Agilent Capillary Trap Sampler

SAMPLE TRACE LEVELS OF GAS QUICKLY IN THE FIELD

The Measure of Confidence

Agilent Technologies

Finally – a fast, flexible gas sampling technology for your field analysis

GC and GC/MS analyses are typically performed in the lab after samples are gathered from the field. However, since most samples originate *outside* the lab, there is a growing need for reliable field sampling, along with easy sample transportation. In addition, it is critical to have a flexible sampler for field detection.

Agilent's Capillary Trap Gas Sampler (CTS) puts sampling at your fingertips – no matter where your analysis takes you

This portable sampler makes it simple to perform trace-level (ppb-ppm) gas sampling *in the field*, and offers these unique advantages:

- **Take your CTS to any sampling spot** due to the convenient handheld design.
- **Outstanding speed – only requires several seconds to minutes per sample.** Agilent's CTS is based on kinetic sampling that quickly concentrates trace-level airborne compounds and does not require lengthy equilibration.
- **Low system and operational costs** especially when you combine the CTS with a thermal separation probe (TSP).

How CTS works – removing capillary sections.

See how easy and convenient gas sampling outside your lab can be

The Agilent CTS samples airborne compounds using short (20 mm) pieces of standard 0.32 mm or 0.53 mm id capillary (WCOT or PLOT) columns. It is used with an Agilent Thermal Separation Probe (TSP) mounted on the split/splitless inlet of an Agilent 5975T GC/MS, or an Agilent 7890 series GC.

Once you arrive at your sampling site, it takes just a few quick steps to complete one sampling:

1. Install the short column onto the CTS head.
2. Aim the CTS at the sample environment, and use the sampler's miniature pump to circulate air sample through the short column.
3. After several seconds to a few minutes of pumping, target compounds will be trapped inside the short column. You can then remove the column from the CTS head and place it inside a TSP glass vial or screw top glass vial.

When you run sample analysis, the TSP probe, together with the glass vial and short column, can be introduced into the GC inlet for sample thermal desorption. The sample can then be quickly vaporized from the short column, and transferred to the analytical column for conventional GC or GC/MS analysis.

Field testing for air pollution.

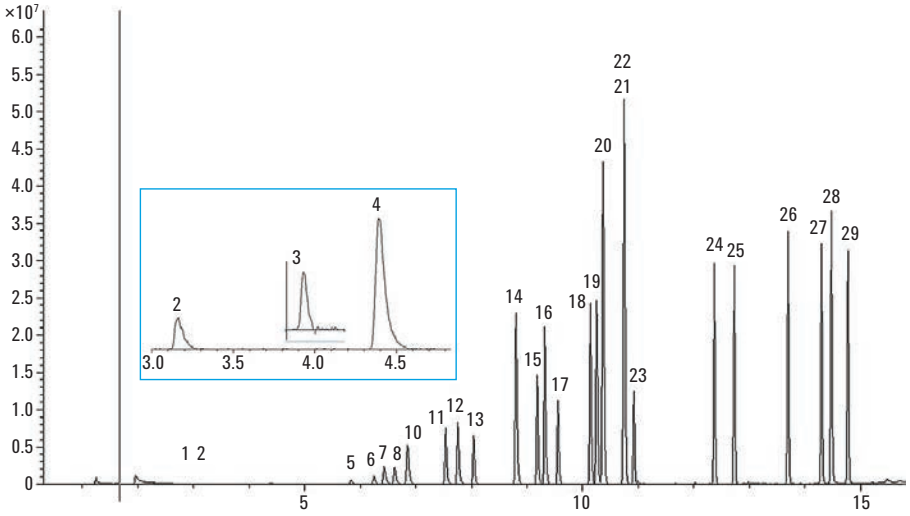
A flexible, cost-effective addition to your sampling toolbox

If your lab uses Solid Phase Micro Extraction (SPME) to capture analytes for sampling, the Agilent CTS can increase your operational speed and flexibility.

For starters, the Agilent CTS lets you bring samples *directly from the field to your lab*. At the sampling site, the CTS sample columns can be plugged, placed in a small plastic bag, and transported to the laboratory for immediate desorption followed by GC or GC/MS analysis.

In addition, the Agilent CTS is remarkably cost effective. The short sample columns are inexpensive and disposable, making them ideal for collecting dirty or reactive samples.

The CTS is also flexible enough to suit your lab's unique sampling needs. A broad range of sample column adsorption films are available – from thin PDMS to thick PLOT/packed column materials. You can even simultaneously trap gas samples into 6 capillary columns, which lets you select test one or more samples at the site, and store the remaining columns as evidence samples.



Total ion current (TIC) trace of the separation of a mixture of 29 VOCs, showing baseline separation. (5991-1519EN Rapid Field Sampling of Airborne Compounds Using the Capillary Trap Sampler, Thermal Separation Probe, and an Agilent 5975T LTM GC/MS).

To learn more about Agilent Capillary Trap Gas Sampler, visit
www.agilent.com/chem/CapillaryTrapSampler

Agilent's NEW CTS makes field sampling easy and cost-effective

This portable, handheld sampler concentrates trace-level airborne compounds in minutes, allowing you to reduce your sampling speed to just minutes – or seconds – per sample.

In addition, the Agilent CTS is fully compatible with Agilent's transportable 5975T GC/MS, making it suitable for a wide range of military, environmental, occupational safety, and forensic applications.

The Agilent CTS enables most of the manual SPME, air bags, air canisters, stir bar sorptive air extraction (SBSE), and TD Tenax tube applications such as analysis of BTEX in air, flammable gases, explosives vapor, SO_2 in air, and others.

For more information

To learn more about the Agilent CTS, visit **www.agilent.com/chem/CapillaryTrapSampler**

Find an Agilent customer center in your country:
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