Biogas analysis

- **Calculation of combustion engineering parameters**
- **Method of analysis**

PRODUCT SHEET

February 2010

Optimization requires knowledge of gas quality
Good knowledge of actual gas quality is essential for optimum utilisation of biogas. DGC offers the required composition analysis of the biogas.

We carry out analyses for main components in our own laboratory in Hørsholm. We supplement the analysis with a calculation of combustion engineering parameters, such as calorific values (net and gross), Wobbe index, density, compressibility factor and methane number.

In co-operation with a German laboratory with experience in biogas analysis we offer analysis of other components (e.g. organic silicon compounds).

You may choose between the following packages of biogas analysis:

Package no. 1 - Determination of calorific value of biogas or natural gas
- Composition analysis (hydrocarbons, CO_2, O_2, N_2 etc.).
- Calculation of calorific values (net, gross), Wobbe index, density, compressibility factor and methane number.

Package no. 1 - Price per sample:
€ 300, excl. VAT

Package no. 2 - Biogas analysis - silicon compounds
- Composition analysis (hydrocarbons, CO_2, O_2, N_2 etc.).
- Calculation of calorific values (net, gross), Wobbe index, density, compressibility factor and methane number.
- Analysis of organic silicon compounds, cf. the list overleaf.
- Analysis of hydrogen sulphide, H2S.

Package no. 2 - Price per sample:
€ 650, excl. VAT

Package no. 3 - Biogas analysis - all-inclusive analysis
- Composition analysis (hydrocarbons, CO_2, O_2, N_2 etc.).
- Calculation of calorific values (net, gross), Wobbe index, density, compressibility factor and methane number.
- Analysis of all components, cf. the list overleaf.

Package no. 2 - Price per sample:
€ 800, excl. VAT

The prices for Packages no. 2 and no. 3 are a guideline only, as they are subject to transportation and handling costs as well as analysis prices in Germany.

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Analysis method: GC-TCD/ECD/MS

O_2	%-vol
N_2	%-vol
CH_4	%-vol
CO_2	%-vol
F12	mg/m³n
F11	mg/m³n
F113	mg/m³n
1,1,1 - Trichlorethane	mg/m³n
Tetrachloethylene	mg/m³n
Vinyl chloride	mg/m³n
1,1 - Dichloethylene	mg/m³n
cis 1,2 - Dichloethylene	mg/m³n
trans 1,2 - Dichloethylene	mg/m³n
Dichlormethane	mg/m³n
Trichlormethane	mg/m³n
Tetrachlormethane	mg/m³n
Methyl chloride	mg/m³n
1,1 - Dichlorethane	mg/m³n
1,2 - Dichlorethane	mg/m³n
Total, Chloride	mg/m³n
Total, Fluoride	mg/m³n
Benzene	mg/m³n
Toluene	mg/m³n
Ethylbenzene	mg/m³n
m/p - Xylene	mg/m³n
o - Xylene	mg/m³n
Cumene	mg/m³n
Propylbenzene	mg/m³n
Mesitylene	mg/m³n
1,2,4 - Trimethylbenzene	mg/m³n
1,2,3 - Trimethylbenzene	mg/m³n
Hydrogen sulphide, H2S	mg/m³n
Organic silicon compounds	
Tetramethylsilane	mg/m³n
Trimethylsilanol	mg/m³n
Hexamethyldisiloxane	mg/m³n
Hexamethylcyclotrisiloxane	mg/m³n
Octamethyltrisiloxane	mg/m³n
Octamethylcyclotetrasiloxane	mg/m³n
Decamethyltetrasiloxane	mg/m³n
Decamethylcyclopentasiloxane	mg/m³n
Total, organic SI compounds	mg/m³n
Total, SI*	mg/m³n

*calculated by means of analysis of individual compounds

Further agreement can be made to analyse other components. DGC may acquire information on prices at any time

Contact us
If you have any questions to the subjects described on the product sheet or other DGC services, you are welcome to contact us:

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Profile
DGC is a specialized consultancy and development company within energy and environment. DGC's main focus area is gas utilization.

DGC offers consultancy, measurements, laboratory testing, training and certification.

DGC has its head office and laboratory in Hørsholm, north of Copenhagen and a local office in Aalborg.