



WASSON·ECE
INSTRUMENTATION
Engineered Solutions, Guaranteed Results.

Refinery Gas Analyzers

Wasson-ECE Refinery Gas Analyzers (RGA) are an integral part of any HPI lab. These instruments often carry the heaviest sample loads because of the critical information they provide. RGAs provide valuable information regarding plant operation, unit optimization, and quality control. Our RGA systems are designed for flexibility while maintaining the accurate and repeatable results our clients have come to expect.

As a premier channel partner of Agilent Technologies, Wasson-ECE extends the capabilities of the 8890 Gas Chromatograph to meet key requirements of refinery gas analysis. The Wasson-ECE RGA incorporates our specially-designed aux oven, which holds up to five additional rotary valves and six columns, extending the analysis capabilities far beyond traditional methods.

At Wasson-ECE we strive to produce a product that is innovative and state-of-the-art to help our customers overcome their analytical challenges. The flexibility of our RGA systems can ease bench space issues by combining analyses into a single instrument while maintaining an easy-to-service system with minimal downtime.

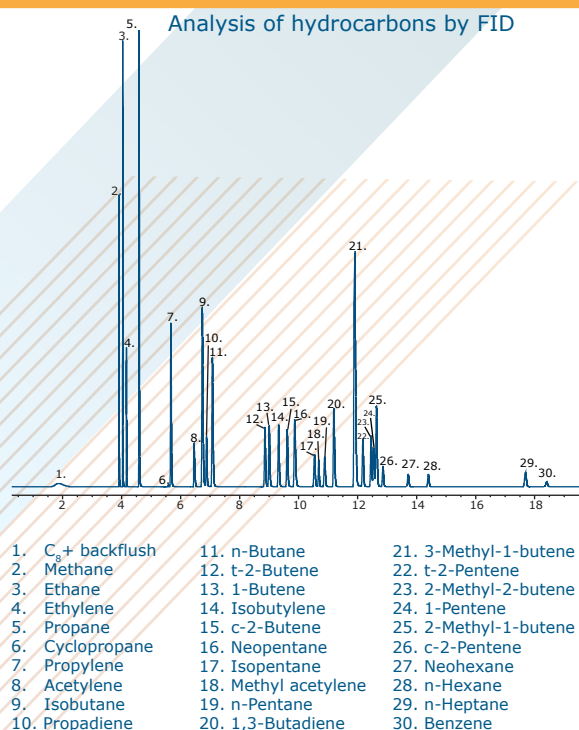


RGA Features

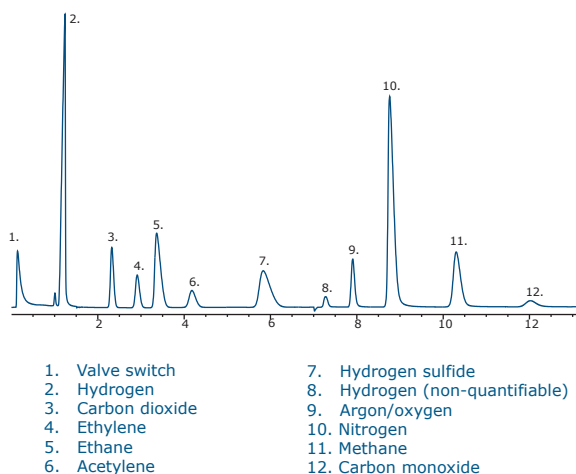
- **Complete range of analyzers** for refinery and other petroleum gases and liquids
- **Includes method development, selection of valves, and columns** in all configurations
- **Dual TCDs and a single FID** for the simultaneous analysis of fixed gases and hydrocarbons
- **Wasson-ECE Auxiliary Oven** which provides a second thermal zone
- **Customized reports** including calculations for mole %, weight %, or volume %, and calorific value available
- **Optional liquid sampling valves or On-board Vaporizer** expands the analytical capabilities to liquefied gases
- **Optional fourth detector** available on all Super RGA configurations



383-Standard Refinery Gas Analysis

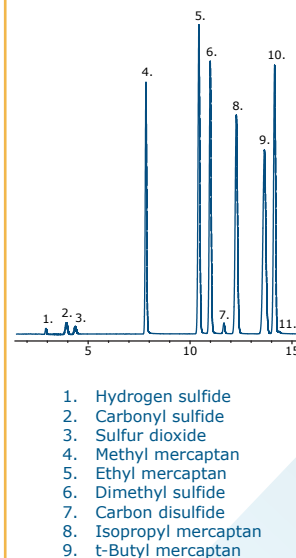


Fixed gas analysis by dual TCDs



383D-SCD

Analysis



Wasson-ECE Super RGA

Wasson-ECE has the unique ability to add a fourth detector to the GC, building our Super RGA series of analyzers. The additional detector expands the analytical capabilities of the standard RGA to accommodate applications such as sulfurs, oxygenates, heavy hydrocarbons, and trace CO/CO₂. This increased flexibility in configurations can reduce the number of GCs used in a lab, saving clients valuable bench space and time.

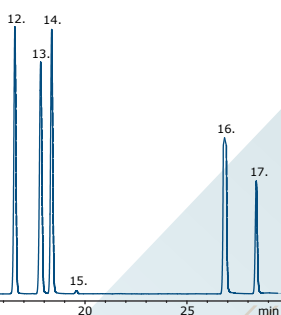
Performance Guarantee

From hardware to analysis we stand behind our quoted application. Prior to shipping the instrument, chromatograms are submitted for customer approval. Performance is guaranteed to the client's actual sample, not just a generic standard. Any problems with the application during the first year are covered under warranty for an unparalleled performance guarantee.

The Wasson-ECE Turn-key Process

- **Sales**
 - o Application designed to customer's requirements
- **Factory Application**
 - o Method development and application setup
 - o Customer samples are run to verify performance
 - o Chromatograms are sent for client approval
 - o Factory acceptance training if desired
- **Installation**
 - o Experienced Wasson Field Service Technician
 - o Analysis of client's real world samples
 - o Calibration and familiarization
- **Customer Satisfaction**
 - o Follow up after installation
 - o Knowledgeable and responsive service team
 - o Optional preventative maintenance visits or service contracts

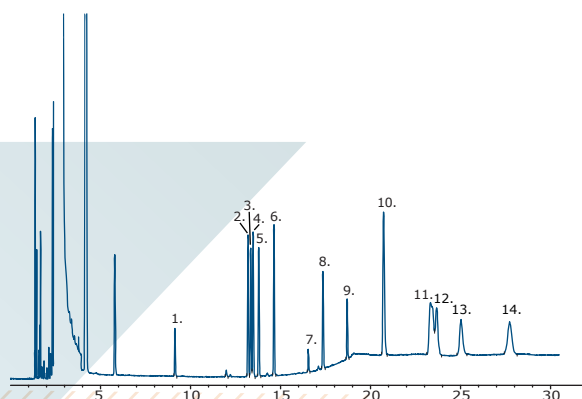
Analysis of sulfurs by SCD



- 10. n-Propyl mercaptan
- 11. Ethyl methyl sulfide
- 12. Thiophene/2-butanethiol
- 13. Diethyl sulfide
- 14. n-Butyl mercaptan
- 15. Dimethyl disulfide
- 16. Diethyl disulfide
- 17. Phenyl mercaptan

383D-OXY

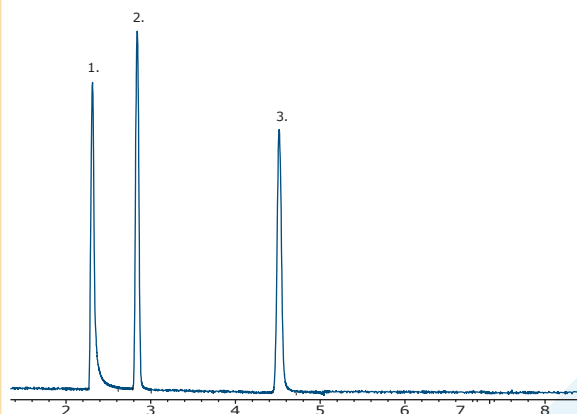
Analysis of oxygenates by second FID



- 1. Dimethyl ether
- 2. Ethyl tert-butyl ether
- 3. Methyl tert-butyl ether
- 4. Diisopropyl ether
- 5. sec-Butyl methyl ether
- 6. tert-Amyl methyl ether
- 7. Methanol
- 8. Acetone
- 9. Ethanol
- 10. iso-/n-Propanol composite
- 11. iso-/2-Butanol composite
- 12. tert-Butanol
- 13. n-Butanol
- 14. tert-Amyl alcohol

383D-MET

Analysis of trace CO/CO₂ by second FID/methanizer



- 1. Carbon monoxide
- 2. Methane
- 3. Carbon dioxide

Wasson-ECE RGA Configuration Options

Application Number	383	383(D)-OXY*	383(D)-MET*	383D-DHA*	383D-SCD*	583	783(D)*
Description	Standard RGA	RGA and oxygenates	RGA and trace CO/CO ₂	RGA and DHA	RGA and sulfurs	Fast RGA	RGA and heavy hydrocarbons
Runtime (min.)	<20	<20/22	<20	<20/140	<20/25	<7	<20
RGA Analyses							
Fixed Gases	●	●	●	●	●	●	●
C ₁ -C ₅						●	
C ₁ -C ₇ , Configurable**	●	●	●	●	●		●
H ₂ S	●	●	●	●	●	●	●
Sulfurs					●		
Oxygenates		●					
Trace CO/CO ₂			●				
C ₅ -C ₁₂							●
BTEX							●
DHA				●			●
Optional Analytical Upgrades							
Ammonia*	●						●
Analysis of LP Samples ***	●	●	●	●		●	●
Separation of O ₂ and Ar	●	●	●	●	●	●	●
Inert sample lines	●	●	●	●	●	●	●
Standard Method Compliance (depending upon final configuration)							
ASTM D1946	●	●	●	●	●	●	●
ASTM D2163	●	●	●	●	●	●	●
ASTM D5134				●			
ASTM D5504					●		
ASTM D5623					●		
ASTM D6729				●			
ASTM D6730				●			
ASTM D7423		●					
ASTM D7754		●					
ASTM D7833	●	●	●	●	●	●	●
UOP 539	●	●	●	●	●	●	●
UOP 603			●				

(D) Refers to a four detector system utilizing dual Wasson-ECE TCDs

*For the complete analysis multiple methods are developed

** User can select between a C₆+, C₇+, or C₈+ backflush

***Liquid sampling valves or On-board Vaporizer available depending on system configuration

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