



Operating Instructions

863 Valley View Road, Eighty Four, PA 15330 USA
Tel: 724-941-9701 Fax: 724-941-1369 e-mail: skctech@skcinc.com

Exhaled Breath Sample Bags 239 Series Sample Bags

SKC Exhaled Breath Sample Bags are ideal for collecting and storing human breath samples. The samples are subsequently analyzed for volatile organic compounds (VOCs) or volatile sulfur compounds (VSCs). Exhaled Breath Sample Bags are constructed of 4-ply low-background FlexFoil® PLUS material. The special PVC exhaled breath fitting allows easy sample collection. The polypropylene sample removal fitting facilitates sample removal by gas-tight syringe for GC analysis or by a pump through a detector tube for immediate quantitative results.

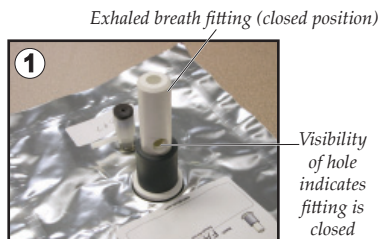
Guidelines for Bag Sampling

1. Long-term storage of samples in bags is not recommended.
2. SKC sample bags are designed for sampling air at atmospheric pressure only. Attempting to pressurize the bag can result in bag rupture and sample loss. Do not ship bag samples by air freight in non-pressurized cargo cabin. Bags can burst under such conditions.
3. All federal and state packaging and transporting regulations apply.
4. Failure to follow warnings and cautions voids any warranty.
5. Bag fittings are durable, but not intended for use as handles or hanging devices. This type of handling may damage the seal causing leakage. It is considered misuse and will void any warranty.
6. **Do NOT reuse sample bags.**

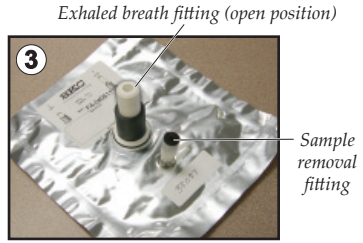
Sampling

- ❗ ***Wear gloves when handling the bag and fittings (photos are shown without gloves for clarity).***
- ❗ ***Before sampling, open and close exhaled breath fitting a couple of times to distribute fitting lubricant evenly.***

1. Ensure exhaled breath fitting is in the **closed position** (hole on side of fitting visible).
2. Clean exhaled breath fitting with isopropyl alcohol and allow to dry completely before sampling.

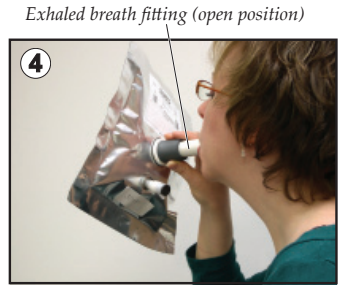


- Place bag on a flat surface. Place palm over exhaled breath fitting and press down firmly on fitting until it stops. The fitting is now open (hole on side of fitting **not** visible).



! *The sample removal fitting is shipped closed. It should remain closed until the sample is to be removed.*

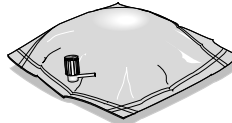
- Have test subject place lips on the exhaled breath fitting and blow **gently** into the bag. Collect the desired volume of sample.



! *Do not fill bag more than 80% of its maximum volume.*



Incorrect

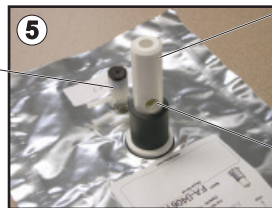


Correct

- Immediately** remove fitting from lips of test subject, **quickly** grip exhaled breath fitting at bottom of fitting (do **not** grip bag material), and twist and pull until hole in fitting appears above bottom part of fitting. The fitting is now closed (hole on side of fitting visible).



Sample removal fitting



- Replace bag(s) in original packaging and ship to a laboratory for analysis.

Removing the Sample from the Bag

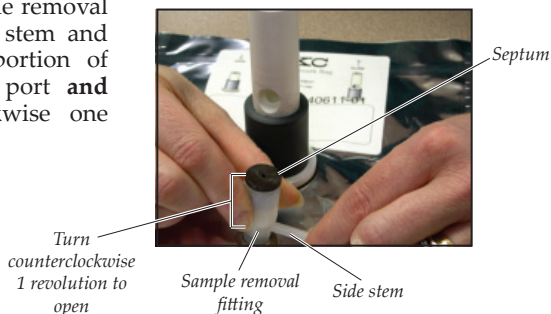
The sample can be removed from the bag using either of the following procedures. Select the procedure that best fits your application.

Procedure 1: Using a gas-tight syringe and needle, carefully insert the needle into the septum port in the center of the brown cap on the fitting and pierce the septum. Use the syringe to withdraw the sample. Analyze sample.

❗ **Do not allow the needle to puncture the bag material when piercing the septum.**

Procedure 2: Open the sample removal fitting by gripping the side stem and turning the entire upper portion of the fitting (brown syringe port and white section) counterclockwise one revolution.

❗ **Do not turn side stem.**



Using a short length of tubing, connect the side stem on the sample removal fitting to the inlet of an appropriate detector tube and the outlet of the detector tube to a low flow sample pump. Pull the sample through the detector tube and read results on tube.

Reference

Mochalski, P., Wzorek, B., Sliwka, I., and Amann, A., Suitability of Different Polymer Bags for Storage of Volatile Sulphur Compounds Relevant to Breath Analysis, *Journal of Chromatography B*, Vol. 877, Issue 3, Jan. 15, 2009, pp. 189-196, <http://dx.doi.org/10.1016/j.jchromb.2008.12.003>

Ordering

Description		Cat. No.
Exhaled Breath Bags	1-liter maximum capacity, pk/3	239-01
	3-liter maximum capacity, pk/3	239-03

Other SKC sample bags are available in FlexFoil PLUS, FluoroFilm, SamplePro® FlexFilm, and SamplePro PVDF with fittings made of stainless steel, polypropylene, or PTFE in sizes up to 100 liters. SKC also manufactures custom sample bags. Contact SKC at 724-941-9701 or skctech@skcinc.com

For FlexFoil PLUS stability data, visit www.skcinc.com/instructions/1805.pdf.

For more product information or assistance with applications, contact SKC Technical Service at 724-941-9701 or skctech@skcinc.com.

SKC Limited Warranty and Return Policy

SKC products are subject to the SKC Limited Warranty and Return Policy, which provides SKC's sole liability and the buyer's exclusive remedy. To view the complete SKC Limited Warranty and Return Policy, go to <http://www.skcinc.com/warranty.asp>.

www.skcinc.com