

Low-level Ammonia analyser ER610



- < 100 ppb detection limit
- for PEM fuel cells, fertiliser synthesis and biogas
- fast on-line analysis

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ER610

Low-level ammonia analyser

The low-level ammonia analyser accurately detects and quantifies trace amounts of ammonia in environmental, biological, or industrial samples. This ensures compliance with safety and environmental regulations, and helps monitor processes where ammonia presence could indicate contamination or inefficiency.

Principle of operation

The low-level ammonia analyser comprises a gas sampling valve (GSV), a suitable separation column, and Pulsed Discharge Detection (PDD); see figure 1. As ammonia readily adsorbs onto active surfaces, Sulfinert® (SilcoNert 2000®) deactivation is applied to the entire sample path, a measure that is critical for reliable and accurate quantification.

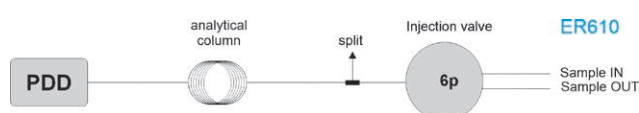


Figure 1 Diagram low level ammonia analyser



Figure 2 Low-level ammonia analyser on Thermo Trace GC1600

Results

Figure 3 demonstrates the analysis of 13.8 ppm ammonia. Further dilution demonstrated a lower limit of detection of < 100 ppb. Note the good peak shape and clear separation from water.

Injection: GSV (Gas Sampling Valve)
Detection: PDD (Pulsed Discharge Detector).

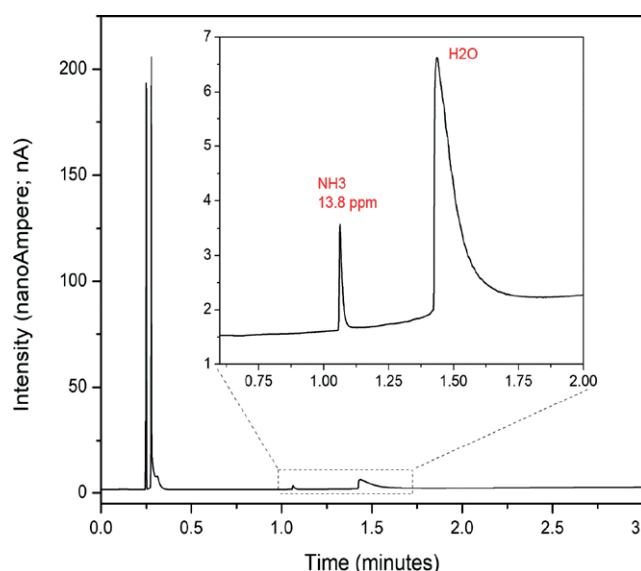


Figure 3 13.8 ppm NH₃ using GC-PDD. LOD: < 100 ppb

Specification

- Thermo Trace GC1600 with GSV, capillary column, PDD (Pulsed Discharge Detector)
- Ammonia specific separation column
- Chromeleon chromatography data system
- Runtime 2 minutes
- Minimum detectability: < 100 ppb
- Repeatability: < 1 %

Ordering information ER610 - ABCDE				
code X	0	1	2	3
GC model, power	1600, 230V	1610, 230V	1600, 115V	1610, 115V

For the selection of options ABCDE (e.g. valve type and passivation, pump and vacuum sampling, rotameter and sample connections, pressure and moisture sensors, hydrogen sensor for safety shut-off, power plug type and more), [see the options table in the order guide.](#)

About GAS

Global Analyser Solutions provides GC & GC-MS solutions for Energy, Refinery, Chemical and Environmental markets. Our analysers address a broad spectrum of measuring requirements with high precision and reliability. Please reach out for more information on our website. www.gassite.com