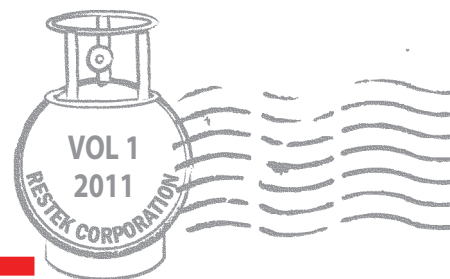


RESTEK AIRMAIL



Meet the Air Team!

Spotlight on the Operations Group

From left to right: Carole Womer (Purchasing Agent), Barry Spicer (Production Technician), Bob King (Production Technician), and Pete Rose (Production Manager).



Plus 1 Service in Action!

No matter how big your order is, the Air Team's operations group is dedicated to meeting delivery dates and quality specifications so that you can meet your deadlines with reliable products. In the summer of 2010, the team received an order for 600 air cans that needed to be delivered as soon as possible. They pulled together and got it shipped on time, with Carole in the forefront coordinating raw material orders, arranging shipments from vendors, and communicating updates to the group. Barry, Bob, and Pete put in extra time not only to meet this customer's needs, but also to fulfill other customers' delivery expectations during the same time. No matter how large or small the request, our knowledgeable and experienced team will provide Plus One customer service to you!

Upcoming Events

NEMC

August 15-19, 2011
Hyatt Regency
Bellevue, WA

New Products!

Passive Air Sampling Kits—
Soil Gas, p. 3

Dual Canister Sampling
Manifold, p. 3



Save Money!

Canister and Flow Controller Repair Service

Save money and increase performance with Restek's canister and flow controller repair service.



Normal wear and tear on canisters and components can result in damage causing leakage. Restek's repair service allows you to extend the life of your equipment for much less than the cost to replace with new products. Contact Customer Service at 800-356-1688, or your Restek representative, to take advantage of this service. You will be given instructions and an SRV # to return the parts to us.

Sampling Kit/Flow Controller Repair

Includes all new rubber seals in flow controller and orifice and frit replacement
cat.# 550131

Canister Repair

Includes valve replacement, leak test & cleaning
cat.# 560838



New Applications!

Analyzing Naphthalene Using Method TO-15

Naphthalene, although not included as a target compound in EPA Method TO-15, is now being requested more frequently especially for soil vapor intrusion sampling protocols. Its inclusion is due to its status as a possible carcinogen, and to the potential for it to migrate from polluted sites into nearby buildings, contaminating indoor air. Adding naphthalene to the list of VOCs in TO-15 presents some challenges to air chemists; typically, VOC and SVOC sampling requires the use of two different sampling devices: canisters and solid sorbents. Being able to sample VOCs and naphthalene at the same time with the same device and being able to analyze them using the same method proves both convenient and cost-effective for labs already employing TO-15. Here we show the analysis of 64 compounds, including naphthalene, using EPA Method TO-15, a highly inert SilcoCan® canister, and an Rxi®-1ms column.

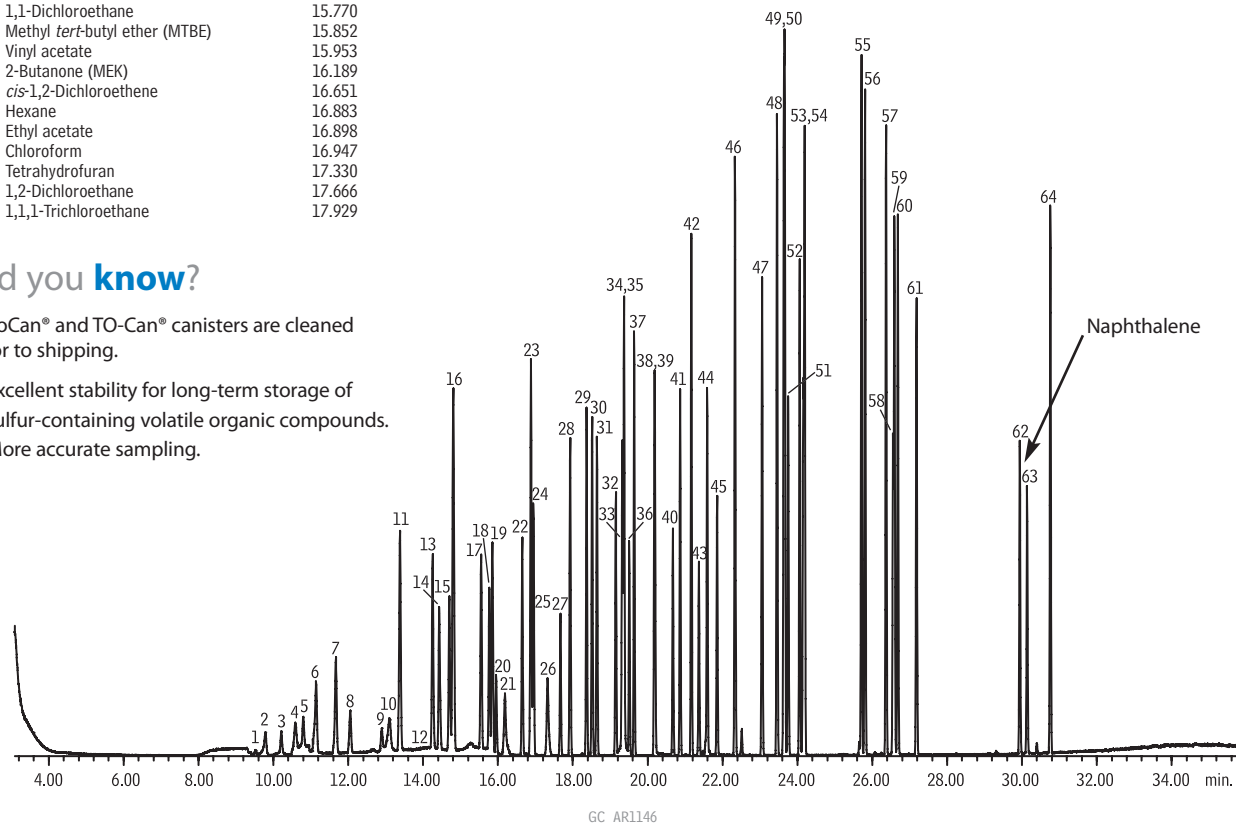
US EPA TO-15 Compounds on Rxi®-1ms

Peaks	RT (min.)	29. Benzene	18.366	47. Chlorobenzene	23.055
1. Propylene	9.521	30. Carbon tetrachloride	18.516	48. Ethylbenzene	23.456
2. Freon®-12 (dichlorodifluoromethane)	9.781	31. Cyclohexane	18.645	49. <i>p</i> -Xylene	23.660
3. Chloromethane	10.216	32. 1,2-Dichloropropane	19.149	50. <i>m</i> -Xylene	23.660
4. Freon®-114 (dichlorotetrafluoroethane)	10.589	33. Bromodichloromethane	19.324	51. Bromoform	23.752
5. Vinyl chloride	10.797	34. Trichloroethene	19.370	52. Styrene	24.061
6. 1,3-Butadiene	11.139	35. 1,4-Dioxane	19.415	53. 1,1,2,2-Tetrachloroethane	24.162
7. Bromomethane	11.672	36. Methyl methacrylate	19.507	54. <i>o</i> -Xylene	24.193
8. Chloroethane	12.057	37. Heptane	19.639	55. 4-Ethyltoluene	25.713
9. Acrolein (2-propenal)	12.901	38. <i>cis</i> -1,3-Dichloropropene	20.183	56. 1,3,5-Trimethylbenzene	25.807
10. Acetone	13.100	39. 4-Methyl-2-pentanone (MIBK)	20.226	57. 1,2,4-Trimethylbenzene	26.370
11. Freon®-11 (trichlorofluoromethane)	13.384	40. <i>trans</i> -1,3-Dichloropropene	20.675	58. Benzyl chloride	26.554
12. 2-Propanol (Isopropanol)	14.097	41. 1,1,2-Trichloroethane	20.868	59. 1,3-Dichlorobenzene	26.593
13. 1,1-Dichloroethene	14.256	42. Toluene	21.168	60. 1,4-Dichlorobenzene	26.685
14. Methylene chloride	14.433	43. 2-Hexanone (MBK)	21.370	61. 1,2-Dichlorobenzene	27.184
15. Carbon disulfide	14.699	44. Dibromochloromethane	21.590	62. 1,2,4-Trichlorobenzene	29.942
16. Freon®-113 (1,1,2-trichloro-1,2,2-trifluoroethane)	14.806	45. Ethylene dibromide (1,2-Dibromoethane)	21.856	63. Naphthalene	30.135
17. <i>trans</i> -1,2-Dichloroethene	15.550	46. Tetrachloroethene	22.333	64. Hexachloro-1,3-butadiene	30.759
18. 1,1-Dichloroethane	15.770				
19. Methyl <i>tert</i> -butyl ether (MTBE)	15.852				
20. Vinyl acetate	15.953				
21. 2-Butanone (MEK)	16.189				
22. <i>cis</i> -1,2-Dichloroethene	16.651				
23. Hexane	16.883				
24. Ethyl acetate	16.898				
25. Chloroform	16.947				
26. Tetrahydrofuran	17.330				
27. 1,2-Dichloroethane	17.666				
28. 1,1,1-Trichloroethane	17.929				

did you know?

SilcoCan® and TO-Can® canisters are cleaned prior to shipping.

- Excellent stability for long-term storage of sulfur-containing volatile organic compounds.
- More accurate sampling.

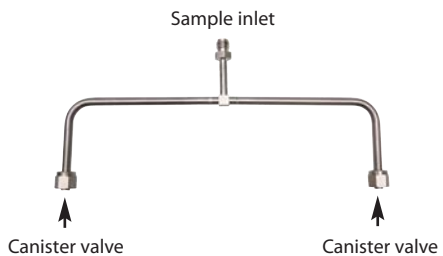


Column Rxi®-1ms, 60 m, 0.25 mm ID, 1.00 μ m (cat.# 13356); Sample TO-15 65 Component Mix (cat.# 34436); Diluent: Nitrogen; Conc.: 10 ppbv, 300 mL sample; Injection Liner: 0.75 mm Straight/SPME Liner (cat.# 21110); Inj. Temp.: 200 °C; Oven Oven Temp: -50 °C (hold 2.00 min.) to 210 °C at 9.00 °C/min. (hold 5.00 min.); Carrier Gas: He, constant flow; Flow Rate: 1.2 mL/min.; Linear Velocity: 27 cm/sec.; Detector MS; Mode: Scan; Transfer Line Temp.: 280 °C; Analyzer Type: Quadrupole; Source Temp.: 230 °C; Quad Temp.: 150 °C; Electron Energy: 1258.8 eV; Solvent Delay Time: 3 min.; Tune Type: PFTBA; Ionization Mode: EI; Scan Range: 29 - 280 amu; Scan Rate: 5.45 scans/sec.; Preconcentrator Nutech 8900DS; Trap 1 Settings Type/Sorbent: Nickel Tube; Cooling temp: -160 °C; Preheat temp: 20 °C; Preheat time: 5 sec; Desorb temp: 20 °C; Desorb flow: 80 mL/min; Desorb time: 240 sec; Bakeout temp: 180 °C; Flush flow: 100 mL/min; Flush time: 10 sec; Sweep flow: 0 mL/min; Sweep time: 0 sec; Trap 2 Settings Type/Sorbent: Tenax; Cooling temp: -20 °C; Desorb temp: 200 °C; Desorb time: 180 sec; Bakeout temp: 220 °C; Bakeout time: 240 sec; Cryofocuser Cooling temp: 200 °C; Desorb temp: 200 °C; Inject time: 60 sec; Instrument HP6890 GC & 5973 MSD

Dual Canister Sampling Manifold

(Stainless Steel & Siltek® Treated)

- Duplicate sampling with all size canisters using 1 or 2 flow controllers.
- Precise dimensions (9.5" wide x 3.5" high) provide accurate splitting of sample between two canisters.
- One-piece design means fewer leaks.
- Thick walled stainless steel tubing is rugged enough for field use.
- 1/4" compression connections.



Description	Stainless Steel cat.#	Siltek Treated cat.#
Dual Canister Sampling Manifold	24998	24999

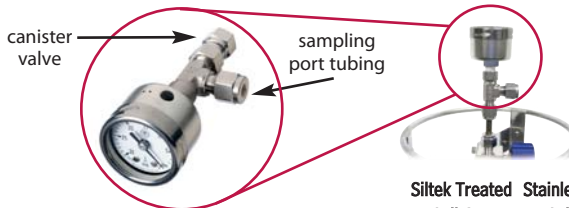
Note: Do not use the DCSM as a handle to pick up 2 canisters!

Passive Air Sampling Kits—Soil Gas

(Stainless Steel & Siltek® Treated)

Assembled sampler includes:

- Stainless steel tee with orifice.
- 1 1/2" vacuum gauge (-30" Hg to 0" Hg).
- 2 µm frit filter for insertion into 1/4" compression sample inlet.
- 1/4" port connector to canister valve.



Sampling Time for for 6 L Canister*	Flow	Orifice Size	Siltek Treated	Stainless Steel
			Soil Gas Sampler Kit cat.#	Soil Gas Sampler Kit cat.#
20 min.	210 mL/min.	0.0065"	22935	22930
30 min.	150 mL/min.	0.0055"	22936	22931
1 hr.	80 mL/min.	0.0040"	22937	22932
4 hr.	19 mL/min.	0.0020"	22938	22933
10 hr.	6 mL/min.	0.0014"	22939	22934

*Air sampling canisters sold separately.

Customer Innovations! Avoid Resampling Soil Vapors



The primary challenge in vapor intrusion monitoring is distinguishing vapor intrusion from other sources of exposure. In order to establish that VOCs are from soil vapor, rather than from the surrounding environment, sampling systems must be tested with tracer compounds like helium and shown to be properly sealed. Sample collection system integrity can be demonstrated by including the tracer gas in the list of target analytes reported; however, if high levels are found, the sample is rejected and costly resampling may result.

Centek Laboratories pioneered a technique for detecting tracer gas in the field (see photo). This cost-effective alternative to lab analysis assures the integrity of the sampling system before sampling begins. The technique includes using a Restek Leak Detector (cat.# 22839) to accurately screen the helium tracer gas at the sample inlet at concentrations of 10%, the level at which sample port resealing is required. This reduces resampling and lab analysis costs, and also minimizes equipment costs since the Restek Leak Detector is just a fraction of the cost of other portable field devices.

This innovative technique for real-time detection of helium tracer gas in the field using a Restek Leak Detector is a simple, inexpensive way to minimize resampling by establishing system integrity prior to sample collection. Centek's innovative technique is effective and has been included in the New York State Department of Health method [1].

References

[1] New York State Department of Health, October, 2006, Guidance for Evaluating Soil Vapor Intrusion in the State of New York, http://www.nyhealth.gov/environmental/investigations/soil_gas/svi_guidance/docs/svi_main.pdf (accessed August 27, 2010).

Photos courtesy of Centek Laboratories, LLC

Restek Electronic Leak Detector

Backed by a 1-year warranty, the new Restek Leak Detector sets an industry standard for performance and affordability in hand-held leak detectors.

Features & benefits include:

- New ergonomic, hand-held design.
- Rugged side grips for added durability.
- Longer lasting battery, up to 6 hours of continuous use.
- A convenient carrying and storage case.
- Easy to clean probe assembly.



Leak Detector Facts

Detectable gases: helium, nitrogen, argon, carbon dioxide, hydrogen*
 Battery: Rechargeable Ni-MH internal battery pack (6 hours normal operation)
 Operating Temperature Range: 32°-120°F (0°-48°C)
 Humidity Range: 0-97%
 Warranty: one year
 Certifications: CE, Ex, Japan
 Compliance: WEEE, RoHS

Description	qty.	cat.#
Leak Detector with Hard-Sided Carrying Case and Universal Charger Set (US, UK, European, Australian)	ea.	22839
Leak Detector Routine Maintenance Review**	ea.	22839-R
Soft-Side Storage Case	ea.	22657
Small Probe Adaptor	ea.	22658

Avoid using liquid leak detectors on a GC! Liquids can be drawn into the system.

*Caution: The Restek Electronic Leak Detector is designed to detect trace amounts of hydrogen in a noncombustible environment. It is NOT designed for determining leaks in a combustible environment. A combustible gas detector should be used for determining combustible gas leaks under any condition. The Restek Electronic Leak Detector may be used for determining trace amounts of hydrogen in a GC environment only.
 **Routine maintenance includes inspection of the probe tip, internal/external tubing and a battery replacement.

Hot Topic! Goodbye Tedlar®—Hello ALTEF!

As a result of DuPont's supply of Tedlar® material being diverted to the solar energy market exclusively, we will be unable to source Tedlar® gas sampling bags once our current inventory is exhausted. To address this change in the market, we are introducing a new line of gas sampling bags, known as ALTEF bags, which have been shown to be an excellent alternative. ALTEF bags have many of the desired characteristics of Tedlar® bags, but are readily available and considerably less expensive. Free samples will be available over the next few months. **Compare and switch to ALTEF bags today!**

	ALTEF	Tedlar
Composition	fluoropolymer film	polyvinyl fluoride (PVF) polymer resin
Thickness	0.003"	0.002"
Tensile Strength	6,100 psi	8,000 psi
Max. Operating Temp	150 °C	204 °C
Specific Gravity	1.78	1.7
Oxygen Permeability	58 cc/m ² x d	50 cc/m ² x d
Water Vapor Permeability	12-15 g/m ² x d	9-57 g/m ² x d
CO₂ Permeability	172 cc/m ² x d	172 cc/m ² x d

ALTEF Gas Sampling Bags

- Excellent low-cost alternative to Tedlar® bags for collection of most VOCs.
- Very low VOC and sulfur background compared to Tedlar® bags.
- Not recommended for ketones, acetates, hydrogen sulfide, or permanent gases.
- Durable PVDF film is resistant to abrasion and chemicals, including most acids and organic compounds.
- Contain no additives, fillers, or pigments.



Description	Size	qty.	cat.#
0.5L	6" x 6"	10-pk.	22958
1L	7" x 7"	10-pk.	22959
3L	10" x 10"	10-pk.	22960
5L	12" x 12"	10-pk.	22961
10L	12" x 22"	10-pk.	22962
25L	18" x 24"	5-pk.	22963

PATENTS & TRADEMARKS

Restek patents and trademarks are the property of Restek Corporation. Other trademarks appearing in Restek literature or on its website are the property of their respective owners.

Now Available!

Free Literature! Request your free copy from

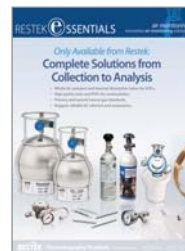
www.restek.com



A Guide to Whole Air Canister Sampling
(cat.# EVTG1073)



Gas Sampling Bags
(cat.# EVFL1335)



Restek Essentials – Air Monitoring
(cat.# EVFL1310)

Lit. Cat.# GNFL1337

© 2011 Restek Corporation.

Restek U.S. • 110 Benner Circle • Bellefonte, PA 16823 • 814-353-1300 • 800-356-1688 • fax: 814-353-1309 • www.restek.com

Restek France • phone: +33 (0)1 60 78 32 10 • fax: +33 (0)1 60 78 70 90 • e-mail: restek@restekfrance.fr

Restek GmbH • phone: +49 (0)6172 2797 0 • fax: +49 (0)6172 2797 77 • e-mail: info@restekgmbh.de

Restek Ireland • phone: +44 (0)2890 814576 • fax: +44 (0)2890 814576 • e-mail: restekireland@aol.com

Restek Japan • phone: +81 (3)6459 0025 • fax: +81 (3)6459 0025 • e-mail: ryosei.kanaguchi@restek.com

Thames Restek U.K. LTD • phone: +44 (0)1494 563377 • fax: +44 (0)1494 564990 • e-mail: sales@thamesrestek.co.uk

ISO 9001:2008
cert.# FM80397