

# ISOTOPIC ANALYSIS USING MICRO-GC/MS COUPLING

**Technique :** Micro-GC/MS

**Column :** PoraPlot Q 10m

**Carrier gas :** Helium

**Injector :** Variable volume

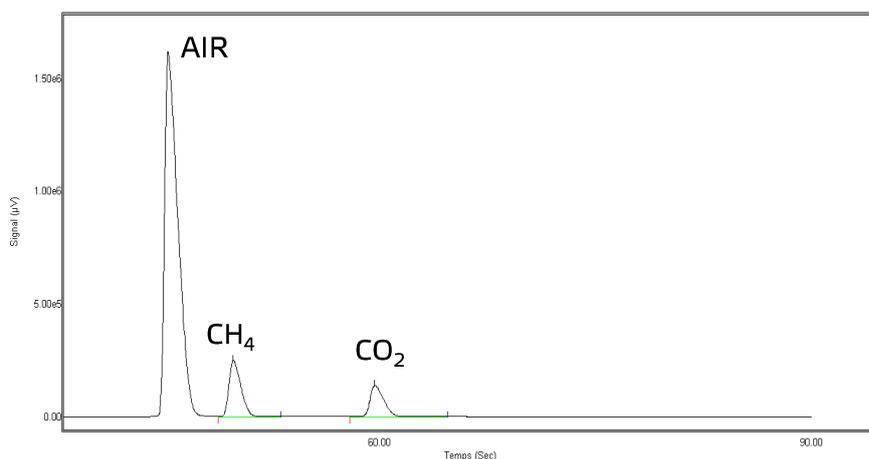
**Column temperature :** 50°C

**Injection time :** 50 ms

**Column pressure :** 25 psi

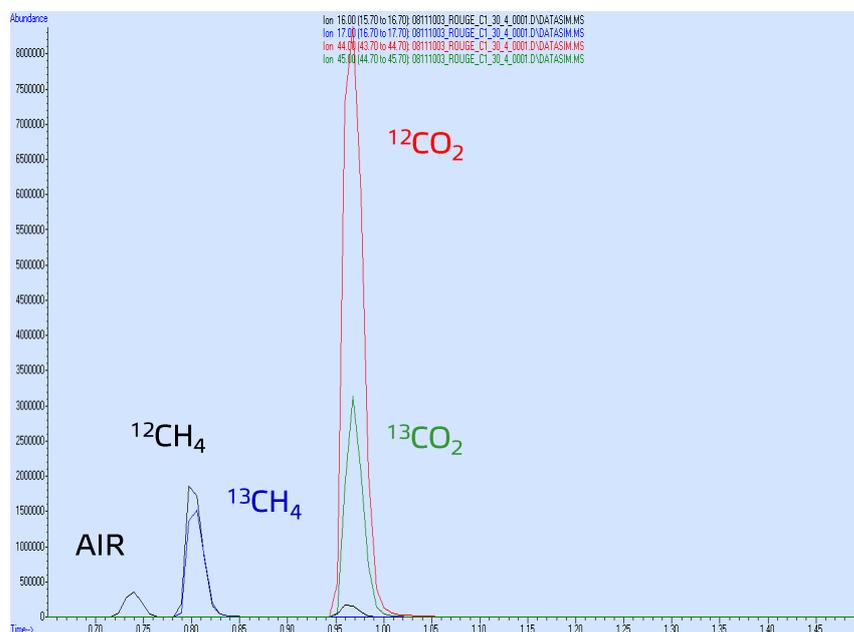
**μTCD sensitivity :** Standard

**MSD :** SIM Mode



**a) TCD signal from Micro-GC**

In scientific usage, isotopic tracer term is applied to less abundant nonradioactive, or stable, isotopes that are suitable for use in tracer techniques. Tracers may be used to follow the movement of substances in large or small amounts as well as at molecular or atomic levels. The observations may be made by the measurement of the relative abundance of isotopes in applications employing stable isotopes as tracers.



**b) MSD signal : SIM mode**

In investigations using isotopes, the Micro-GC/Mass Spectrometer coupling can determine the relative amounts of various isotopes in a sample of the gas mixture being analyzed. Isotopic tracers have important applications in many fields of scientific research and in medicine, agriculture, and industry.

In this example, isotopic ratio for CH<sub>4</sub> and CO<sub>2</sub> is measured from a Biogas sample.

*More information : [www.sra-instruments.com](http://www.sra-instruments.com)*