

# HPLC Application

ID No.: 16651

## BioEthanol 18HR Fermentation 3-58-51

**Column:** Rezex™ ROA-Organic Acid H+ (8%), LC Column 300 x 7.8 mm, Ea

**Dimensions:** 300 x 7.8 mm ID

**Order No:** 00H-0138-K0

**Elution Type:** Isocratic

**Eluent A:** 0.005N Sulfuric Acid

Gradient	Step No.	Time (min)	Pct A
Profile:	1	0	100

**Flow Rate:** 0.6 mL/min

**Col. Temp.:** 60 °C

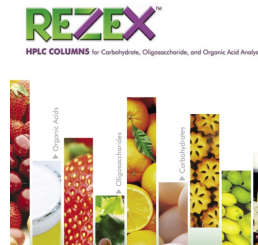
**Detection:** Refractive Index (RI) @ (40 °C)

**Detector Info:** Shimadzu Prominence LC-20A System (LC-20AT pump, DGU-20A3 Membrane Degasser, SIL-20AC Autosampler, CTO-20A Column Oven, RID-10A Differential Refractive Index Detector, CBM-20A System Controller, Class-VP Chromatography Data System SecurityGuard™ Guard Cartridge System extends column lifetime.

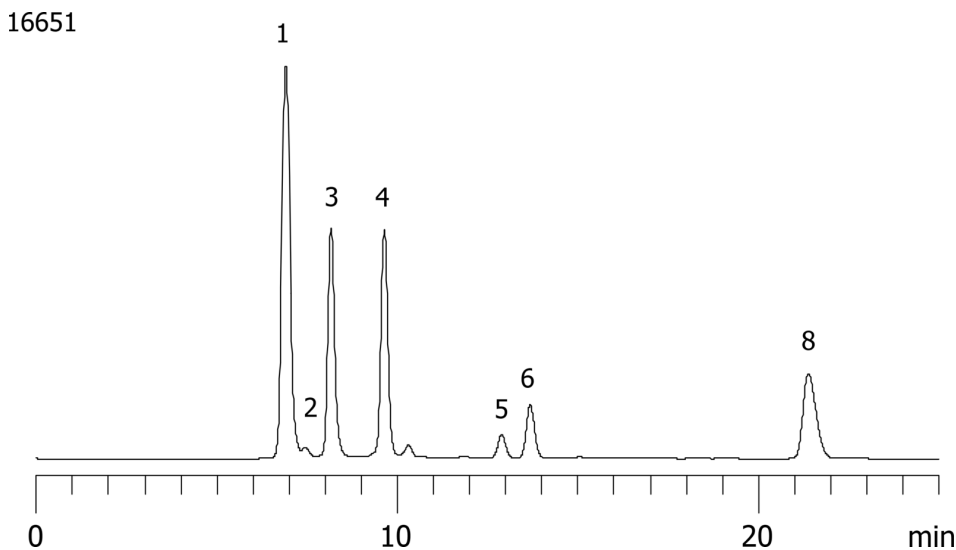
**Analyst Note:**

- SecurityGuard Cartridges, Carbo-H 4 x 3.0mm, 10/Pk Part No.: AJ0-4490

- Holder Part No.: KJ0-4282



Products used in this application:



**ANALYTES:**

- 1** Dp4+  
Retention Time: 6.9 min
- 2** Dp3  
Retention Time: 7.4 min
- 3** Maltose  
Retention Time: 8.1 min
- 4** Glucose  
Retention Time: 9.6 min
- 5** Lactic acid  
Retention Time: 12.8 min
- 6** Glycerol  
Retention Time: 13.7 min
- 7** Acetic acid  
Retention Time: 15 min
- 8** Ethanol  
Retention Time: 21.3 min

