

## FAMES In Monterey Jack Cheese by GC/FID on Zebron ZB-FAME

**Column:** Zebron ZB-FAME, GC Cap. Column 30m x 0.25mm x 0.2µm , Ea  
**Phase:** Proprietary Pesticides Phase  
**Dimensions:** 30 meters x 0.25 mm x 0.2 µm  
**Order No:** 7HG-G033-10  
**Oven Profile:** 100 °C for 2 min to 140 °C @ 10 °C/min to 190 °C @ 3 °C/min to 260 °C @ 30 °C/min for 2 min

**Carrier Gas:** Constant Flow Helium, 1.2 mL/min  
**Injection:** Split 50:1 1 µL @ 240°C  
**Detection:** Flame Ionization (FID) (260°C)

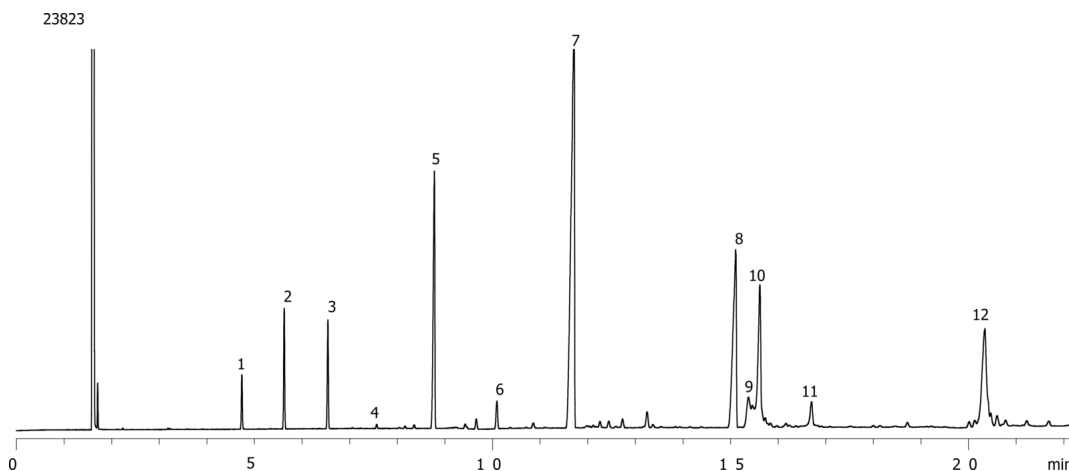
**Analyst Note:** Recommended Liner: Zebron PLUS Single Taper with Wool, 4 mm ID  
Liner Part No.: AG2-0A11-05 (for Agilent systems)  
Inlet Seal: AG0-8620 (Gold Plated Easy Seal)  
Septum: AG0-4696 (PhenoRed-400)

### Sample Preparation

1. Weigh out 100-200 mg of cheese and place it into a scintillation vial
2. Add 100 mg pyrogalllic acid
3. Add 2 mL ethanol followed by 4 mL deionized water and 4 mL NH<sub>4</sub>OH (concentrated)
4. Incubate @ 70 °C for 20 min then add 10 mL HCl and incubate for an additional 25 min
5. Extract triglycerides using 2 mL diethyl ether and 2 mL chloroform
6. Blow down extraction liquid
7. Reconstitute in 1 mL toluene and 2 mL 8 % boron trifluoride in methanol
8. Cap reaction mixture, hold @ 100 °C for 45 min
9. After reaction, add 5 mL water, 1 mL hexane, and 1 g Na<sub>2</sub>SO<sub>4</sub>
10. Extract upper layer for GC analysis



Products used in this application:



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### ANALYTES:

- 1 C10:0
- 2 C11:0
- 3 C12:0
- 4 C13:0
- 5 C14:0
- 6 C15:0
- 7 C16:0
- 8 C18:0
- 9 C18:1 trans 9
- 10 C18:1 cis 9
- 11 C18:2 cis 9,12
- 12 C20:2 cis 11,14

