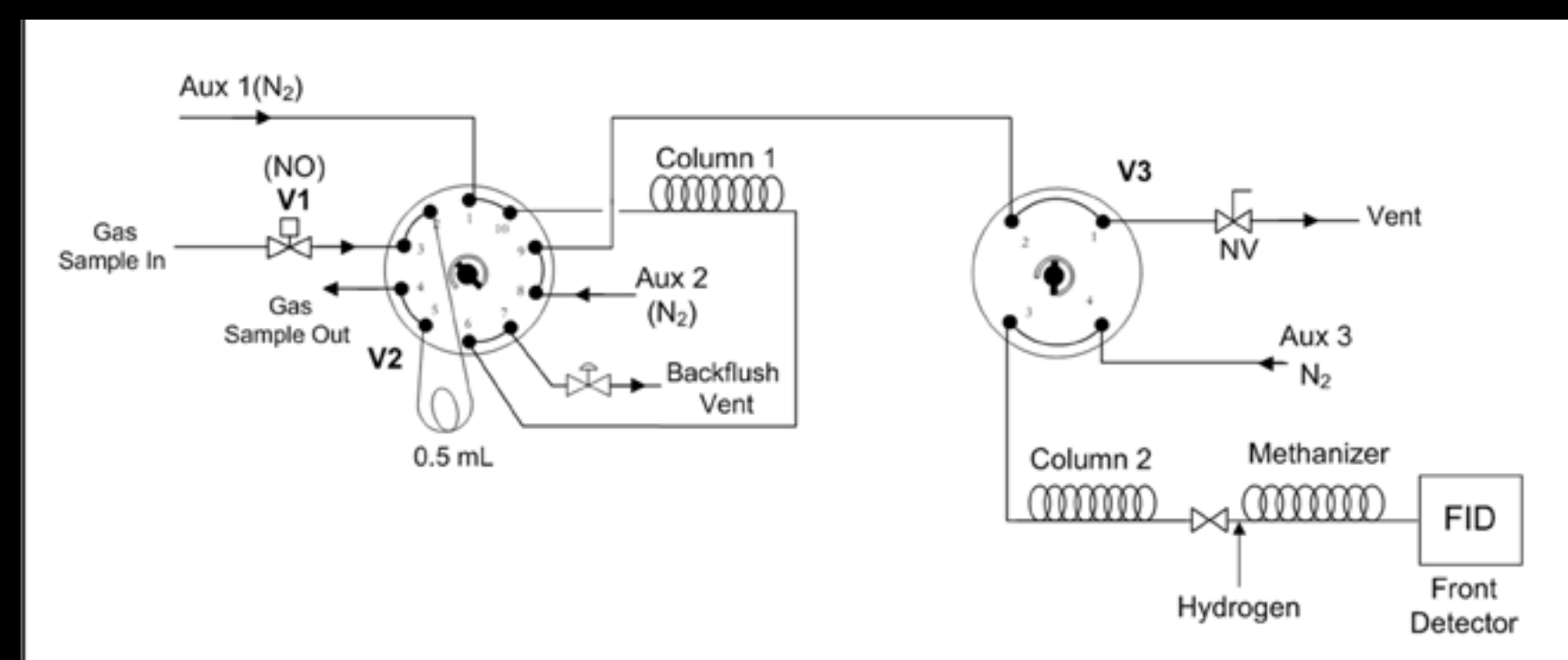


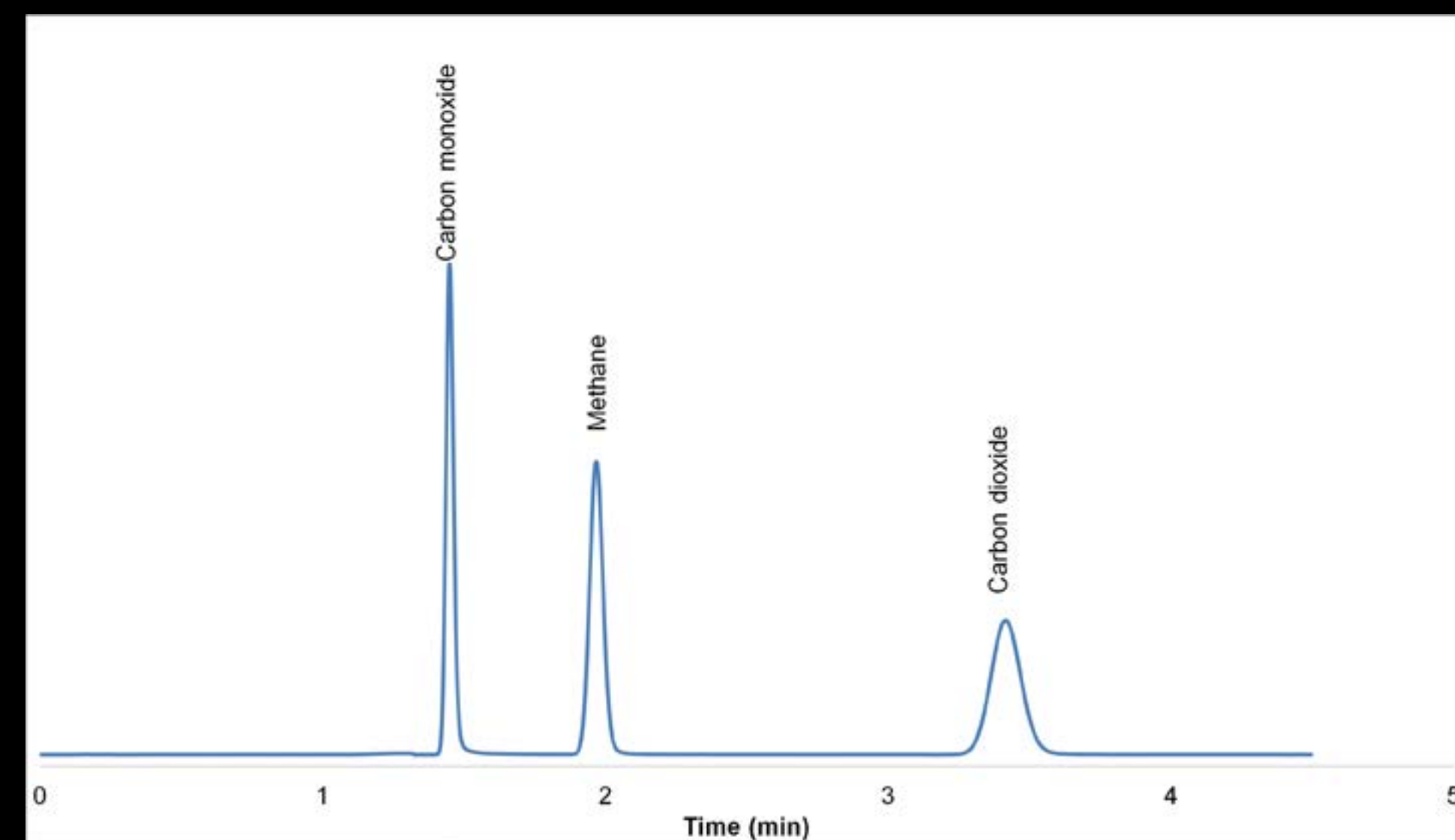
Improving Trace CO and CO2 Analysis in Hydrogen and various Hydrocarbon Gas Streams

By Thomas Adamski, Rob de Jong, Rik Suijker - PAC, L.P.

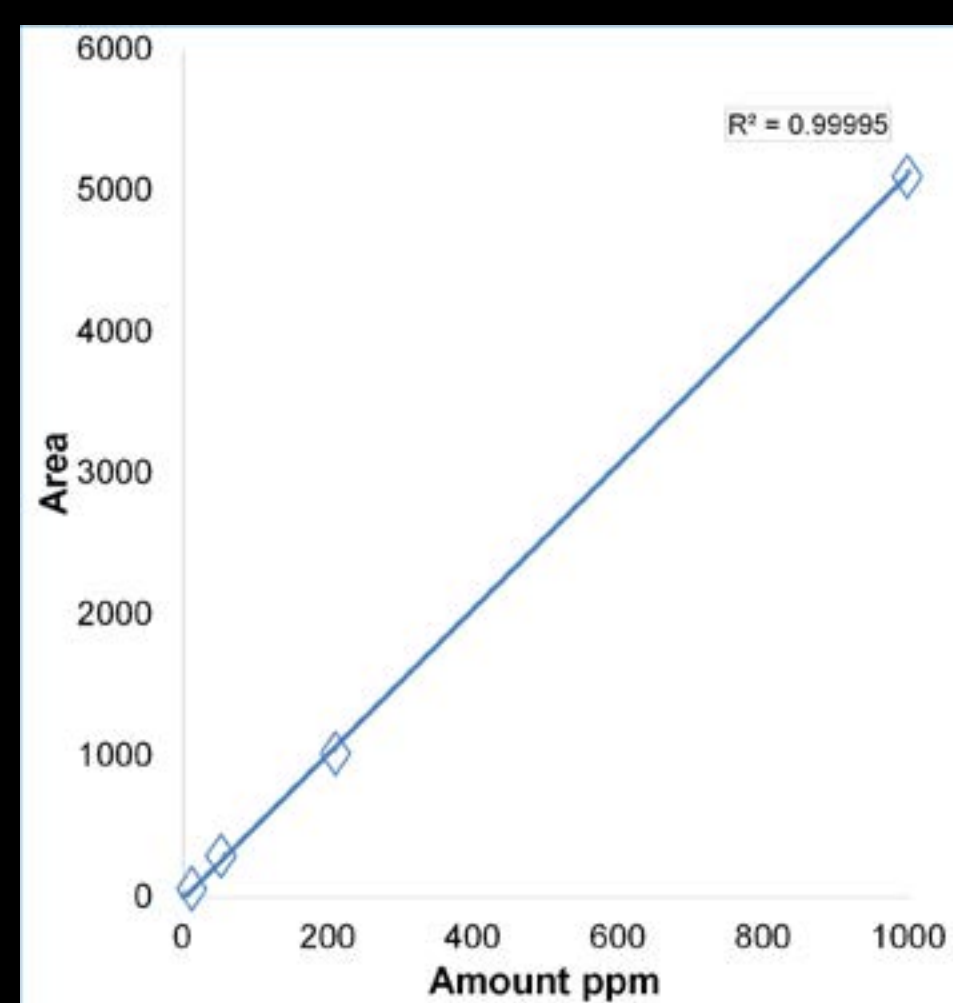
Plumbing Diagram for UOP 603-13



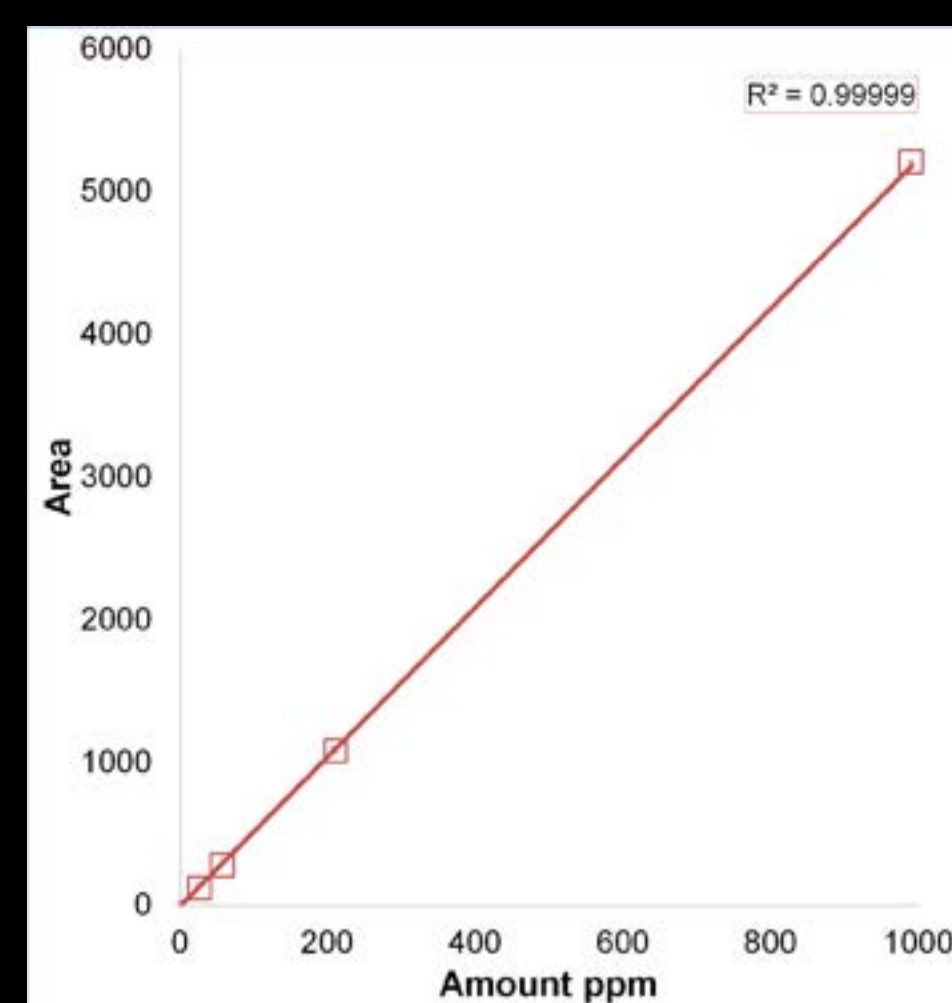
Fast Separation for UOP 603



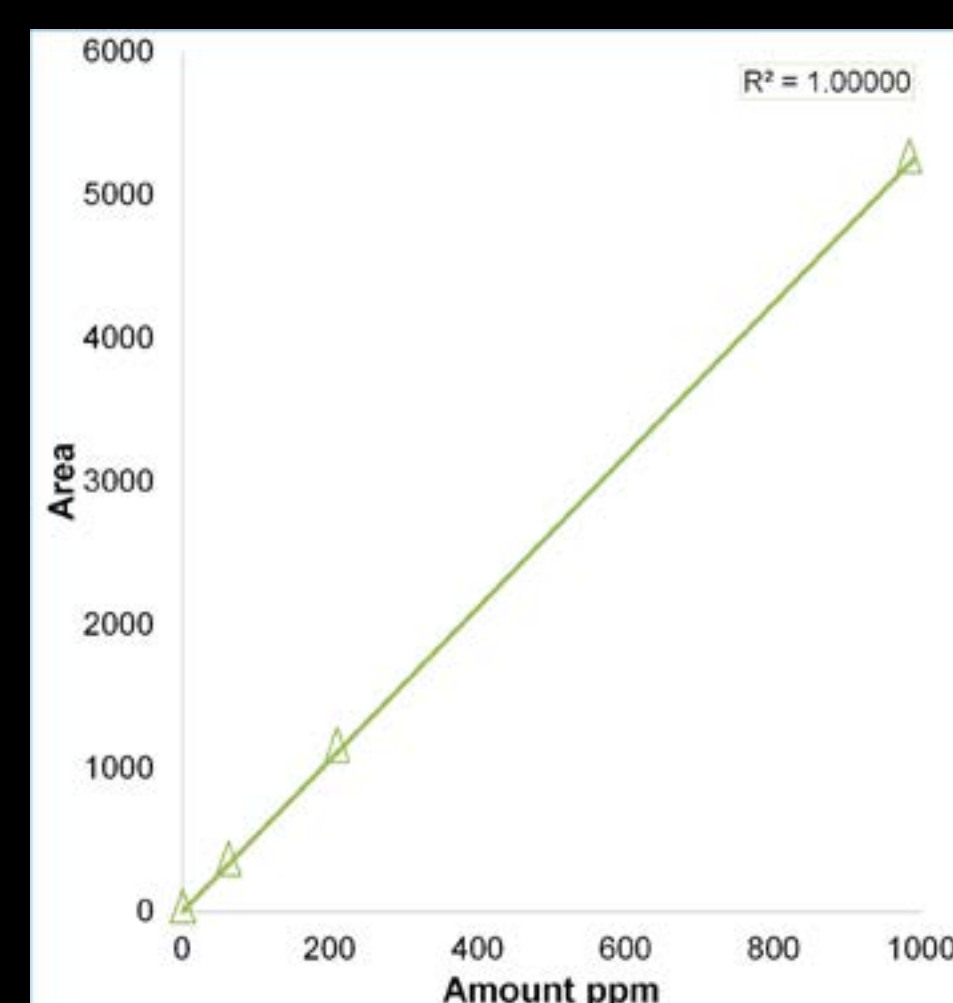
Linearity Plots for CO, Methane, and CO2



Linearity Plot Carbon Monoxide



Linearity Plot Methane



Linearity Plot Carbon Dioxide

TURN-KEY SOLUTION, PROVEN HARDWARE

- Complete Solution Based on Agilent 7890B GC and proprietary AC Analytical Controls Methanizer

EXCELLENT PERFORMANCE FOR SUPERIOR ROI

- Fast Analysis in < 5 Minutes
- Superior Sensitivity, Repeatability & Linearity

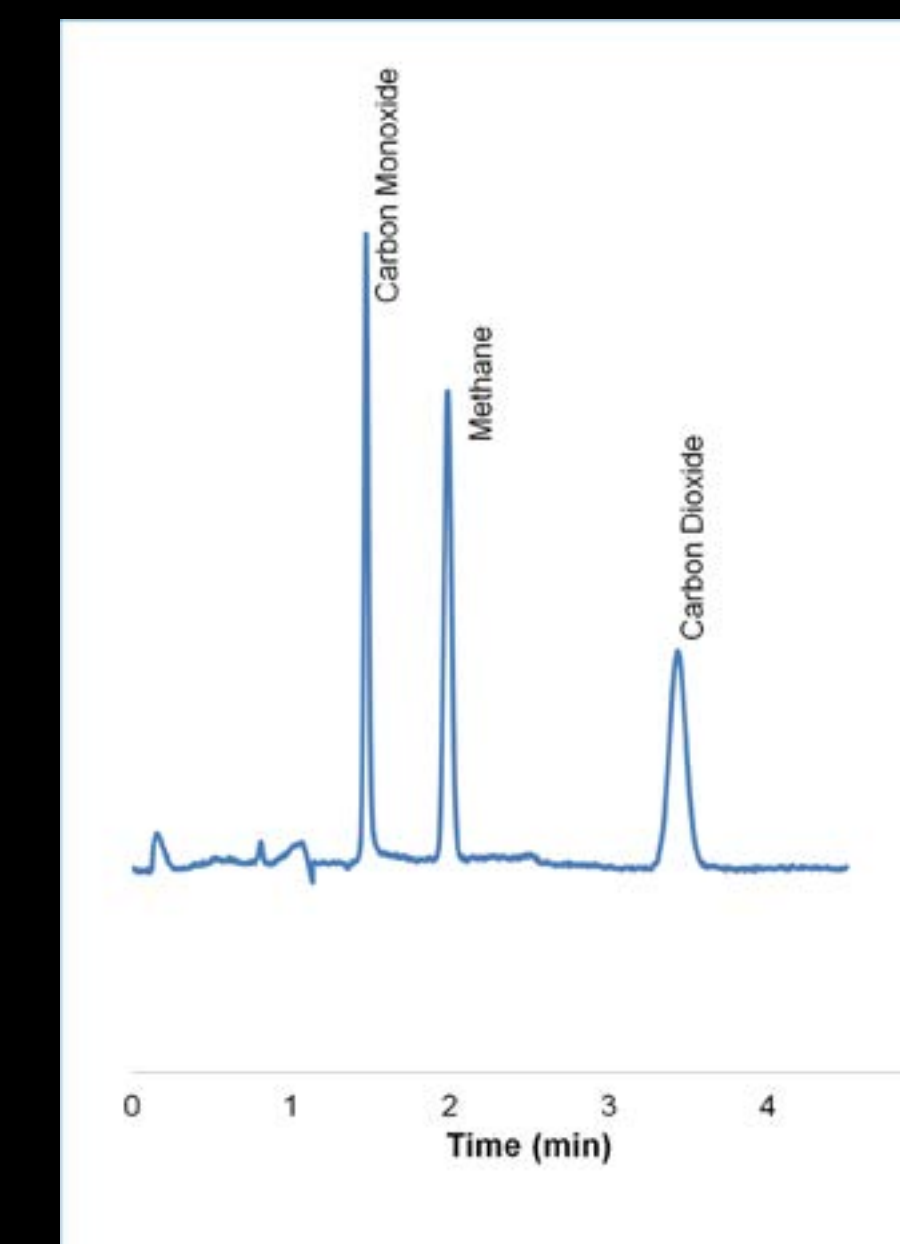
EASY TO USE

- Robust Solution using AC proprietary Methanizer with bypass valve
- No Methane Matrix Interference in Natural gas for more accurate and easier integration.

PROVEN COMPLIANCY

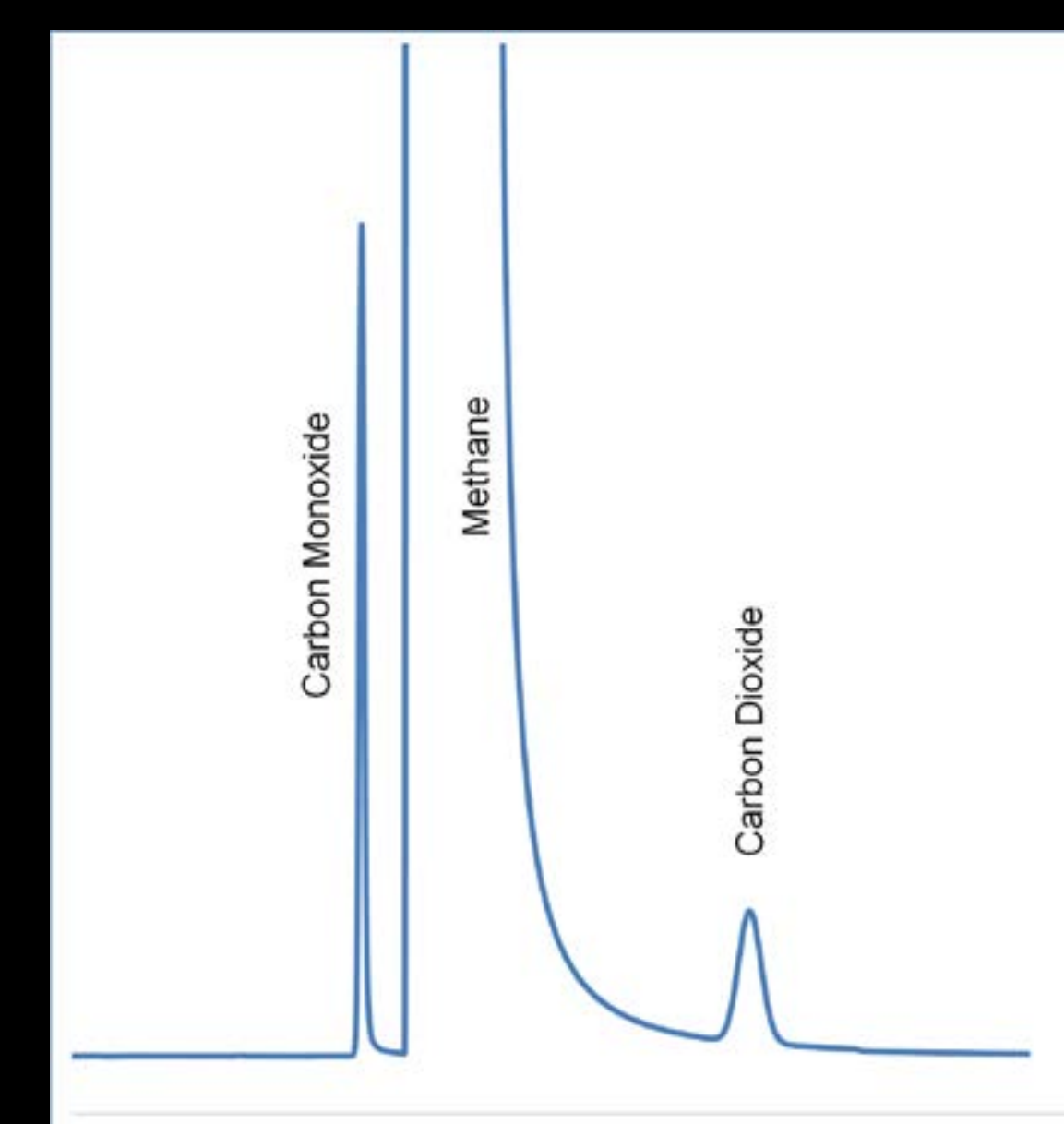
- UOP 603 was developed on PACS's AC Analytical Controls Solution

Trace level detection at 1 ppm and quantification limits

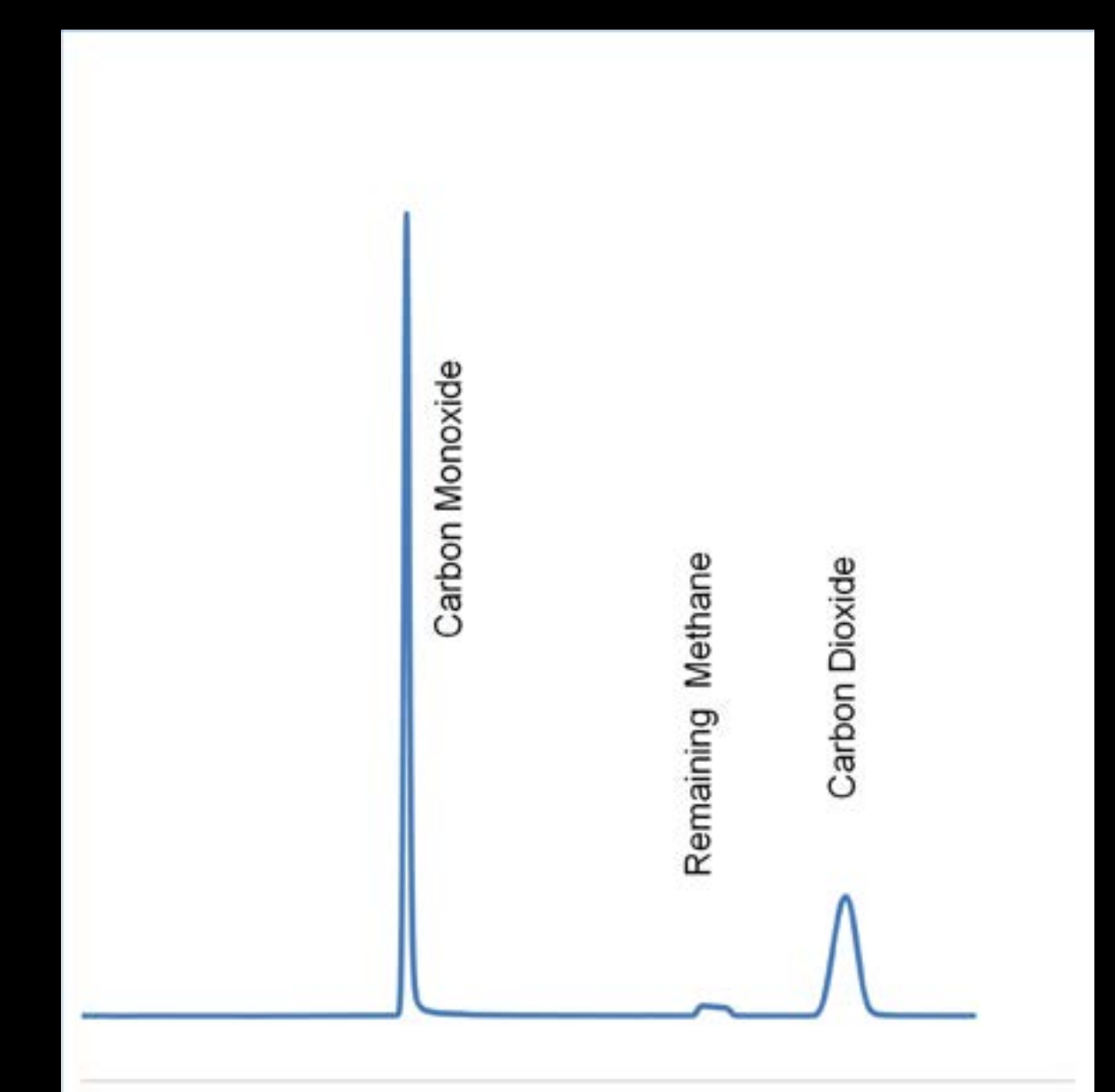


	CO	Methane	CO2
LOD (ppm)	0.03	0.04	0.1
LOQ (ppm)	0.11	0.14	0.32

CO and CO2 in Natural Gas sample, analyzed without and with heart cutting



Without Heart Cutting



With Heart Cutting