

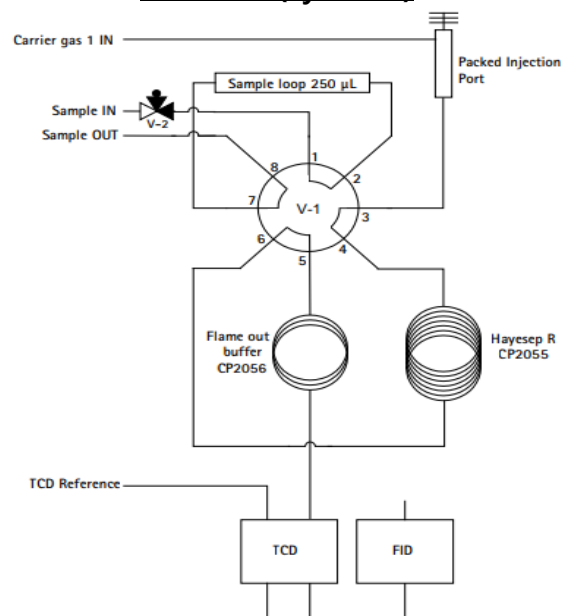
Natural Gas Analyser - Quick Reference Guide

Natural Gas Analyser

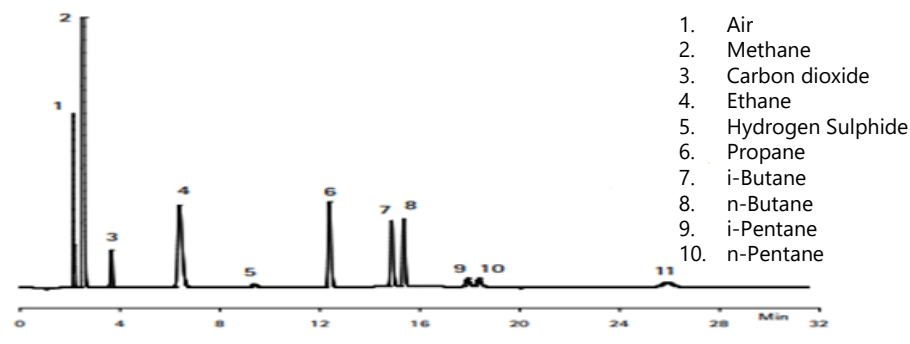
There are a number different Natural Gas Analysers, (NGAs) to meet the broadest range of stream sample types and throughput needs, whether the analysis is conducted in a lab, at-line or in the field. NGAs are standard 'turnkey' systems pre-configured and tuned at the factory to ensure their compliance with standard methods used to determine the heating value of natural gases and related streams. They can also be specially configured to determine other components of interest (e.g. sulphur compounds), to ensure the suitability for use in downstream processes. All systems employ a proven and optimized multi-channel/multi-dimensional approach to determine the heating/calorific value of natural gas, as well as quantify individual components.

The basic NGA (System A) is the simplest of all NGA analysers. The system employs a single valve column designed for simplicity, a Thermal Conductivity Detector (TCD) and Flame Ionization Detector (FID). The TCD is used for the determination of O₂, N₂, CH₄, CO₂ and hydrocarbons, while the FID, connected in series, determines hydrocarbons in low concentrations, i.e. C₃-C₅ and C₆+ back-flushed grouping peak (late back-flush). A single unheated 4 port Liquid Sampling Valve (LSV) is available for LPG type samples.

NGA Basic (System A)



Natural Gas Sample - System A



Analyser	Description	Published Method(s)
Natural Gas A	Single Channel Natural Gas Analyser	ASTM D1945, GPA2261
Natural Gas B	Dual Channel Natural Gas Analyser	ASTM D1945, GPA2261
Natural Gas C	Extended Natural Gas Analyser	GPA 2286 (He/H ₂ included)
Natural Gas D	Three Bespoke Extended Natural Gas Analyser	ASTM D1945, GPA2261, GPA 2286 (He/H ₂ included)

Conclusions

Natural Gas Analyser (System A)

- The analysis is completely automated.
- No costly method development.
- A full range detection is possible.
- All channel results are combined into 1 report.
- The simple set-up is aimed easy operation/maintenance and service.

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