

Application note # C-13026

Analysis of Biodiesel (B100) using the HI-BIODIESEL 105 Column (UNI EN 14105, ASTM D6584)

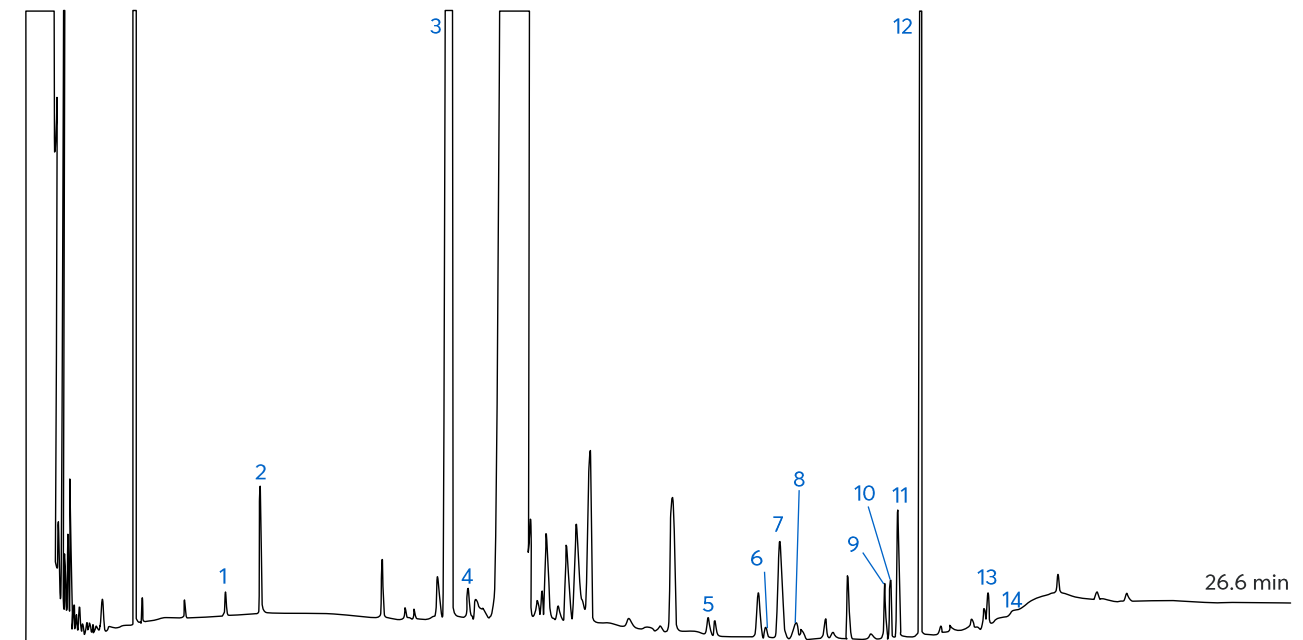


Figure 1: Analysis of Biodiesel (B100) using the Avantor® Hichrom HI-BIODIESEL 105 column.

Method Details

CONDITIONS

Oven Program:	50 °C (1 min), 15 °C/min, 180 °C, 7 °C/min, 230 °C, 30 °C/min, 370 °C (15 min)
Carrier Gas:	Nitrogen, 3 mL/min
Injector:	PTV (from 100 °C to 370 °C)
Detector:	FID, 380 °C
Sample:	Biodiesel sample MSTFA derivatized. Butanetriol and Tricaprin (internal standards) added.

Always check the latest and official method information from the applicable governing body prior to analysis.

The HI-BIODIESEL 105 is a method specific column designed for the analysis of Biodiesel, including glycerin, mono-, di- and triglyceride content.

PEAK IDENTIFICATION

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|----------------------------|------------------------------------|-----------------------------------|
| 1. Glycerin | 6. Mono linolenyl glycerol | 11. beta-Sitosterol TMS |
| 2. Butanetriol | 7. Mono oleoyl glycerol + Linoleyl | 12. Tricaprin |
| 3. FAME 16 | 8. Mono stearoyl | 13. Diolein |
| 4. C16:0 | 9. Campesterol TMS | 14. beta-Sitosterol glucoside TMS |
| 5. Mono palmitoyl glycerol | 10. Stigmasterol TMS | |

ORDERING TABLE

Product	Details	Dimensions	Part Number
Avantor® Hichrom HI-BIODIESEL 105	GC Column	0.32 mm, 0.10 µm, 15 m	HI40-32-010-15

Acknowledgment: Analysis carried out by Lic. Rodolfo A. Cabrera (Unitec Bio S.A., Santa Fe, Argentina).