

PRODUCE RELIABLE DATA QUICKLY AND REDUCE OPERATING COSTS

The Measure of Confidence



Agilent Fast Refinery Gas Analyzer with Hydrogen Carrier Gas

Refinery gas analysis provides information that is critical to process optimization and product quality. However, confidently analyzing refinery gases is challenging, because the source and composition of each gas varies considerably. Success depends upon quickly separating complex mixtures from a broad range of samples found in refinery and petrochemical streams.

To complicate matters, the global helium shortage has reduced the availability – and increased the cost – of helium gas, jeopardizing workflow continuity.

Implement the latest GC technologies without disrupting your workflow

Agilent's Fast Refinery Gas Analyzer (RGA) with hydrogen carrier gas enables a complete RGA analysis in **less than 8 minutes**. Like every Agilent RGA, it is based on the Agilent's 7890 GC system, and is factory pre-tested and pre-configured to deliver critical results quickly – while saving you precious start-up time. Other advantages include:

- Rapid cycling for maximum sample throughput
- Micropacked columns housed in an external isothermal oven for stable analysis of hydrogen sulfide and oxygen, along with other permanent gases
- The ability to use hydrogen as a carrier gas – reducing your helium dependence and operational costs
- Excellent reproducibility and analytical performance

Ready to go:

Every Agilent Fast RGA Analyzer reflects innovative technology and a stringent quality control process:

Factory

- System setup, column installation, and leak testing
- Instrument checkout
- Performance verification using application checkout mix

Delivery

- Method-specific instrument manual
- CD-ROM with method parameters and checkout data for out-of-the-box operation
- Includes method-specific consumables and re-ordering information

Installation

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

Customized to get you
on the **FAST TRACK**



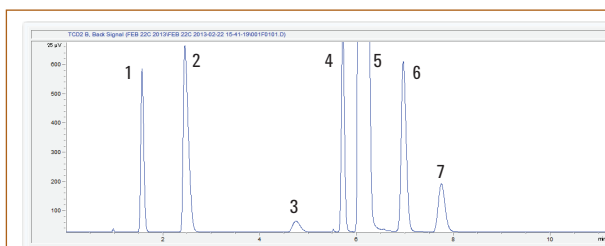
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An ideal combination of speed and stability

The Agilent Fast RGA with hydrogen carrier gas features an external, isothermal oven that holds the micropacked columns at a constant temperature during analysis. This enhances analyte stability, allowing you to *simultaneously determine* oxygen and hydrogen sulfide in a single run.

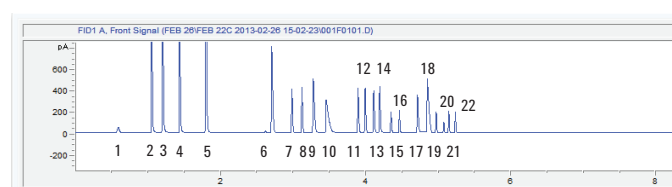
What's more, multiple valves together with optimized timing for 2-dimensional GC analysis reduce run time to less than 8 minutes, with elution times as low as:

- Less than 2 minutes for hydrogen
- Within 6 minutes for hydrocarbons (up to C₅)
- Within 8 minutes for permanent gases

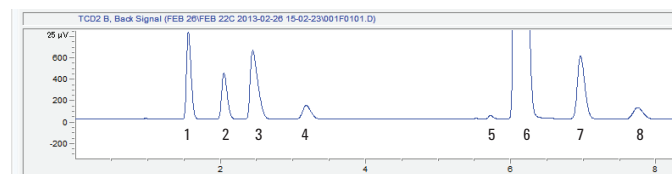


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|-------------------|---------------------|-------------|--------------------|
| 1. carbon dioxide | 3. hydrogen sulfide | 5. nitrogen | 7. carbon monoxide |
| 2. ethane | 4. oxygen | 6. methane | |

Factory test of the Agilent Fast RGA with hydrogen carrier gas. Note the quality of the hydrogen sulfide peak (peak 3).



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|--------------|----------------|----------------------------|-----------------------------|
| 1. n-hexane* | 7. i-butane | 13. i-butene | 19. t-2-pentene |
| 2. methane | 8. n-butane | 14. c ₂ -butene | 20. 2-methyl 2-butene |
| 3. ethane | 9. propadiene | 15. i-pentane | 21. 1-pentene |
| 4. ethylene | 10. acetylene | 16. n-pentane | 22. c ₂ -pentene |
| 5. propane | 11. t-2-butene | 17. 1,3-butadiene | |
| 6. propylene | 12. 1-butene | 18. propyne | |



- | | | | |
|--------------------|--------------|-------------|------------|
| 1. CO ₂ | 3. ethane | 5. oxygen | 7. methane |
| 2. ethylene | 4. acetylene | 6. nitrogen | 8. CO |



1. hydrogen

*Peak one (n-hexane) on FID channel is C₆ plus composite.

Separation of hydrocarbons, permanent gases, and hydrogen. The analyzer's three detectors (FID/TCD/TCD) collect data simultaneously – allowing you to perform a complete analysis of gases and hydrocarbons (to n-C₆).

Ordering information:

When ordering, please specify:

G3445B#530 – Fast Refinery Gas Analyzer with Hydrogen Carrier Gas

Put your laboratory on the analytical fast track

Contact your local Agilent Representative or Agilent Authorized Distributor at agilent.com/chem/contactus

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

Visit agilent.com/chem/appkits

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