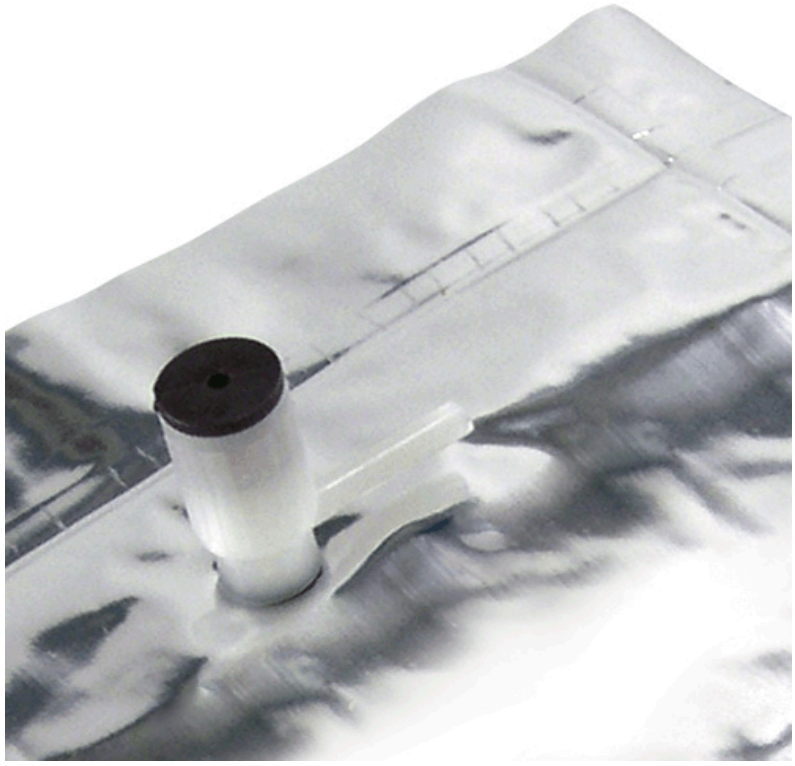
ANALYT MESSTECHNIK



INSTRUCTIONS FOR USE

SKC Air Sample Bags

How to choose the pump and bag, calibrate the flow rate, set up the sampling train, fill an SKC Tedlar, Standard FlexFoil or FlexFoil PLUS sample bag and send it to the laboratory.

AMTC-IN-0041

Rev. 2 · October 2026

About this document

An air sample bag holds a sample of air with the gases and vapours in it until a laboratory analyses it. These instructions show how to set up a sampling train with an SKC air sample bag — Tedlar, Standard FlexFoil or FlexFoil PLUS — and an air sampling pump, how to fill the bag and how to send it to the laboratory.

Product and supplied items (p. 5) says when bag sampling fits and how the bag fittings differ. Before use (p. 6) lists the equipment, explains what the pump must do, gives the rules that protect the sample and goes on through flow calibration, preparing the bag and setting up the sampling train. Procedure (p. 8) covers filling the bag, and After use and sample handling (p. 9) goes from the end of sampling to shipping.

These instructions give general information. It does not replace the analytical method you sample to, the regulations that apply to your work, or the operating instructions of the pump, the calibrator and the bag. For the instructions for each SKC bag fitting and the SKC sample bag stability report, ask Analyt-MTC.

Keep these instructions for the lifetime of the product. The current revision is on the product page at analyt-mtc.com.

How these instructions mark information

NOTICE

Practices not related to personal injury — damage to the product, the process or the sample.

Document information

Title	SKC Air Sample Bags — Instructions for use
Document number	AMTC-IN-0041
Revision	Rev. 2 — October 2026
Applies to	SKC Tedlar, Standard FlexFoil and FlexFoil PLUS sample bags with single or dual fittings
Language	English
Manufacturer	SKC Inc.

Revision history

Rev.	Date	Change
2	October 2026	Quality programme: new document type, number and identity pages.
1	October 2026	First issue.

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CHAPTER 1

Safety

Read the safety messages in this chapter before you use the bags. Every safety message in these instructions is a NOTICE: it protects the sample and the bag. Each message also appears at the step it belongs to.

Intended use

An SKC air sample bag holds one sample of air with the gases and vapours in it until a laboratory analyses it. Bag sampling suits gases and vapours above the detection limit of common analytical instruments, usually over a short time. A pump that can both pull and push air fills the bag through PTFE tubing.

Check that the bag film and fitting suit the compounds and the temperature range of the application; the operating instructions of each bag give its limits. Each bag is for one sample only. Unstable or highly reactive compounds, rubber or Tygon tubing and a bag filled beyond 80 % are outside the intended use.

Rules for every bag sample

NOTICE

- **Unstable and reactive compounds.** Do not use sample bags to collect unstable or highly reactive compounds.
- **No unpressurised air freight.** A large drop in barometric pressure can burst filled bags in an unpressurised cargo hold. Send filled bags by air only in a pressurised cargo hold.
- **Fill to 80 % at most.** Never fill a bag to more than 80 % of its maximum volume (see Figure 4-1 (p. 8)).
- **PTFE tubing only.** Connect the bag with PTFE tubing only. Never use rubber or Tygon tubing for bag sampling.
- **Single use.** SKC air sample bags are made for one sample only. Do not reuse a bag.

CHAPTER 2

Product and supplied items

When bag sampling fits

Bag sampling suits gases and vapours whose concentration lies above the detection limit of common analytical instruments. A bag sample usually runs for a short time and shows the peak airborne concentration. Where the chemical levels stay constant, several bag samples together can give a time-weighted average (TWA) exposure.

Choose the bag and fitting

Choose a bag film and fitting that suit the compounds you sample for and the temperature range of the application. Check the film against your compounds in the SKC sample bag stability report, and the temperature range in the operating instructions of the bag. Ask Analyt-MTC for both.

Every SKC sample bag comes with fittings. A tubing/valve flushes, fills and seals the bag; a syringe port with a PTFE-lined septum lets the laboratory draw the sample out.

Table 2-1. SKC bag fittings

Fitting	Ports
Single fitting, polypropylene	Tubing/valve and syringe port in one fitting, with one port for filling and a second port for taking the sample out.
Single fitting, PTFE or stainless steel	Tubing/valve and syringe port in one fitting, with one port for all functions.
Dual fittings	A tubing/valve fitting and a separate syringe-port fitting on the bag.

CHAPTER 3

Before use

What you need

1. **An air sampling pump** that reaches the method's flow rate with the sampling medium in line — for example an SKC Grab Air Sampler or an SKC Twin Port Pocket Pump. It must work as a suction sampler, pulling air in, and as a pressure sampler, pushing it out into the bag; check in its operating instructions that it does both.
2. **An airflow calibrator**, for example a Defender 717 Series primary standard calibrator.
3. **An SKC air sample bag** as the analytical method specifies, or one that suits the application.
4. **PTFE tubing** to connect the pump to the bag.

Rules for every bag sample

NOTICE

- **Unstable and reactive compounds.** Do not use sample bags to collect unstable or highly reactive compounds.
- **No unpressurised air freight.** A large drop in barometric pressure can burst filled bags in an unpressurised cargo hold. Send filled bags by air only in a pressurised cargo hold.
- **Fill to 80 % at most.** Never fill a bag to more than 80 % of its maximum volume (see Figure 4-1 (p. 8)).
- **PTFE tubing only.** Connect the bag with PTFE tubing only. Never use rubber or Tygon tubing for bag sampling.
- **Single use.** SKC air sample bags are made for one sample only. Do not reuse a bag.

1. Calibrate the flow rate

For a simple grab sample the flow rate does not matter, as long as the bag is not filled beyond 80 % of its maximum volume. If the analytical method specifies a flow rate, calibrate the pump to it with a primary standard calibrator:

1. Set up the pump as its operating instructions describe.
2. Connect the pump to the outlet (suction) port of the external calibrator with flexible tubing.
3. Let the pump run for 5 minutes.
4. Calibrate to the flow rate the method gives for the chemical of interest. The operating instructions of the pump and the calibrator describe the procedure.

2. Prepare the bag

1. Check that the bag film and fitting suit the compounds and the temperature range (see Choose the bag and fitting (p. 5)).
2. Rinse the bag with purified air or nitrogen, three times at the least.

3. Set up the sampling train

1. Push one end of a piece of PTFE tubing onto the tubing/valve fitting of the bag (Figure 3-1 (p. 7)).
2. Connect the other end of the tubing to the outlet port or outlet fitting of the pump. Use PTFE tubing only; never rubber or Tygon tubing.

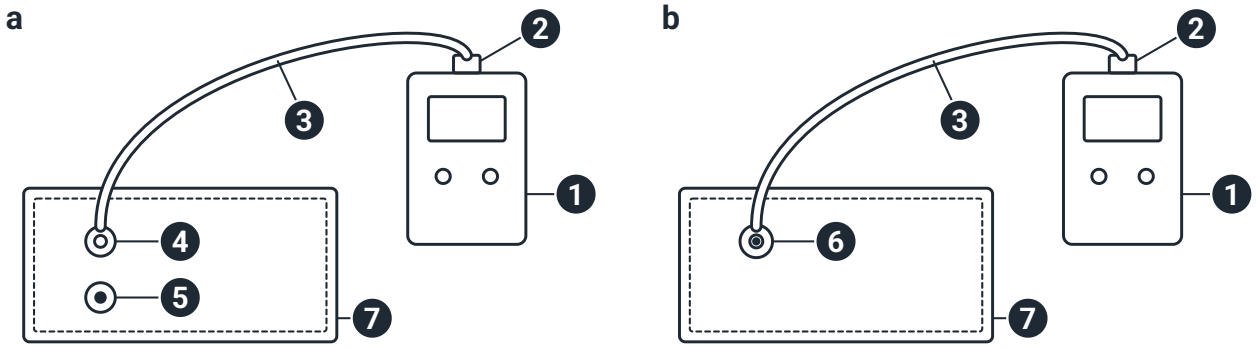


Figure 3-1. Sampling train. (a) Bag with dual fittings. (b) Bag with a single fitting. 1 Sample pump. 2 Outlet port. 3 PTFE tubing. 4 Tubing/valve fitting. 5 Syringe-port fitting. 6 Single fitting, tubing/valve and syringe port combined. 7 Sample bag.

CHAPTER 4

Procedure

One sample takes one new bag. Keep the operating instructions of the pump, the calibrator and the bag at hand: they show how to work the controls and the valve of your models.

4. Fill the bag

1. Open the valve on the bag fitting. The operating instructions of the bag show how.

   NOTICE

   Fill to 80 % at most. Never fill a bag to more than 80 % of its maximum volume (see Figure 4-1 (p. 8)).

2. Switch the pump on.
3. Write down the start time and any other sampling information.



Wrong: overfilled **Right:** correctly filled

Figure 4-1. How full to fill the bag.

CHAPTER 5

After use and sample handling

5. After sampling

1. At the end of the sampling period, switch the pump off.
2. Close the valve on the bag fitting and make sure it is sealed tight. The operating instructions of the bag show how.
3. Write down the end time.
4. Take the bag off the pump and record the remaining sampling information.

6. Send the bags to the laboratory

1. Pack the bags loosely with padding, so that nothing can puncture them in transit.
2. Do not send them by air unless the cargo hold is pressurised (see Rules for every bag sample (p. 6)). Ship them.

Disposal

Dispose of used bags and their packaging under local regulations.

CHAPTER 6

Service and contacts

Contact and support

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Before you call

Have the following at hand so that Analyt-MTC can help you quickly:

- the catalogue number and batch number on the bag label;
- the pump and calibrator you use;
- the compounds you sample for and the analytical method.

SKC Air Sample Bags are made by SKC. Analyt-MTC answers questions on SKC sample bags, pumps and calibrators, supplies the operating instructions for each bag fitting and the bag stability report, and takes orders under the SKC catalogue numbers. Warranty matters follow Analyt-MTC's terms of sale. Analyt-MTC's contact details are above and on the back cover.

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