Compendium of Methods for the Determination of Toxic Organic Compounds in Air (TO)

MIXES AND SOLUTIONS	COMPOSITION	QTY.	CAT. NO.	PRICE
TO-1 METHOD DESCRIPTION: VOLATILE ORGANIC COMPOUNDS				
EPA TO-1 Toxic Organics Mix 1A	9 analytes, 2mg/mL each in methanol n-Heptane, 1-Heptene, Benzene, Toluene, Ethylbenzene, Isopropylbenzene (Cumene), o-Xylene, m-Xylene, p-Xylene	1mL	48896	
EPA TO-1 Toxic Organics Mix 1B	14 analytes, 2mg/mL each in methanol Allyl chloride, Acrylonitrile, Chloroform, 1,2-Dichloroethane, 1,1,1-Trichloroethane, Carbon tetrachloride, 1,2-Dichloropropane, Trichloroethylene, 1,3-Dichloropropane, Ethylene dibromide, Bromoform, Tetrachloroethylene, Chlorobenzene, Bromobenzene	1mL	48897	
TO-2 METHOD DESCRIPTION: VOLATILE ORGANIC COMPOUNDS				
EPA TO-2 Toxic Organics Mix 2A	3 analytes, 2mg/mL each in methanol Methylene chloride, Vinyl chloride, Vinylidene chloride	1mL	48898	
TO-4 / TO-10 METHOD DESCRIPTION: ORGANOCHLORINE PESTICIDES BY CAPILLARY GC/ECD				
EPA Pesticide Mix	16 analytes at indicated concentrations in methanol:methylene chloride (98:2) Aldrin, 10µg/mL; α-BHC, 10µg/mL; β-BHC, 10µg/mL; γ-BHC (Lindane), 10µg/mL; δ-BHC, 10µg/mL; 4,4'-DDD, 60µg/mL; 4,4'-DDE, 20µg/mL; 4,4'-DDT, 60µg/mL; Dieldrin, 20µg/mL; Endosulfan I, 20µg/mL; Endosulfan II, 20µg/mL; Endosulfan sulfate, 60µg/mL; Endrin, 20µg/mL; Endrin aldehyde, 60µg/mL; Heptachlor, 10µg/mL; Heptachlor epoxide isomer B), 10µg/mL	1mL	48858-U	
TO-5 / TO-11 METHOD DESCRIPTION: ALDEHYDES AND KETONES BY HPLC/UV				
TO11/IP-6A Aldehyde/ Ketone-DNPH Mix	15 analytes, 15µg/mL each (aldehyde equivalent) in acetonitrile Acetaldehyde-2,4-DNPH; Acrolein-2,4-DNPH; Acetone-2,4-DNPH; Benzaldehyde-2,4-DNPH; Butyraldehyde-2,4-DNPH; Crotonaldehyde-2,4-DNPH; 2,5-Dimethylbenzaldehyde-2,4-DNPH; Formaldehyde-2,4-DNPH; Hexaldehyde-2,4-DNPH; Isovaleraldehyde-2,4-DNPH; Propionaldehyde-2,4-DNPH; Propionaldehyde-2,4-DNPH; m-Tolualdehyde-2,4-DNPH; o-Tolualdehyde-2,4-DNPH; p-Tolualdehyde-2,4-DNPH; Valeraldehyde-2,4-DNPH	1mL	47285-U	
TO-7 METHOD DESCRIPTION: N-NITROSODIMETHYLAMINE BY CAPILLARY GC/MS				
N-Nitrosodimethylamine	Neat	100mg	48552	
	200µg/mL in methanol	1mL	48670	
	5000µg/mL in methanol	1mL	40059	
TO-8 METHOD DESCRIPTION: CRESOL AND PHENOL BY HPLC/UV/EC/FI				
o-Cresol	5000µg/mL in methanol	1mL	40250-U	
m-Cresol	5000µg/mL in methanol	1mL	40251-U	
p-Cresol	5000µg/mL in methanol	1mL	40252-U	
Phenol	5000µg/mL in methanol	1mL	40063	
TO-13 METHOD DESCRIPTION: POLYNUCLEAR AROMATIC HYDROCARBONS BY GC/FID AND HPLC/UV				
TCL Polynuclear Aromatic Hydrocarbons Mix	16 analytes at indicated concentrations in acetonitrile:methanol (90:10) Acenaphthene, 1000µg/mL; Acenaphthylene, 500µg/mL; Anthracene, 20µg/mL; Benzo(a)anthracene, 50µg/mL; Benzo(b)fluoranthene, 20µg/mL; Benzo(k)fluoranthene, 20µg/mL; Benzo(ghi)perylene, 80µg/mL; Benzo(a)pyrene,50µg/mL; Chrysene, 50µg/mL; Dibenzo(a,h)anthracene, 200µg/mL; Fluoranthene, 50µg/mL; Fluorene, 100µg/mL; Indeno(1,2,3-cd)pyrene, 50µg/mL; Naphthalene, 500µg/mL; Phenanthrene, 40µg/mL; Pyrene, 100µg/mL	1mL	49156	
EPA 610 Polynuclear Aromatic Hydrocarbons Mixture SS	16 analytes at indicated concentrations in methanol:methylene chloride (50:50) Acenaphthene, 1000µg/mL; Acenaphthylene, 2000µg/mL; Anthracene, 100µg/mL; Benzo(a)anthracene, 100µg/mL; Benzo(a)pyrene, 100µg/mL; Benzo(b)fluoranthene, 200µg/mL; Benzo(k)fluoranthene, 100µg/mL; Benzo(ghi)perylene, 200µg/mL; Chrysene, 100µg/mL; Dibenzo(a,h)anthracene, 200µg/mL; Fluoranthene, 200µg/mL; Fluorene, 200µg/mL; Indeno(1,2,3-cd)pyrene, 100µg/mL; Naphthalene, 1000µg/mL; Phenanthrene, 100µg/mL; Pyrene, 100µg/mL	1mL 1mL	48743 4S8743	

SS Separate Source standards. Prepared from independently sourced raw materials and quality controlled independently.

Air Monitoring Standards
US EPA TO-14 Method

Air Monitoring Standards in Gas

TO-14 Method description: SUMA Canister Sampling with GC/MS Analysis of Volatile Organics in Ambient Air

Scott TO-14 gas blends are packaged in SCOTTY 104 high pressure, transportable, laboratory-size cylinders. A SCOTTY 104 cylinder measures only 12¼" high and 3¼" in diameter (31cm x 8.3cm), but contains 104 liters of gas at 1800psi – enough gas to deliver adequate calibration for 80 or more uses. Each cylinder is equipped with CGA 110/180 fittings, to plumb directly to your sampling system or through an appropriate regulator.

Where available, the components in Scott TO-14 gas calibration blends are traceable to NIST reference mixtures (NIST SRM 1804). All are certified for superior stability and accuracy. Shelf life: 1 year

MIXES AND SOLUTIONS	COMPOSITION	QTY.	CAT.NO.	PRICE
TO-14 Calibration Mix 1	39 analytes, 100ppb each in nitrogen in a SCOTTY 104 cylinder, 1800psig	104 liters	41900-U	
	39 analytes, 1ppm each in nitrogen in a SCOTTY 104 cylinder, 1800psig	104 liters	509981	
	Benzene, Bromomethane, Carbon tetrachloride, Chlorobenzene, Chloroform, Chloromethane, 1,2-Dibromoethane, 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,1-Dichloroethene, cis-1,2-Dichloroethene, 1,2-Dichloropropane, cis-1,3-Dichloropropene, trans-1,3-Dichloropropene, Ethyl chloride, Ethylbenzene, Halocarbon 12, Halocarbon 11, Halocarbon 113, Halocarbon 114, Hexachloro-1,3-butadiene, Methylene chloride, Styrene, 1,1,2,2-Tetrachloroethane, Tetrachloroethylene, Toluene, 1,2,4-Trichlorobenzene, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, Trichloroethene, 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, Vinyl chloride, m-Xylene, o-Xylene, p-Xylene			
TO-14 Aromatics Subset Mix	14 analytes, 100ppb each in nitrogen in a SCOTTY 104 cylinder, 1800psig	104 liters	41901	
	Benzene, Chlorobenzene, 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Ethylbenzene, Styrene, Toluene, 1,2,4-Trichlorobenzene, 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, m-Xylene, o-Xylene, p-Xylene			
TO-14 Chlorinated Hydrocarbons Subset Mix	19 analytes, 100ppb each in nitrogen in a SCOTTY 104 cylinder, 1800psig	104 liters	41902	
	Carbon tetrachloride, Chloroform, Chloromethane, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,1-Dichloroethene, cis-1,2-Dichloroethene, 1,2-Dichloropropane, cis-1,3-Dichloropropene, trans-1,3-Dichloropropene, Ethyl chloride, Hexachloro-1,3-butadiene, Methylene chloride, Tetrachloroethylene, 1,1,2,2-Tetrachloroethane, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, Trichloroethene, Vinyl chloride			
TO-14 CFC/HCFC Subset Mix	4 analytes, 100ppb each in nitrogen in a SCOTTY 104 cylinder, 1800psig	104 liters	41903	
	Halocarbon 11, Halocarbon 113, Halocarbon 114			
TO-14 Reactive Subset Mix	3 analytes, 100ppb each in nitrogen in a SCOTTY 104 cylinder, 1800psig	104 liters	41911	
	1,3-Butadiene, 3-Chloropropene, 4-Ethyltoluene			
TO-14 GC/MS Tuning Standard Bromofluorobenzene	2ppm in nitrogen in a SCOTTY 104 cylinder, 1800psig	104 liters	41913	
JHAP-9 Mix*	9 analytes, 1ppm each in nitrogen in a SCOTTY 104 cylinder, 1800psig	104 liters	501123	
	9 analytes, 100ppb each in nitrogen in a SCOTTY 104 cylinder, 1800psig	104 liters	507970	
	Acrylonitrile, Benzene, 1,3-Butadiene, Chloroform, 1,2-Dichloroethane, Methylene chloride, Tetrachloroethylene, Trichloroethylene, Vinyl chloride			
JHAP-43 Mix	43 analytes, 1ppm each in nitrogen in a SCOTTY 104 cylinder, 1800psig	104 liters	500429	
	43 analytes, 100ppb each in nitrogen in a SCOTTY 104 cylinder, 1800psig	104 liters	500011	
	Acrylonitrile, Benzene, Bromomethane, 1,3-Butadiene, Carbon tetrachloride, Chlorobenzene, Chloroform, Chloromethane, 3-Chloropropylene (Allyl chloride), 1,2-Dibromoethane, 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,1-Dichloroethene, cis-1,2-Dichloroethene, 1,2-Dichloropropane, cis-1,3-Dichloropropene, trans-1,3-Dichloropropene, Ethylbenzene, Ethyl chloride, 4-Ethyltoluene, Halocarbon 11, Halocarbon 113, Halocarbon 114, Halocarbon 12, Hexachloro-1,3-butadiene, Methylene chloride, Styrene, 1,1,2,2-Tetrachloroethane, Tetrachloroethylene, Toluene, 1,2,4-Trichlorobenzene, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, Trichloroethene, 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, Vinyl chloride, m-Xylene, o-Xylene, p-Xylene			
BTEX Gas Mix	6 analytes, 10ppm each in nitrogen in a SCOTTY 48 cylinder, 300psi	48 liters	501883	
	Benzene, Ethylbenzene, Toluene, m-Xylene, o-Xylene, p-Xylene			

*This mix has been made available because of the renewal of the Japanese Air Pollution Prevention Law (effective April 1, 1997)

Air Monitoring Standards
US EPA TO-14 Method, SCOTTY 104 Accessories

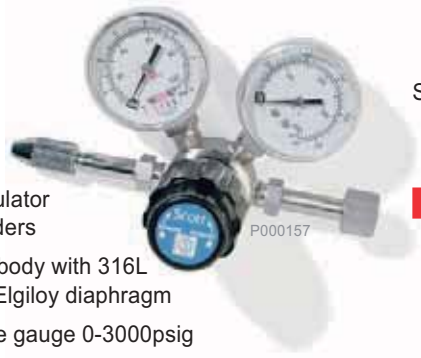
P000908

Pressure Regulator for Use with TO-14 Cylinders

Aluminum body with stainless steel diaphragm

- Inlet pressure rating 0-2000psig
- Delivery pressure 1-25psig
- CGA 180 / 1/8-inch NPT (F)
- Supplied with 1/8-inch Swagelok NPT to 1/8-inch tube

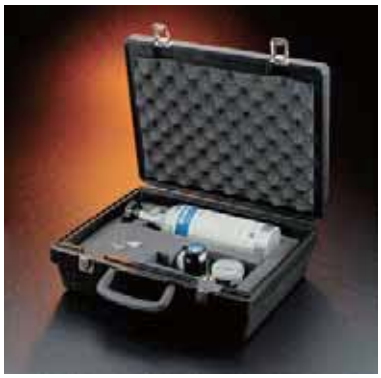
DESCRIPTION	CAT. NO.	PRICE
Model 26 Pressure Regulator		
with gauge	41910-U	
without gauge	41907	
High Pressure Gauge only		
0-2000psi	41908	


P000157

Model 6 SCOTTY Regulator for SCOTTY 104 Cylinders

- Stainless steel body with 316L stainless steel/Elgiloy diaphragm
- Supply pressure gauge 0-3000psig
- Delivery pressure range 0-100psig
- CGA 110/180 connector
- Regulator supplied with 1/8" tube connector or syringe adapter

DESCRIPTION	CAT. NO.	PRICE
with connector	509965	
with syringe adapter	501115	


E00025

HPD Carrying Case with TO-14 Calibration Mix #1

DESCRIPTION	CAT. NO.	PRICE
Case with TO-14 Calibration Mix #1		
at 100ppb (41900-U)	507881	
at 1ppm (509981)	507938	
at 100ppb (41900-U) and Model 6 regulator with connector (509965)	507946	
at 1ppm (509981) and Model 6 regulator with syringe adapter (501115)	507954	
at 1ppm (509981) and Model 6 regulator with connector (509965)	507962	
Case only	509973	


P000159

Stand for SCOTTY 104 Cylinder

Ensures your SCOTTY 104 cylinder will be stable on a bench-top or other surface.

DESCRIPTION	CAT. NO.	PRICE
Stand	41909	