



## Capabilities comparison of *ALTEF* and Multi-Layer Foil Gas Sampling Bags Based on commonly sampled chemical compounds

### Sulfur Compounds

Compound	Recommended sampling bag material	
	<i>ALTEF</i>	Multi-Layer Foil
n-Butyl mercaptan	Red	Red
tert-Butyl mercaptan	Dark Green	Dark Green
Carbon disulfide†	Light Green	Red
Carbonyl sulfide	Dark Green	Dark Green
Diethyl disulfide	Red	Red
Diethyl sulfide†	Light Green	Red
Dimethyl disulfide	Red	Red
Dimethyl sulfide†	Light Green	Red
2,5-Dimethylthiophene	Red	Red
Ethyl mercaptan†	Light Green	Dark Green
Ethyl methyl sulfide†	Light Green	Red
2-Ethylthiophene	Red	Red
Hydrogen Sulfide	Red	Dark Green
Isobutyl mercaptan†	Light Green	Red
Isopropyl mercaptan†	Light Green	Dark Green
3-Methylthiophene	Red	Red
Methyl mercaptan†	Light Green	Dark Green
n-Propyl mercaptan†	Light Green	Dark Green
Tetrahydrothiophene	Red	Red
Thiophene†	Light Green	Red

Color Code:

Red: Not suitable

Dark Green: Recommended

Light Green: Suitable when used as recommended

† - *ALTEF* bags can be used to sample these sulfur compounds if sample is analyzed within 24 hours.

†† - Multi-Layer Foil bags can be used to sample most VOCs but are not recommended for collecting low ppm to high ppb VOCs due to background levels from bag materials.

*ALTEF* bags are recommended for most VOCs, if analyzed within 48 hours, and for many sulfur compounds, if analyzed within 24 hours.

Multi-Layer Foil bags are recommended for Methane (CH<sub>4</sub>), Hydrogen Sulfide (H<sub>2</sub>S), Carbon Monoxide (CO), and Carbon Dioxide (CO<sub>2</sub>), if analyzed within 48 hours.

### VOCs

Compound	Recommended sampling bag material	
	<i>ALTEF</i>	Multi-Layer Foil††
Acetone	Red	Light Green
Acetonitrile	Red	Light Green
Acrylonitrile	Red	Light Green
Allyl chloride	Dark Green	Light Green
Benzene	Dark Green	Light Green
Bromoethane	Dark Green	Light Green
Butyl Acetate	Red	Light Green
Carbon tetrachloride	Dark Green	Light Green
Chloroform	Dark Green	Light Green
Carbon dioxide	Dark Green	Light Green
Carbon monoxide	Dark Green	Light Green
1,2-Dichloroethane	Dark Green	Light Green
Dichloropropane	Dark Green	Light Green
Ethyl acetate	Red	Light Green
Ethylene	Dark Green	Light Green
Heptane	Dark Green	Light Green
Hexane	Dark Green	Light Green
Isooctane	Dark Green	Light Green
Isopropyl alcohol	Dark Green	Light Green
Methane	Dark Green	Light Green
Methyl ethyl ketone	Red	Light Green
Methylene chloride	Dark Green	Light Green
Methyl tert-butyl ether	Dark Green	Light Green
Octane	Dark Green	Light Green
Perchloroethylene	Dark Green	Light Green
Propylene	Dark Green	Light Green
Propylene oxide	Dark Green	Light Green
Tetrahydrofuran	Dark Green	Light Green
Toluene	Red	Light Green
1,1,1-Trichloroethane	Dark Green	Light Green
Trichloroethylene	Dark Green	Light Green
Vinylidene chloride	Dark Green	Light Green
p-Xylene	Red	Light Green