

## Biodiesel analyser

### FAME & methanol

PF600



- EN 14103 & EN 14110
- Two methods in one analyser
- Optional: integration with glycerol and triglyceride analysis

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# Biodiesel analyser: FAME & methanol

Biodiesel is an alternative fuel produced from renewable sources such as vegetable oils and organic waste. Specific directives from worldwide authorities have been promoting the use of biodiesel blended with petro-diesel. Biodiesel must meet a set of requirements defined in ASTM and EN standards. The analyser described here reports FAME and Methanol content.

## System setup

The GAS biodiesel analyser is an efficient and cost-effective solution for 2 biodiesel GC methods integrated in one GC system:

- EN 14103: FAME; ester and linolenic acid methyl ester content: Using SSL (split/splitless injector), Rtx-WAX column (30m\*0,32mm; 0.25um), FID. Liquid sample injection (figure 2).
- EN 14110: Methanol content Using SSL, Rxi-1 column (30m\*0.25mm; 1.00um), FID. Headspace injection (figure 3).

Each method has its own separate analysis channel, so in total 2 sets of injectors, separation columns and flame ionisation injectors are applied (figure 1).

*OPTIONAL: EN 14105 / ASTM 6584 (free and total glycerol and mono-, di-, triglyceride content) can be added using a second gaschromatograph, efficiently using one liquid autosampler (Triplus RSH), injecting on 3 separated liquid injectors. The entire workflow can be automated, from methyl ester preparation and standard dilution to injection using a single Triplus autosampler, for improved data precision, reproducibility and lab productivity. The operator has to weigh the sample and place it in the sample tray, and all necessary steps and reporting are completed fully automated (figure 4). Contact us for more information.*

## Specification

- Thermo Trace GC1600 with dual SSL (Split-splitless injector), dual FID and dual capillary columns
- Chromeleon chromatography data system
- Runtime 27 minutes

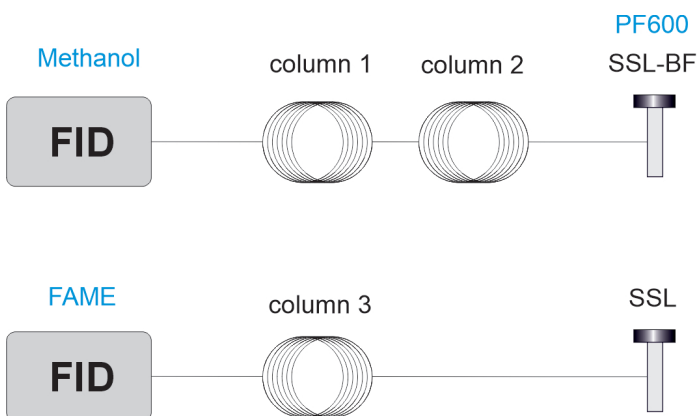


Figure 1 Diagram biodiesel analyser EN 14103 & EN 14110

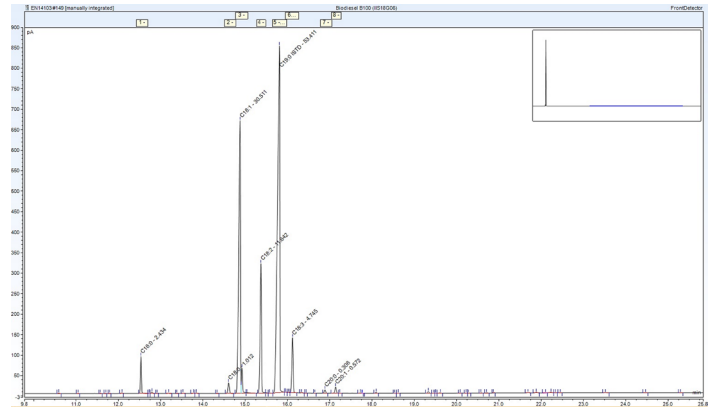


Figure 2 Chromatogram EN 14103. Fatty Acid Methyl Esters (FAME)

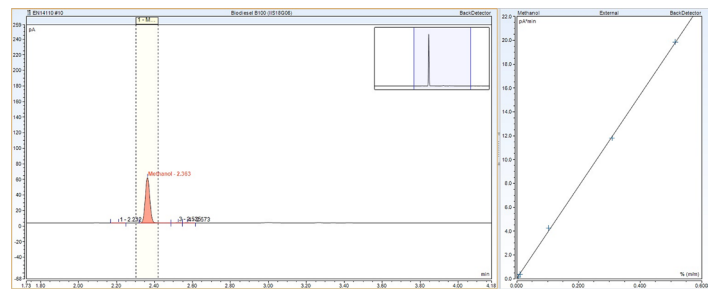


Figure 3 Chromatogram EN 14110. Methanol

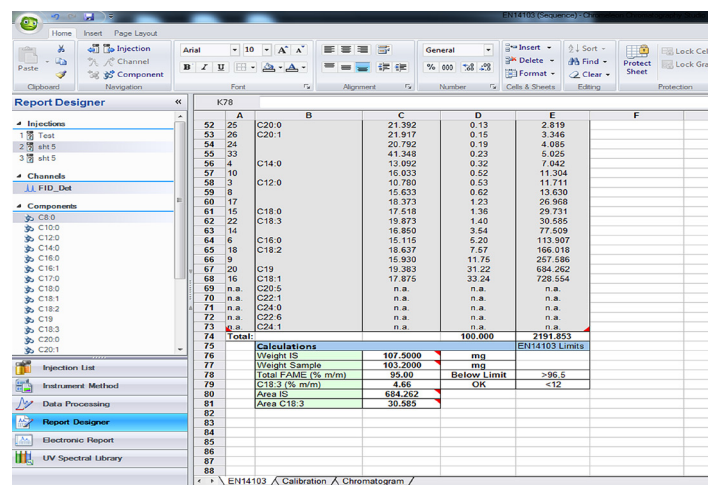


Figure 4 Automated reporting after each run by Chromeleon report designer

Ordering information PF60X - ABCDE				
code X	0	1	2	3
GC model, power	1600, 230V	1610, 230V	1600, 115V	1610, 115V

For the selection of options (e.g. GC oven cryo valves, 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.