Air Testing: Canister Information Sheet

Advantages of using canisters

1. Integrated sampling can be conducted for a longer period of up to 24 hours for a 6L canister. Longer time periods apply for larger canisters
2. No need for pumps in the field and associated flow calibrations. All the flows are measured before and after sampling in the laboratory using certified flow meters and gauges
3. Samples can be easily screened in the laboratory prior to analysis – note TVOC PID readings from the field are particularly useful for impacted sites
4. A wide range of volatile gases can be sampled. Note, sorbents are generally targeted to specific groups of compounds

Disdvantages of using canisters

1. Reliable only to report up to C_{12}
2. Potentially costly to ship due to their size

Canisters are used to test for volatile organic compounds (VOCs) in ambient air, indoor air, vapour intrusion, as well as soil and landfill gases.

In addition to VOCs, refinery gas analysis, permanent gas and natural gas components can be collected in passivated canisters.

NATA Accredited NATA for an extensive range of analytes using USEPA TO15, USEPA M18, ASTM1945, ASTM1946 and USEPA method 3c methodologies

NATA

Accreditation Number 2901

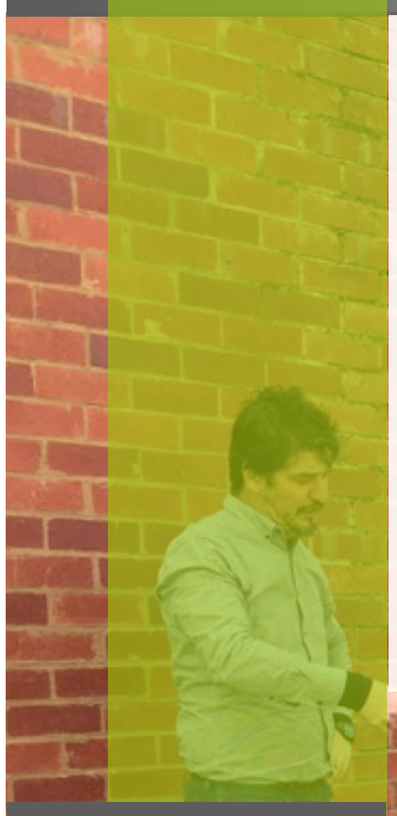
The National Association of Testing Authorities (NATA) is the authority that provides independent assurance of technical competence through a proven network of best practice industry experts for customers who require confidence in the delivery of their products and services.

As a leading laboratory, we are fully accredited and qualified to perform air testing according to national standards.

With **NATA Accreditation**, you have the confidence that you are teaming with a partner that will provide you with absolute results. Contact us today to find out more.

Sampling

There are at least two methods available for sampling air with the canisters:



GRAB SAMPLES

- Typically for an indicative sample over a short time period (5-15 seconds)
- Canisters are provided under a vacuum of -30”Hg
- A grab sample can be taken by opening the valve until the vacuum is reduced down to -10”Hg→-5”Hg on the canisters vacuum gauge
- This results in approximately 4-5L of air sampled into a 6L canister
- An accurate volume is determined from the certified vacuum gauge reading recorded before and after sampling by the Air Toxics team at the laboratory.

RESTRICTED FLOW SAMPLING

- A Time Weighted Average (TWA) sample can be taken using a flow restrictor.
- The restrictor uses a critical orifice to provide a constant flow over time periods of <1, 1-3, 3-8 hours and 8-24 hours.
- Envirolab can provide flow restrictors for the canisters and can advise on and set the flow rates required for requested time periods.
- For example, using a 6L canister, a flow restrictor set at 3mL/min sampled over 24 hours will result in 4.32L of air sampled and a reduction of the vacuum from -30”Hg to approximately -8”Hg residual vacuum.
- Residual vacuums lower than -2”Hg (i.e. approaching atmospheric pressure) may result in inconsistent flow rate and therefore -5”Hg as a minimum is recommended.
- Flow restrictors can currently be provided to cover the range 2-340mL/min.

* See ‘Air Analyte Table – VOCs and Fixed Gases’ flyer for analyte lists.

Quality customer service is our prime objective. Our experience, together with state-of-the-art facilities ensure that you are provided with a fast turnaround of absolute results. We also take pride in having quality control procedures in place and work according to strict quality control standards.

With our local offices and laboratories across Australia, ask us today about how we can help you.

Great Science. Great Service.

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Whatever the size of your project or your safety and environment issues, Envirolab has a solution to help. Contact us Australia wide on 1300 424 344

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