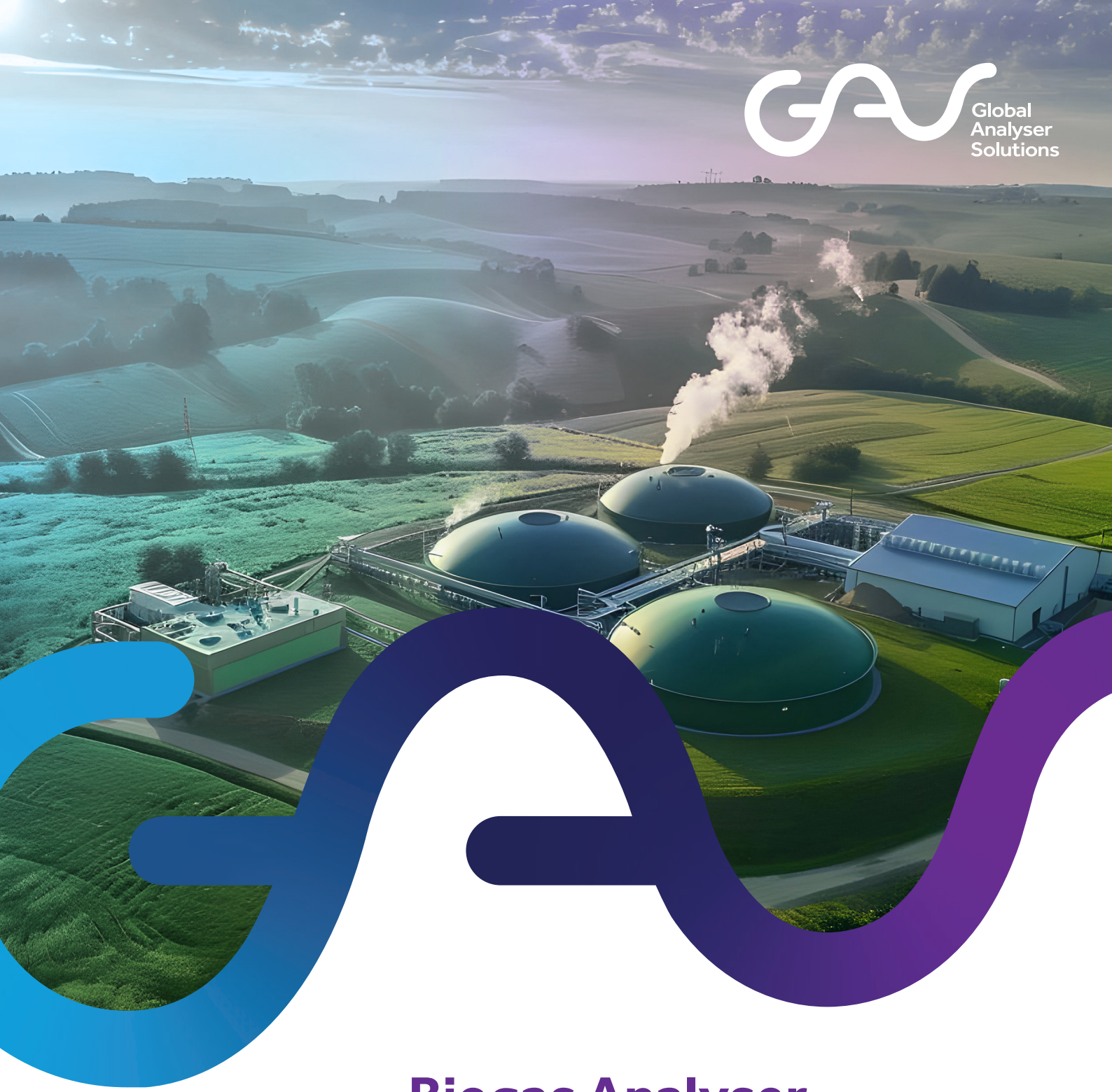


Global Analyser Solutions

Biogas Analyser

EV300



- For permanent gases, hydrocarbons and H_2S in biogas
- Robust and cost-effective

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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 such as permanent gases, light hydrocarbons and H_2S 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.
- Runtime 9 minutes
- Minimum detectability < 0.01 %
- Repeatability < 1 %
- Calorific value calculation pack optional

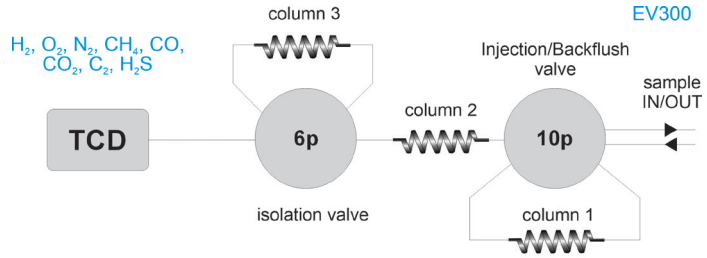


Figure 1 Diagram Biogas analyser

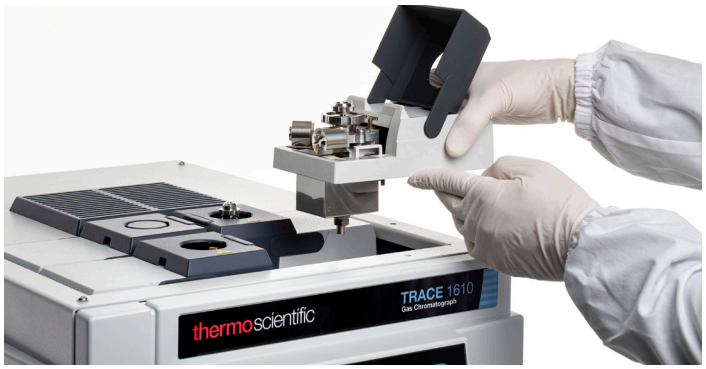


Figure 2 InstantConnect injector/detector technology

Results

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

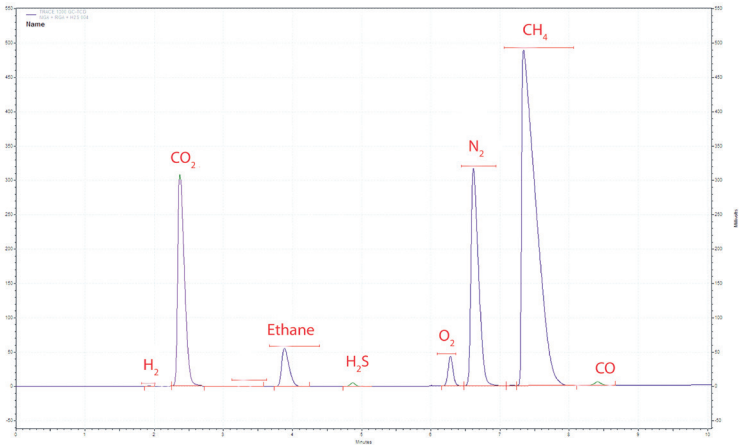


Figure 3 Chromatogram Biogas Analyser (TCD)

TRACE 1300 GC-FID Sample ID	Methane Area	Ethane Area	Propane Area
Reprotest NGA 111	20139243	1739944	640911
Reprotest NGA 112	20066079	1734190	638430
Reprotest NGA 113	20044487	1731425	637100
Reprotest NGA 114	20036908	1732525	637037
Reprotest NGA 115	20018051	1730020	636031
Reprotest NGA 116	20091304	1733729	637896
Reprotest NGA 117	20025051	1729628	636297
Reprotest NGA 118	20075026	1735024	637270
Reprotest NGA 119	19994570	1727838	636393
Reprotest NGA 120	20012133	1728047	635546
Reprotest NGA 121	20010572	1728331	635273
Reprotest NGA 122	20031270	1730048	635984
Reprotest NGA 123	19971068	1723629	634951
Reprotest NGA 124	20019514	1728056	634989
Reprotest NGA 125	20002092	1728500	635194
Reprotest NGA 126	19945816	1722529	632508
Reprotest NGA 127	19970722	1723681	633248
Reprotest NGA 128	20004032	1728207	636239
Reprotest NGA 129	20023385	1729286	635917
Reprotest NGA 130	19907280	1721256	634269
Min:	19907280	1721256	632508
Max:	20139243	1739944	640911
Mean:	20019430	1729295	636074
Std Dev:	51251	4519	1835
%RSD:	0.26	0.26	0.29

TRACE 1300 GC-TCD Sample ID	CO2 Area	Ethane Area	Nitrogen Area	Methane Area
Reprotest NGA 111	2226454	5898353	5345064	90507939
Reprotest NGA 112	2217093	5902294	5346925	90445635
Reprotest NGA 113	2215965	5903676	5346602	90526422
Reprotest NGA 114	2227435	5904121	5345091	90517862
Reprotest NGA 115	2213580	5897482	5346060	90501697
Reprotest NGA 116	2217296	5901460	5349411	90488306
Reprotest NGA 117	2222737	5903879	5349656	90549145
Reprotest NGA 118	2219658	5908502	5350448	90595649
Reprotest NGA 119	2223410	5902305	5351021	90504111
Reprotest NGA 120	2217703	5904050	5353904	90638117
Reprotest NGA 121	2225062	5898589	5345321	90599110
Reprotest NGA 122	2219024	5902849	5351045	90574361
Reprotest NGA 123	2224970	5902603	5350286	90568154
Reprotest NGA 124	2226904	5901536	5349733	90598430
Reprotest NGA 125	2223668	5904325	5345351	90531033
Reprotest NGA 126	2232354	5907475	5351045	90639410
Reprotest NGA 127	2224965	5903110	5350234	90640979
Reprotest NGA 128	2219309	5904037	5352404	90670039
Reprotest NGA 129	2216183	5913463	5352165	90560228
Reprotest NGA 130	2221801	5909808	5346745	90588078
Min:	2213580	5897482	5345064	90445635
Max:	2232354	5913463	5353904	90670039
Mean:	2221734	5903696	5348926	90562235
Std Dev:	4782	3839	2770	59659
%RSD:	0.22	0.07	0.05	0.07

Figure 4 Repeatability

Ordering information	EV30X - 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