

# AIR SAMPLING CANISTERS

## About community air sampling canisters

### What is an air sample canister?

Air sample canisters are portable, metal vessels that look similar to a small barbeque bottle. They are used to capture an air sample for analysis at a laboratory.

Air is evacuated from the canister under a vacuum so that when the valve is opened, a sample of surrounding air can be pulled inside and stored for analysis.



### When do I take the sample?

Take the sample when the smell is at its worst. This may be in the evening or early in the morning.

### Where to take the sample?

Take the sample outside of buildings and away from potential sources of other smells, such as fuel containers, lawnmowers, or home composting/waste bins.

Do not open the canister inside the home to avoid sampling household compounds such as cleaners, solvents, and perfumes.

### How to use the canisters

1. Open the valve facing away from you. You will hear a hissing sound as air is pulled inside. Wait until the hissing sound is finished, then close the valve on the canister. This will take about 20 seconds.
2. Record the date, time, and address the sample was taken, and the name of the person who took the sample, on the tag provided with the canister using a ball point pen, if possible. Record any further information on the odour being experienced at that time including intensity, offensiveness, and characteristics on the tag.
3. Once the sample is taken, contact the Swanbank Shopfront via email at [swanbankshopfront@des.qld.gov.au](mailto:swanbankshopfront@des.qld.gov.au) within 24-48 hours of taking the air sample to let us know that the canister is ready for collection. If you need to call, please phone 0436 620 772. Please let us know your name and location.
4. DES officers will contact you during business hours to arrange canister collection, this will be within two business days of you contacting us.
5. Store the canister in a cool place until it has been collected.



# About the testing process

## What compounds are being tested for?

The laboratories use US EPA Method TO-15 to analyse the air samples collected.

This method measures different chemicals called Volatile Organic Compounds (VOC).

VOCs are a group of carbon-based chemicals that easily evaporate at room temperature. Many common household materials and products, such as paints and cleaning products, give off VOCs. Common VOCs include acetone, benzene, ethylene glycol, formaldehyde, methylene chloride, perchloroethylene, toluene, and xylene. Different VOCs may have different health impacts, and range from those that are highly toxic to those with no known health impacts.

The laboratory tests for 74 different VOCs compounds when they receive the canister. While all 74 compounds are tested for, they may not all be detected, or they may be below the limit of reporting on the laboratory report.

## What are the results assessed against?

Measured compound concentrations in the laboratory report are compared against the relevant short-term (one hour or 24 hour) air quality objectives for the protection of human health listed in the Queensland Environmental Protection (Air) Policy 2019 (EPP Air), where available.

Where the criteria for air pollutants are not listed in the EPP Air, other reputable international standards such as the Texas Commission on Environmental Quality (TCEQ) or Ontario Ambient Air Quality Criteria (AAQC), are used.

The sampling method used (air sample collected over 30 seconds or less) means that it is not appropriate to compare the canister results against longer-term (weekly or yearly) air quality objectives. Longer-term exposure will be influenced by factors such as changing source emissions and weather conditions over time, so an instantaneous VOC measurement may not reflect the weekly or annual VOC concentration.

## What happens if a guideline value is exceeded?

Exceeding an air quality objective or criteria means that a further assessment will need to occur to determine whether there is any risk to human health. If elevated results are received, a DES officer will contact yourself and Queensland Health to discuss next steps.

## When will I know the results?

The samples will need to be sent to the laboratory to be analysed. DES officers will contact you with the results. It may take several weeks for the department to receive and review the results before they can be discussed with you.

## Why can't I get my results immediately?

The air monitoring equipment does not provide real-time results. The results need to be sent to the laboratory to be analysed. The laboratory is operational on business days and is not open on weekends or public holidays.

The results are then compared to health guideline values and discussed with you.

## How long can the sample be kept before it is sent to the lab?

Studies indicate under normal usage, most substances we are testing for can be recovered from canisters at or near their original concentrations after storage of up to 30 days. It is best practice, however, to deliver samples for analysis as close as possible to the time the sample was collected.