

Supel™-Inert Foil Gas Sampling Bags with Thermogreen® LB-2 Septa



P001383

Supel-Inert Foil Gas Sampling Bags with Thermogreen LB-2 Septa are ideal for sampling low molecular weight compounds such as carbon monoxide (CO), carbon dioxide (CO₂), and permanent gases.

Key Features and Benefits:

- The Thermogreen polymer has the industry's lowest bleed preventing sample contamination from the septum. Thermogreen is proprietary to Supelco.
- Multilayer foil composition composed of two outer layers of aluminum film providing great barrier to gases permeating through the walls of the bag.
- Chemically inert with moisture and light protection.
- Not recommended for low ppm VOC's due to background levels.

Chemical Composition (5 layers)

1. 0.002" Polyethylene
2. 0.0003" Aluminum Foil
3. Polyethylene
4. Aluminum (metalized)
5. 60 Gauge Nylon

Physical Properties of Supel-Inert Foil Gas Sampling Bags

Tensile Strength:	24 lbs/in
Specific Gravity:	1.09 g/mL
Max. Operating Temp.:	87 °C (188.6 °F)
Permeability:	Carbon Dioxide: 0.0005 cc/100 in ² /day
	Oxygen: 0.0006 g/100 in ² /day
	Water Vapor: 0.0006 g/m ² /day

Important Considerations & Recommendation for Proper Gas Bag Sampling

- **Avoid Contamination During Sampling**
 - **Tubing** - Use quality PTFE tubing when sampling. Minimize the use of soft rubber (such as Tygon®) tubing in the sampling train. If it is necessary to use this tubing, use the smallest piece possible to make the connections needed. *Flush longer lines with clean air before use.*
 - **Sampler** - Use *negative pressure sampler* (such as the Model 1062 bag sampler) to fill the bag rather than a typical air sampling pump. Any material that your sample is exposed to before it's collected in the bag can either adsorb analytes and/or off-gas contaminants into the sample. When using a typical air sampling pump ensure sufficient flush/purge with clean air to reduce risk of cross-contamination
 - If sampling at different locations with different analyte concentrations, try to align sampling from lowest to highest contaminated site. Purge system with clean air in between. *For high concentrations consider to replace tubing.*
- **Use & Handling**
 - **Do not use bags above the max operating temperature of 87 °C (188.6 °F)**
 - **Properly secure valve when opening / closing** – read valve operating instructions prior to use.
 - **Never fill the bags to the point where the film is stretched tight. Doing so could cause the bag to develop a leak.**
 - **Allow room for expansion** - The physical dimensions of the bags are designed to accept the advertised volume without overfilling (taut bag) to allow for gas expansion after sampling. During shipping (e.g. by air) & storage, a change in ambient pressure and temperature result in change of sample volume (decrease or increase). Leave room in the bag to allow for sample expansion.
 - **Shipping** - Store and ship Supel-Inert Foil gas sampling bags with valves facing upward in a well-constructed/sturdy box, and at room temperature; make sure bags are properly labeled – *it is recommend to label the bag prior to sampling and inflation. Air shipments: Even pressurized cabins show a decline in atmospheric pressure (~ 20 kPa). Consider this when filling the bag and accommodate for the resulting volume/sample expansion to prevent bag leakage rupture and/or sample loss.*
 - **Dangerous Compounds** - Use caution when sampling in hazardous atmospheres. *Please consult your laboratory's Safety & Hazard Handling Procedures and Material Safety Datasheets (MSDS).*

Methods Suitability/Applications

Method /Application	Compounds
OSHA ID-172	Carbon Dioxide in Workplace Atmospheres
OSHA ID-210	Carbon Monoxide
NIOSH 6603	Carbon Dioxide
Landfill / Biogases (LFG)	Hydrogen, Hydrogen Sulfide, Methane, Nitric Oxide, Oxygen
Calibration Mixes	Preparation of Standards/Gas Mixes

General Sampling Instructions

Preparation

Note: For low background applications it might be advisable to flush the bag three to five times with purified air or nitrogen prior to use. However, this is not necessary for all applications.

1. Verify pump is properly prepared (e.g. purged/cleaned) and ready for use.
2. Verify tubing is at the shortest length possible; purge longer lengths with purified air.
3. Prepare labels with required laboratory information and affix to bag.

Sampling

4. Purge sample port.
5. Attach new inert tubing from the sample port or probe to a low flow rate pump; purge tubing.
6. Attach additional inert tubing from the pump outlet to the Supel-Inert foil bag PLV or SCV valve; open valve.
7. Collect sample according to method requirements; do not overfill bag; do not expose the bag to temperatures above 87 °C.
8. Properly close valve by hand-tightening (follow valve operating instructions).

Shipping and Storage

9. Prepare for shipment as required by your laboratory; make sure bags are placed in a sturdy box. Prevent exposure to excessive sunlight.
10. Keep shipping time as short as possible (overnight). Ensure method holding times are not exceeded.

Ordering Information

Supel-Inert Foil Gas Sampling Bags with Thermogreen LB-2 Septa



Screw-Cap Valve



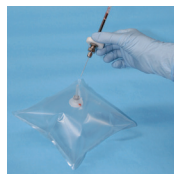
Push-Lock Valve

E001172,1171

Capacity	Nominal Dimensions	Cat. No.
Screw-Cap Valve (SCV)		
0.6L	6 x 6 in. (15.2 x 15.2 cm)	30279-U
1L	7 x 9 in. (17.8 x 22.9 cm)	30226-U
2L	9 x 11 in. (22.9 x 27.9 cm)	30227-U
5L	12 x 14 in. (30.5 x 35.6 cm)	30228-U
10L	12 x 21 in. (30.5 x 53.3 cm)	30229-U
Push-Lock Valve (PLV)		
0.6L	6 x 6 in. (15.2 x 15.2 cm)	30281-U
1L	7 x 9 in. (17.8 x 22.9 cm)	30237-U
2L	9 x 11 in. (22.9 x 27.9 cm)	30238-U
5L	12 x 14 in. (30.5 x 35.6 cm)	30239-U
10L	12 x 21 in. (30.5 x 53.3 cm)	30240-U

Accessories

Description	Qty.	Cat. No.
Barcode Labels	198	RAD190



E000991

Needle Sampling Kit for Thermal Desorption Tubes
1 29023-U
(For concentrating compounds from the Gas Sampling Bag onto an adsorbent tube)

Tubing

Description	Cat. No.
1/8" PTFE Tubing 50 ft length (0.125" O.D. x 0.063" I.D.)	58699
1/8" PTFE Tubing 50 ft length (0.125" O.D. x 0.085" I.D.)	20532
1/4" PTFE Tubing 25 ft length (0.250" O.D. x 0.228" I.D.)	20533

Field Samplers

(Battery charger not included)



E000129

Description	Cat. No.
Model 1060 Bag Sampler, Single 0.6L-2L Bags	24622-U
Model 1062 Bag Sampler, Single 0.6L-10L Bags	24623
Model 1063 Bag Sampler, Six 1L Bags	24647

Battery Charger

Description	Cat. No.
110V for Model 1060	24643
110V for Model 1062	24644
110V for Model 1063	24644
110V/240 Universal	24697-U

Trademarks

Supel, Thermogreen — Sigma-Aldrich Co. LLC
Tygon — Norton Co.