Choosing the best film for your gas sampling needs

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| ALTEF        | • Developed specifically for gas sampling applications  
               • Chemically inert to most acids, aliphatic and aromatic organic compounds, chlorinated solvents, and alcohols  
               • Max. operating temp: 302°F  
               • ALTEF bags are made of .003” thick film vs. competitor’s bags of .002” thick | • Economical    
               • Readily available  
               • Suitable for sampling VOC’s and sulfur compounds  
               • Low VOC background  
               • Longer sample storage times than most other bag materials  
               • Does not exhibit background levels of DMAC or phenol, as Tedlar® does | • More permeable than Tedlar® (.003” thickness is recommended versus .002” for Tedlar®)  
               • Not suitable for sampling ketones and esters in high concentrations (>30%)  
               • Lower resistance to UV light than Tedlar® |
| Multi-Layer Foil | • Multiple layers provide low permeability and a moisture barrier  
                       • Opaqueness protects samples from ultraviolet light | • The only bag material that adequately holds H₂S for long periods (>5 to 7 days)  
               • Ideal for collecting low molecular weight compounds  
               • Sample stability for up to 5 days for most compounds  
               • Good VOC stability  
               • Readily available | • Not suitable for collecting low ppm to high ppb VOC’s |
| Tedlar®      | • Low gas permeation levels  
               • High tensile strength  
               • Withstands temperatures up to 400°F  
               • Unaffected by the chemical components of gases commonly sampled, like carbon monoxide, sulfur dioxide, hydrogen sulfide, radon and mercaptans | • Less permeable than FEP, PFA and TFM  
               • Bags resist puncture in the field  
               • Less expensive than FEP and PFA film  
               • Recommended in many EPA testing methods | • Exhibits background levels of DMAC and phenol  
               • Not readily available  
               • Substantial recent price increases due to global shortage |
| FEP          | • One of the most chemically inert materials available for making gas sampling bags | • Works well in extreme temperatures ranging from -400°F to 400°F; allowing it to be used in all stack sampling conditions  
               • Heavier gauge (.005") film is resistant to most severe corrosives as well as tolerates applications involving rough handling or difficult service conditions  
               • Less expensive than PFA  
               • Readily available | • Poor storage stability for most VOC’s and sulfur compounds  
               • More permeable than Tedlar®, ALTEF, and Multi-Layer Foil bags  
               • More expensive than Tedlar®, ALTEF, Multi-Layer Foil bags |
| PFA          | • Highest purity, most chemically inert film available for making gas sampling bags  
               • Widest temperature range; from −420°F to 500°F | • Not affected by the most corrosive chemicals, such as HF, Nitric, HCL and Sulfuric Acids  
               • Readily available | • The most expensive film option for gas sampling bags  
               • Much more permeable than Tedlar® |

Tedlar® is a registered trademark of E.I DuPont

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