CONTROL PROCESS EFFICIENCY AND ENSURE PRODUCT QUALITY

The Measure of Confidence

Agilent Permanent Gas and Trace Impurity Analyzers

Accurately measuring feedstock impurities at increasingly lower concentrations is critical to process efficiency and profitability. For example, producers of high-purity monomers face stiff competition and tight purity specifications. Research and production operations in the food, pharmaceutical, chemical, and semi-conductor industries require high-purity gases as well.

Failure to characterize impurities in feedstock streams can render the gas unfit for a given application. Trace contaminants can also contribute to equipment corrosion and reduced polymer yields. Worst of all, they can cause catalyst degradation, poisoning, and contamination – leading to costly downtime and catalyst bed replacement.

Confidently detect trace contaminants in process feedstocks and finished products immediately after installation

Based on Agilent 7890B GC system, **Permanent Gas and Trace Impurity Analyzers** are factory-configured and chemically tested to measure permanent gases in refinery and natural gas streams. They can also detect sub-ppm-level contaminants in high-purity gases, monomers, and other light hydrocarbon streams.

Agilent Permanent Gas and Trace Impurity Analyzers include innovative technology and reflect our stringent quality control process. Systems include:

Factory

- System setup and leak testing
- Instrument checkout
- Installation of appropriate columns
- Factory-run checkout method using application checkout mix

Delivery

- Instrument manual for running the method
- CD-ROM with method parameters and checkout data files for easy out-of-the-box operation
- Application related consumables included – no separate ordering required
- Easy consumables re-ordering information

Installation

- Duplicate factory checkout with checkout sample – onsite by factory-trained support engineer
- Optional application startup assistance

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Perform fast, unattended analysis and produce stable results using these built-in features:

- **Pre-configuration and chemical testing** ensure optimal performance for ppm-to %-level analysis in high-purity gas streams.
- **Multi-column, multi-detector configurations** maximize the data obtained from a single analysis.
- **Capillary Flow Technology (CFT)** reduces analysis time, improves data, and minimizes the need for system maintenance.
- **Onsite installation and performance checkout** confirm that your analyzer and application meet rigorous Agilent performance criteria.
- **System familiarization** enables your team to begin calibration and validation immediately following installation.

Ordering information:

Part Number	Analyzer Application
SP1 7890-0538	Permanent Gas Analyzer, Single Channel
SP1 7890-0573	Permanent Gas/Hydrogen Analyzer
G3445 Series #646	Low CO and CO_2 in Process Gases Containing High CH_4 Analyzer
G3445 Series #647	Low CO and CO_2 in Process Gas Analyzer
SP1 7890-0191	Inert Impurities in Pure Chlorine Analyzer
SP1 7890-0219	Trace Impurities in Helium Analyzer by PDHID
SP1 7890-0237	Impurities in Monomers Analyzer by PDHID
SP1 7890-0305	Inert Impurities in Crude Chlorine Analyzer
SP1 7890-0341	Trace Oxygenates and Hydrocarbons in Ethylene Analyzer
SP1 7890-0366	Trace CO and CO_2 in Hydrogen and Light Gaseous Hydrocarbons Analyzer
SP1 7890-0409	Impurities in Ethylene/Propylene Analyzer by PDHID

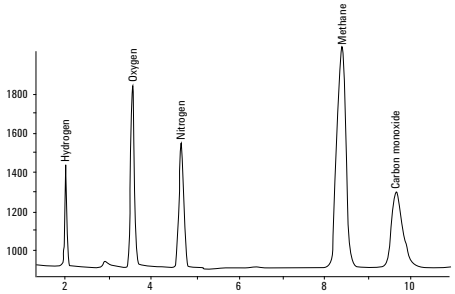
Produce reproducible process-monitoring and quality-control data... day in and day out

Configuration:
- Valve/2-column (packed column)/PDHID

Sample type:
- Ethylene/Propylene

Compounds analyzed:
- H_2, O_2, N_2, CO, CH_4

Typical quantification range:
- H_2: 0.1-40 ppm
- N_2, CO: 0.1-10 ppm



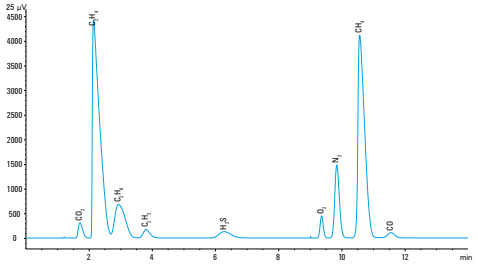
Determination of impurities at 0.1 ppm. Matrix effects were eliminated by "cutting out" the matrix on a packed pre-column. Inert impurities (including H_2, O_2, N_2, CO, and CH_4) were separated on a packed column.

Configuration:
- 2-Valve/3-Column (packed column)/TCD

Sample type:
- Gaseous samples including refinery gas, natural gas, or other gaseous streams

Compounds analyzed:
- O_2, N_2, CO, CO_2, CH_4, C_2 isomers, and H_2S

Typical quantification range:
- 0.01 Mol% for O_2, N_2, CO, CO_2, CH_4, C_2 isomers, and H_2S



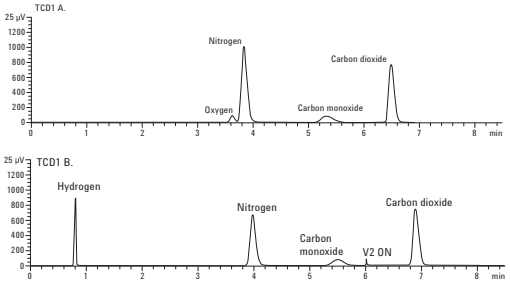
This mixture of O_2, N_2, CO, CO_2, CH_4, C_2 isomers, and H_2S was analyzed in just 12 minutes.

Configuration:
- 3-valve/5-column (packed column)/2-TCD/ Hastelloy valve, inlet tubing, sample filter, nickel stripper

Sample type:
- Pure chlorine gas

Compounds analyzed:
- H_2, O_2, N_2, CH_4, CO_2, and CO

Typical quantification range:
- 50 ppm for fixed gases



Measurement of inert low-level impurities in pure chlorine. The chlorine was cut to the vent during sampling.

Put your applications on the *fast track*

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Or call **800-227-9770** (in the U.S. or Canada)

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Printed in U.S.A., September 25, 2014
5991-5042EN

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