13/425) (vials only)

Description	Volume	Material	100-pk.	1,000-pk.
WISP 48 Step Vial w/White Graduated Marking Spot	4.0 mL	Amber	24656	24657

Precleaned Volatile Organic Analyte (VOA) Sampling Vials

- Container, liner, and closure cleaned, assembled, and lot traceable.
- Open top caps.
- PTFE faced 0.125" silicone septa.

Description	Volume	Color	Material	Screw-Thread Size	qty.	cat.#
Precleaned VOA Vials	40 mL	Clear	Glass	24 mm/400	72-pk.	21796
Precleaned VOA Vials	40 mL	Amber	Glass	24 mm/400	72-pk.	21797
Replacement Septa, 24 mm x 0.125"			PTFE-lined silicone		100-pk.	24694



Treated Welded/Drawn 304 Grade Stainless Steel Tubing

Our most popular grade of tubing. Recommended for:

- chromatography applications. • gas delivery systems. • lower pressures. • inert applications.

Maximum temperature of 450 °C in an inert atmosphere.

Siltek®/Sulfinert® Treated (Coiled)

OD	ID	cat.#
1/16" (1.59 mm)	0.040" (1.02 mm)	22505

Price-per-foot by length. Minimum order is 5 ft. Price breaks are available at 25 ft., 200 ft., and 400 ft.

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Visit www.restek.com/Contact-Us to find a distributor or representative.

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