

Biogas Analyser

ER300



- For permanent gases, hydrocarbons and H₂S in biogas
- Robust and cost-effective

Get ready for tomorrow's analytics

Biogas Analyser

The GAS Biogas Analyser complies with several international standards, including ASTM D1945, D1946, ISO 6974, 6975, 6976, and GPA 2261, 2177, 2186, and 2286.

Principle of operation

The GAS Biogas Analyser (figure 1) is a single-channel analyser that measures all components of interest like permanent gases, light hydrocarbons and H₂S in 9 minutes. The micropacked columns offer low carrier gas consumption. Sulfinert tubing guarantees optimal analysis of sulphur components. Diaphragm valves and InstantConnect detector technology result in a robust and flexible instrument with >99% uptime.

Instrument specification

- Thermo Trace GC1600 with InstantConnect TCD, external valve oven, 2 diaphragm valves (rotary valves are optional), 3 micro-packed columns.
- Chromeleon chromatography data system
- Runtime 9 minutes
- Minimum detectability < 0.01 %
- Repeatability < 1 %
- Calorific value calculation pack optional

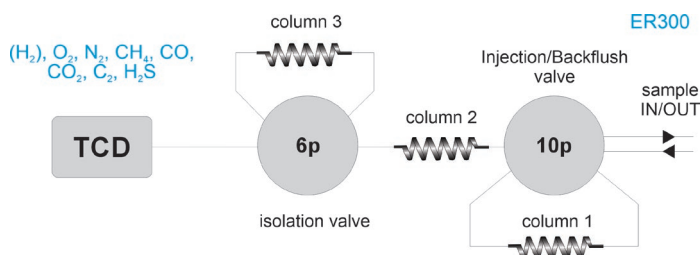


Figure 1 Diagram ER300 analyser



Figure 2 InstantConnect injector/detector technology

Results

Figure 3 shows the chromatogram, while figure 4 reports the repeatability.

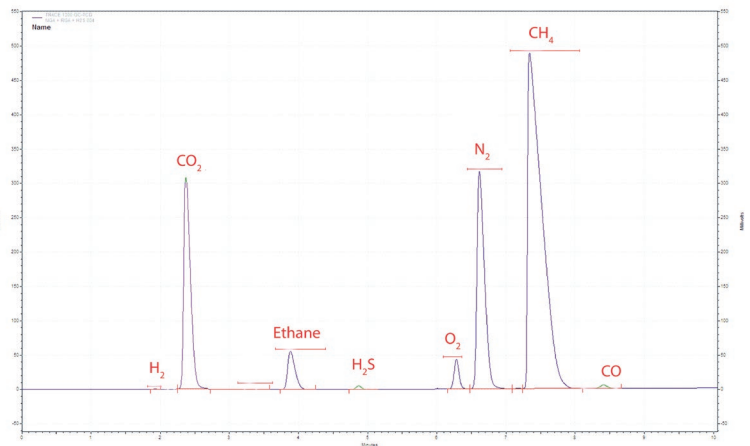


Figure 3 Chromatogram Biogas Analyser (TCD)

TRACE 1300 GC-FID	Methane Area	Ethane Area	Propane Area	TRACE 1300 GC-TCD	CO2 Area	Ethane Area	Nitrogen Area	Methane Area
Sample ID				Sample ID				
R reprotst NGA 111	20139243	1739944	640911	Reprotst NGA 111	2226454	5898353	5345064	90507939
R reprotst NGA 112	20066079	1734190	638430	Reprotst NGA 112	2217093	5902294	5346925	90445635
R reprotst NGA 113	20044487	1731425	637100	Reprotst NGA 113	2215965	5903676	5346602	90526422
R reprotst NGA 114	20036909	1732525	637037	Reprotst NGA 114	2227435	5904121	5345091	90517862
R reprotst NGA 115	20018051	1730020	636031	Reprotst NGA 115	2213500	5897462	5346060	90501697
R reprotst NGA 116	20091304	1733729	637896	Reprotst NGA 116	2217296	5901460	5349411	90488306
R reprotst NGA 117	20025051	1729628	636297	Reprotst NGA 117	2222737	5903879	5349656	90549145
R reprotst NGA 118	20075026	1735024	637270	Reprotst NGA 118	2219658	5908502	5350448	90595649
R reprotst NGA 119	19994570	1727638	636393	Reprotst NGA 119	2223410	5902205	5351021	90504111
R reprotst NGA 120	20012133	1728047	635546	Reprotst NGA 120	2217703	5904059	5353904	90538117
R reprotst NGA 121	20010572	1728331	635273	Reprotst NGA 121	2225662	5898589	5345321	90599110
R reprotst NGA 122	20031270	1730048	635984	Reprotst NGA 122	2219024	5902849	5351045	90574361
R reprotst NGA 123	19971068	1723629	634951	Reprotst NGA 123	2224970	5902603	5350286	90568154
R reprotst NGA 124	20019514	1728056	634989	Reprotst NGA 124	2226904	5901536	5349733	90598430
R reprotst NGA 125	20002092	1725500	635194	Reprotst NGA 125	2222668	5904325	5345351	90531033
R reprotst NGA 126	19945816	1722529	632508	Reprotst NGA 126	2232354	5907475	5351045	90639410
R reprotst NGA 127	19970722	1726861	633246	Reprotst NGA 127	2224065	5903110	5350234	90640979
R reprotst NGA 128	20004032	1728207	636239	Reprotst NGA 128	2219309	5904037	5352404	90670039
R reprotst NGA 129	20023385	1729286	635917	Reprotst NGA 129	2218183	5913463	5352165	90602028
R reprotst NGA 130	19997280	1721256	634289	Reprotst NGA 130	2221801	5909808	5346745	90588078

M in:	19907280	1721256	632508	M in:	2213580	5897482	5345064	90445635
M ax:	20139243	1739944	640911	M ax:	2232354	5913463	5353904	90670039
M ean:	20019430	1729295	636074	M ean:	2221734	5903696	5349926	90562235
Std Dev:	51251	4519	1835	Std Dev:	4762	3839	2770	58659
%RSD:	0.26	0.26	0.29	%RSD:	0.22	0.07	0.05	0.07

Figure 4 Repeatability

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