

# Agilent QuickProbe Technology

Direct, real-time MS analysis of powders, solids, and liquids



# Realize Rapid Screening Without Sample Preparation

Is your forensic lab struggling with a growing caseload of samples that require fast, accurate analysis? Now you can enjoy the speed and simplicity of direct sample analysis on a platform that has been a workhorse in your laboratory for decades.

The Agilent QuickProbe is a real-time MS analysis technique that enables you to identify compounds with little or no sample preparation. The easy-to-use probe, combined with an Agilent GC/MS system, provides fast data analysis with automated library identification. The result: Near instantaneous determination of sample composition at a fraction of the cost.

For overloaded forensic laboratories, QuickProbe is the perfect solution to quickly determine the composition (including the presence of controlled substances) of tablets, powders, and liquids.

## Experience faster screening with Agilent QuickProbe technology

The QuickProbe technique is based on a vaporization inlet that is open to ambient air while having helium purged-flow protection to eliminate air leakage into the QuickProbe and MS ion source.

### Separation in under a minute

QuickProbe includes our innovative sample introduction technology and provides rapid heating with the inlet and short separation column. It interfaces to your standard Agilent GC/MS to obtain in-vacuum electron ionization, followed by quadrupole-based mass analysis. QuickProbe analysis can be run without changes to the existing GC column, in under a minute.

### Confidently identify compounds using electron ionization libraries

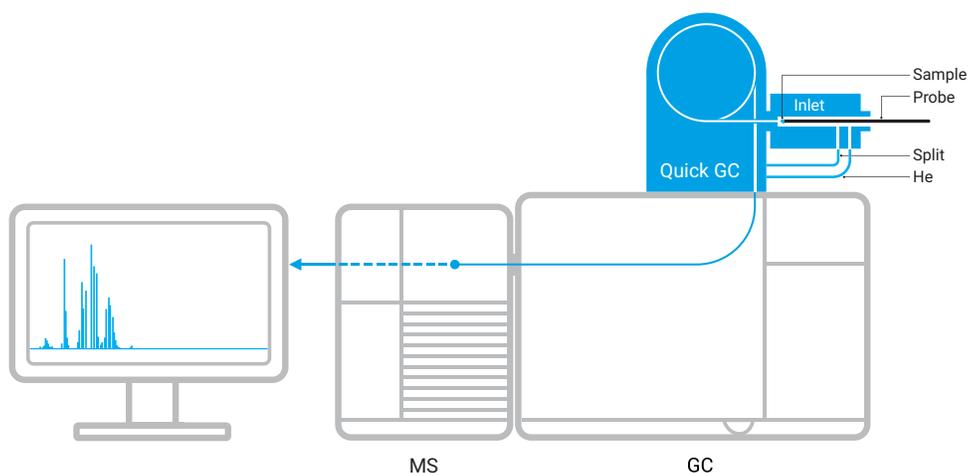
After components in the mixture are separated and quickly identified by MS detection, QuickProbe allows for fast data analysis, using an EI library such as NIST to identify names and structures, even at the isomer level.

### Easy as one, two, three

Introducing a sample into the QuickProbe is simple:

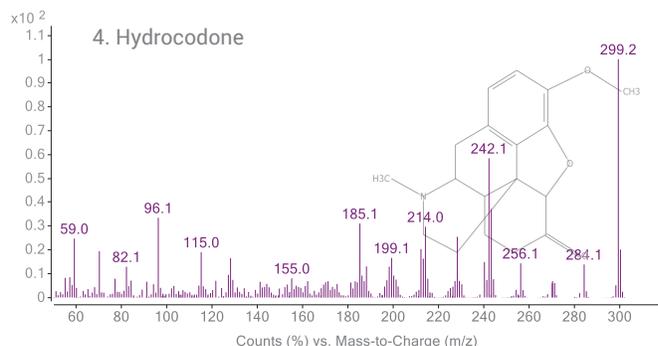
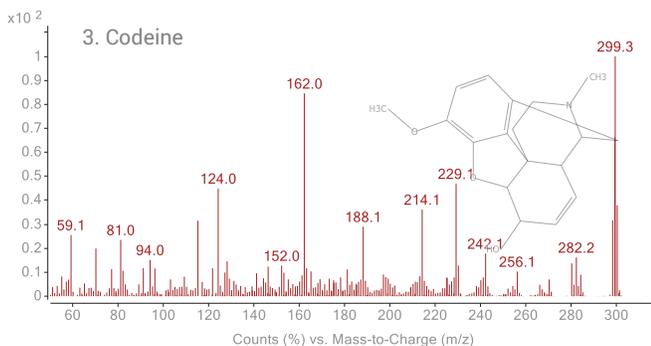
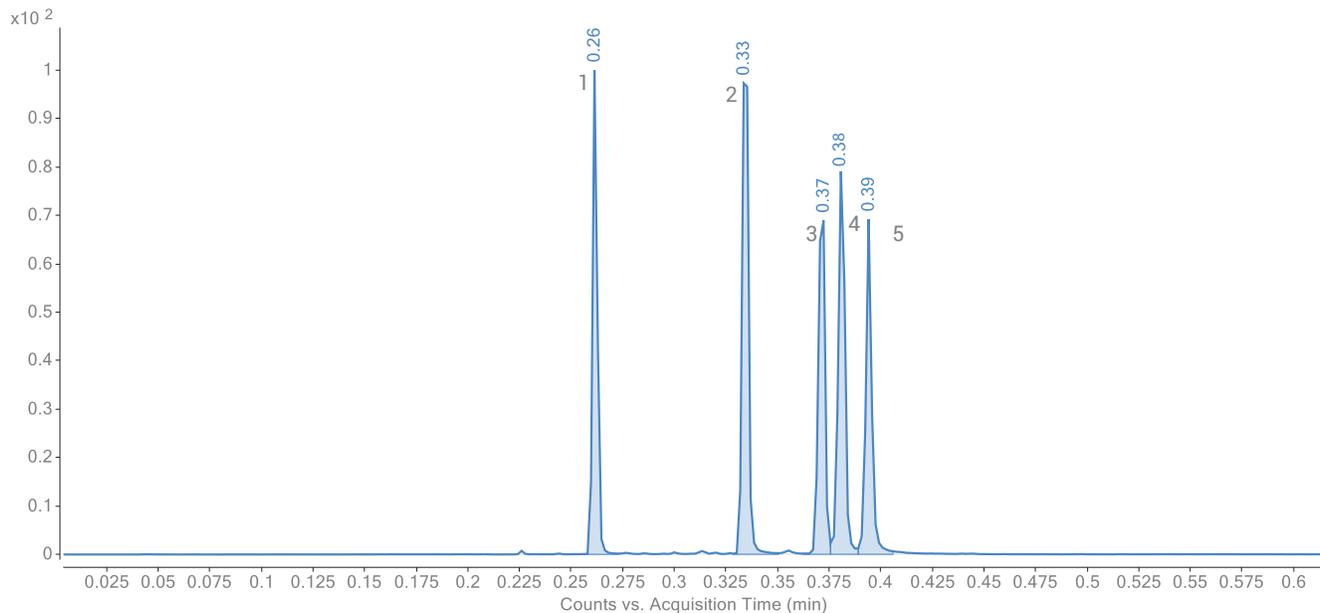
1. Touch the sample with the probe.
2. Insert the probe into the QuickProbe inlet for thermal vaporization, followed by a quick separation within the QuickProbe column.
3. Have results in under a minute.

Compared to other similar solutions, QuickProbe is exceptionally cost-effective. Operational costs are low with savings on reagents and disposal expenses. Plus, there's no need to retrain anyone since it uses GC/MS technology.



## Achieve faster sample analysis in a variety of forensic applications

Agilent QuickProbe is ideal for fast GC/MS analysis of tablets, powders, and liquids.



Opiate mixture (250 ng/ $\mu$ L in methanol) analyzed using Agilent QuickProbe in under one minute. List of components: 1) meperidine, 2) methadone, 3) codeine, 4) hydrocodone, and 5) oxycodone. Note that codeine and hydrocodone are chromatographically resolved, which allows identification of these isomers.

## Specialized consumables

For each sample type, Agilent offers a probe and probe holder that enable rapid sample analysis. The QuickProbe inlet also utilizes a newly designed fritted liner with touchless packaging to prevent any large particulates from contaminating the QuickProbe. Two off-the-shelf column types are available and custom columns may be made to order.



QuickProbe fritted liner with touchless packaging



QuickProbe probes with touchless packaging



QuickProbe probe holder

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QuickProbe technology was developed by Professor Aviv Amirav at Tel Aviv University. See the article "[Open Probe Fast GC-MS: Combining Ambient Sampling, Ultra-Fast Separation, and In-Vacuum Ionization for Real-Time Analysis](#)" by U. Keshet, T. Alon, A. B. Fialkov, and A. Amirav, in the *Journal of Mass Spectrometry* 52, 417-426 (2017).

**For Forensic Use.**

This information is subject to change without notice.

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