



Environmental Science

Summa capability for Air Monitoring



Lab in operation
24/7



Dedicated
logistics fleet



Customer service
focused



Fastest growing
& Most Innovative Lab



5 day turnaround
(3 day on request)

i2 Analytical can offer UKAS accredited testing on Summa canisters to its clients across the UK and worldwide.

What are Summa Canisters?

We can provide a UKAS Accredited TO-15 Suite of analysis that includes 65 separate compounds together with the following additional analysis:

- Petrol range ali/aro splits from C6-C7, C7-C8, C8-C10, C5-C12;
- An extensive target suite of 26 compounds from C1- C6 hydrocarbons; and
- Bulk gases of Oxygen, Nitrogen, Carbon Dioxide, Carbon Monoxide, Methane & Hydrogen.

Benefits over Tedlar Bags

- Supplied with a flow controller to regulate air flow over a project specific period
- Also the ability to take grab samples from site with no air flow controller
- Ease of use
- Increased holding times
- Canisters supplied under calibrated vacuum conditions with no further equipment needed on site



Please call us on 01923 225404 or email reception@i2analytical.com

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Air monitoring on your site to <math><0.5\text{ppbv}</math> required?

Supporting the target suites we are also able to screen for unknown compounds. Should targeted analysis be required for determinands outside of our established methods we have the capability to define bespoke client based suites to allow for a variety of project and site needs.

Supporting Best Practice

The use of Summa canisters for projects is in line with the following best practice guidance:

- BS8576:2013 Guidance on investigations for ground gas – Permanent gases and Volatile Organic Compounds (VOCs)
- CIRIA C682 – The VOCs Handbook, investigating, assessing and managing risks from inhalation of VOCs at land affected by contamination, 2009

Why use a Summa Canister?

- Large sample volume allows for all testing to be performed from a single canister
- Analytes stable for 21 days with the exception of vinyl acetate at 18 days
- No adsorption efficiencies to worry about or tube suitability selection
- 8 hr TWA sampling or grab sample
- Ideal for unknown compound sampling



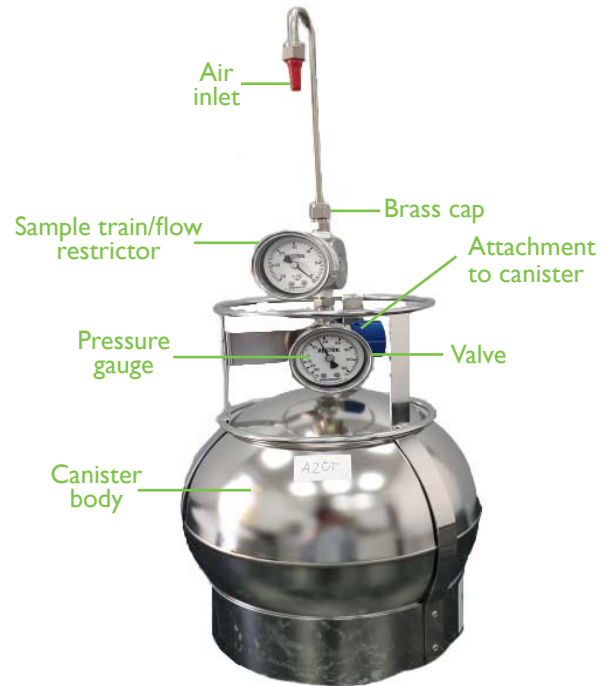
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Vacuum Canister Sampling Guide

Instructions for sampling:

1. Remove the brass cap
2. Attach the sampling train to finger tight
3. Tighten with a spanner
(Too loose will cause leaks, too tight will damage the fittings and canister)
4. Remove the red cap
5. Open the valve
6. Sample for 8 hours
(One hour sampling restrictors also available)
7. Close the valve
8. Disconnect the sample train
9. Attach the brass cap



Important notes:

1. Please do not write or mark on the canister body
2. Do not allow water into the canister
3. Check and record pressure prior to sampling
4. Be careful not to cross thread the fitting when attaching the sample train
5. Do not overtighten the sample train or brass nut
6. Do not overtighten the valve – hand tight only
7. Ensure you record end pressures

Please complete all the required elements of the Chain of Custody:

- All contact and project information
- Canister and sample train reference no.
- Quote reference
- Testing requirements
- All temperatures and pressures
- PID readings if available

The image shows a computer monitor displaying a 'SAMPLE CHAIN OF CUSTODY RECORD' form. The form is divided into several sections. At the top, there is a header with the company logo and name 'i2 ANALYTICAL'. Below this, there are fields for 'Project Name', 'Client', 'Site', 'Date sample dispatched', and 'Sample ID'. The main body of the form is a large table with columns for 'Lab Use', 'Sample ID', 'Depth (m)', 'Date sample taken', 'Time Start', 'Time Stop', 'Canister Vacuum at Start', 'Canister Vacuum at Stop', 'Canister ID', 'Sample train ID', 'TO-15 PID', 'PHOSITE', 'HCS', 'High Airflow Restrictor', 'Restrictor', 'Full Bath Gas Inlet', 'Full Bath Gas Outlet', 'Restrictor Inlet', 'Restrictor Outlet', and 'Sample Specific Notes (Lab use Output)'. Below the table, there are sections for 'Temperature' (Ambient, Interior, Exterior) and 'Pressure' (Start, Stop, Interior, Exterior, Ambient). At the bottom, there are fields for 'LAB USE ONLY' and 'LABORATORY NOTES'.

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Comparison of Canisters to Tedlar Bags

	Canisters	Bags
Mode of Sampling	Passive (vacuum)	Active (pump required)
Hold Time to Analysis	Up to 21 days*	Up to 5 days**
Surface Inertness	Excellent	Fair
Cleanliness	100% certified to ppbv/pptv levels	Some VOCs present in the ppmv
Sample Application	Abient air, soil vapour/gas	Soil vapour/gas, stationary sources
Method Sensitivity	ppbv	ppmv

* Excluding vinyl acetate ** excluding hydrogen

The bulk gas suite consists of: (26 target compounds)

C6+	hydrogen	methane
ethane	ethylene	oxygen/argon
propane	nitrogen	propylene
i-butane	n-butane	propadiene
acetylene	carbon dioxide	t-2-butene
i-butene	i-butylene	c-2-butene
i-pentane	n-pentane	1,3-butadiene
methyl-acetylene	carbon monoxide	t-2-pentene
i-pentene	2-methyl-2-butene	c-2-pentene

The TO-15 suite consists of: (65 target compounds)

propene	dichlorodifluoromethane	dichlorotetrafluoroethane
vinyl chloride	chloromethane	1,3-butadiene
bromomethane	chloroethane	trichlorofluoromethane
ethanol	acrolein	1,1-dichloroethene
trichlorotrifluoroethane	acetone	carbon disulphide
isopropyl alcohol	dichloromethane	trans-1,2-dichloroethene
MTBE	hexane	1,1-dichloroethane
vinyl acetate	cis-1,2-dichloroethene	MEK
ethyl acetate	THF	chloroform
1,1,1-trichloroethane	cyclohexane	carbon tetrachloride
benzene	1,2-dichloroethane	heptane
trichloroethene	1,2-dichloropropane	methyl methacrylate
1,4-dioxane	bromodichloromethane	cis-1,3-dichloropropene
MIBK	toluene	trans-1,3-dichloropropene
1,1,2-trichloroethane	tetrachloroethene	2-hexanone (MBK)
dibromochloromethane	1,2-dibromoethane	chlorobenzene
ethyl benzene	m/p-xylene	o-xylene
styrene	bromoform	1,1,2,2-tetrachloroethane
4-ethyl toluene	1,3,5-trimethyl benzene	1,2,4-trimethyl benzene
1,3-dichlorobenzene	1,4-dichlorobenzene	benzyl chloride
1,2-dichlorobenzene	1,2,4-trichlorobenzene	hexachlorobutadiene
naphthalene		



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[Click here for full details of the accreditation](#)

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i2 SERVICES



- Standard 5 day turnaround (3 day on request)
- State of the art canisters delivered in custom-made boxes
- Sample collections by our own fleet of dedicated vehicles
- Customer focused service
- Committed ongoing investment into the latest equipment
- Brand new laboratories with the latest technology
- Sustainability - active in reducing carbon footprint (electric vehicles, renewable energy)
- International reach

i2 GLOBAL REACH



Laboratories



UK



POLAND



SOUTH AFRICA

Sample Reception and Logistics Centres

DONCASTER

AYLESFORD

NORTHAMPTON

SCOTLAND

WATFORD

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