

Industrial

Thermo Scientific Gas Chromatograph Analyzers

TRACE 1610 GC Natural Gas Analyzer for GPA 2177

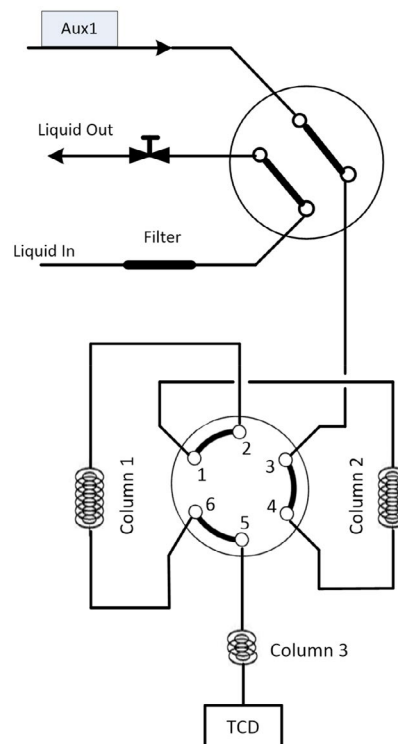
Overview

This Thermo Scientific™ Natural Gas Analyzer analyzes natural gas liquid (NGL) samples to determine the British Thermal Content (BTU) as outlined in GPA Method 2177. The system, based on the Thermo Scientific™ TRACE™ 1610 gas chromatograph, analyzes a single natural gas liquid sample on a single channel Thermal Conductivity Detector (TCD) configuration.

A configuration with two single-channel setup (2x TCD) is available to allow simultaneous analysis of two different samples for increased throughput. In this case, a larger heated auxiliary oven (standard) is used to allocate all the packed columns.

Key features

- Modular Thermo Scientific™ iConnect™ detectors to facilitate troubleshooting and maintenance
- Simultaneous analysis of two samples to increase productivity
- Repeatability <1%
- Dedicated BTU reporting in Thermo Scientific™ Chromeleon™ CDS
- Compliant with GPA 2177, ASTM D2598, ASTM D2163



Schematic of the single channel NGL Analyzer for GPA 2177

Single Channel Thermal Conductivity Detector (TCD)

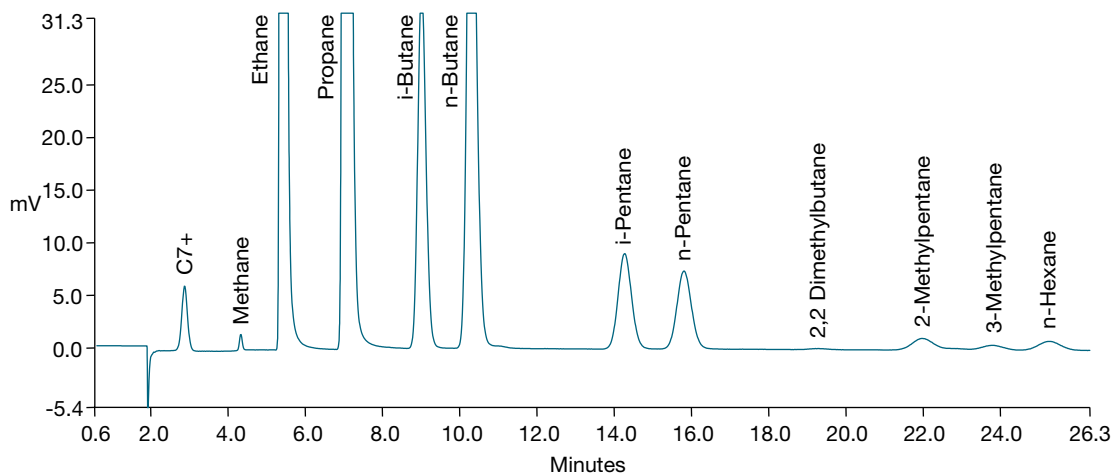
- Sample: Natural gas liquid
- High pressure liquid injection valve
- Components: C7+ regroup, nitrogen (air composite), carbon dioxide, methane, ethane, propane, i-butane, n-butane, i-pentane, n-pentane, 2,2 dimethylbutane, 2-methylpentane, 3-methylpentane, n-hexane
- Independently heated compact auxiliary oven with two valves
- Three packed columns in the GC oven
- Plumbed with sulfur-resistant tubing

Tailored analyzers for specific application needs

Thermo Fisher Scientific offers a suite of analyzers for natural gas, natural gas liquids, and liquefied petroleum gas. TRACE 1610 GC Analyzers for NG/NGL conduct analyses according to standard methods from regulatory agencies, such as the GPA, ASTM, ISO, and DIN, including determination of calorific or BTU content, hydrocarbon speciation, and impurities. Single channel, dual channel, or multi-method combination systems are available to meet your requirements.

Natural gas system specifications

Method	GPA 2177
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Sample	Natural Gas Liquid (NGL)
Detectors	TCD
N ₂ (air composite), CO ₂	Yes
O ₂ /N ₂ separation	No
He/H ₂ separation	No
Hydrocarbons	C1-C6 with C7+ regroup
Repeatability	<1.0%
MDL hydrocarbons	0.005%
MDL perm gases	0.01%
MDL H ₂ S	0.05%
Valves per channel	2
Columns per channel	3 packed
Sulfur inert	Yes



Natural gas liquid with C7+ early group

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