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**EMISSION MEASUREMENT CENTER**  
**APPROVED ALTERNATIVE METHOD (ALT-005)**

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**ACCEPTABILITY OF TEFLON™ BAGS**

Entropy, Inc. has developed a Teflon™ bag (patent approved). Entropy requested a decision from EPA concerning the acceptability of their Teflon™ bag as an alternative to the glass weighing dish in processing particulate samples. An alternative weighing unit must be approximately 250 ml in size, inert and tared easily.

The EPA believes that Entropy's Teflon™ bag meets these criteria and can be used in place of the glass weighing dish. The Teflon™ bag is also transparent, rigid and shaped like a beaker. The bag provides an unbreakable storage container that is easily packed, stored, and/or shipped.

However, like the glass beaker, a static charge has been associated with the use of the Teflon™ bag. Prior to using the bag, it is important that any static charge associated with the bag be dissipated. If the bag is charged with static electricity, the charge may interact electrically with the charges of other objects in close proximity. The attraction or repulsion between a charged bag and an electronic weighing scale or balance can result in inconsistent weighings. The following procedures are recommended for static charge dissipation:

Static Charge Dissipation

To control the static charge, laboratory personnel should wear anti-static gloves and remain standing on a grounded floor mat throughout the weighing procedure.

If required, anti-static equipment may be installed in the laboratory. This equipment may include but is not limited to: a ceiling-mounted pulse DC ionizer; a grounded anti-static floor mat where personnel stand; a grounded anti-static bench mat where all weighing equipment is placed; and an ionization pulse gun with an associated compressed air cylinder.\*

Another possible and less expensive alternative is a Zerostat™ anti-static gun. However, the Zerostat™ is not as effective as the other recommended equipment and is more time-consuming.\*\*

Recommended Preparation Steps

1. Mark each bag (use a diamond-tipped marking tool or equivalent) with a unique identification code.
2. Wash each bag with a non-phosphate detergent, rinse with distilled water, then rinse with an appropriate solvent.
3. Use the ionizing pulse gun to neutralize the static charge of the balance pan and housing prior to weighing.
4. Use the ionization pulse gun to neutralize the static charge of each bag. Tare-weigh each Teflon™ bag, and record each code and corresponding weight.
5. The bags are weighed until a constant weight is achieved (i.e., two or three measurements to within 0.5 milligrams).

Recommended Weighing Procedures

1. Remove samples from the field container and transfer to a prepared bag.
2. If there is a large volume of solvent, the bag can be placed inside a 250ml beaker for additional support until the solvent has evaporated.
3. After desiccation and appropriate treatment of the sample, weigh the bags containing the sample residues.
4. When the samples are ready for storage, the top of the bag may be folded over, and fastened or pressed together and heat-sealed to archive the sample.
5. The bag may also be rolled into a small tube and surrounded with a rubber band for storage and/or shipment for additional analyses.

\* For information on ordering, contact: Richmond Technology, 3101 East Alejo Road, Palm Springs, CA 92262; (619) 325-3211 or Fax (619) 322-2073

\*\* Zerostat™: Available at most record stores. USA Distributor Discwasher, Patent No. 3997817.