# GC Application

ID No.: **23925**

## FAMEs In Extra Virgin Olive Oil by GC/FID on Zebron ZB-FAME (60 m)

**Column:** Zebron ZB-FAME, GC Cap.Column 60m x 0.25mm x 0.2um, Ea

**Phase:** Proprietary Pesticides Phase

**Dimensions:** 60 meters x 0.25 mm x 0.2 µm

**Order No:** 7KG-G033-10

**Oven Profile:** 100 °C for 2 min to 165 °C @ 10 °C/min to 200 °C @ 1.5 °C/min to 280 °C @ 15 °C/min for 1 min

**Carrier Gas:** Constant Flow Helium, 1.2 mL/min

**Injection:** Split 50:1 1 µL @ 240°C

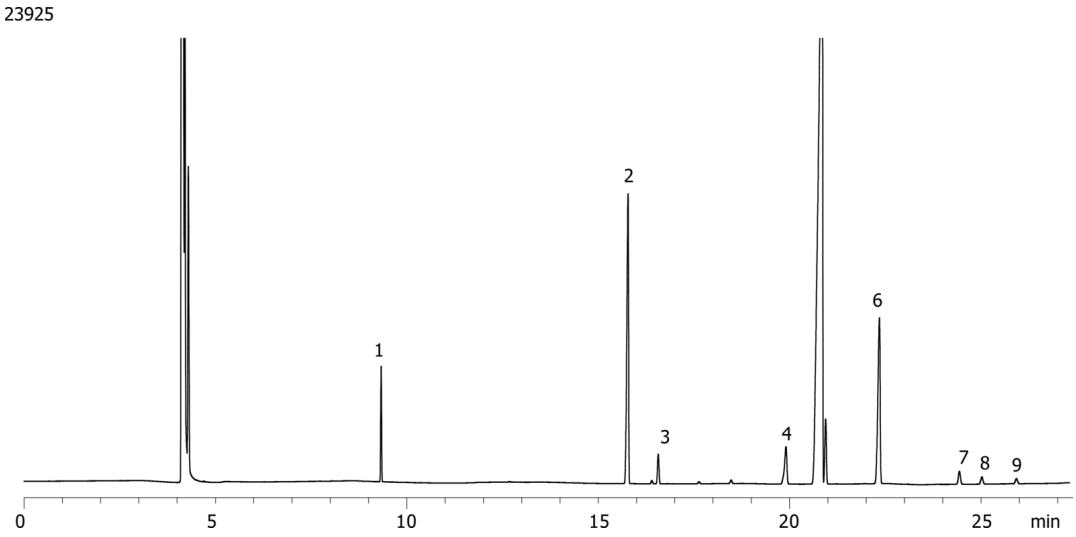
**Detection:** Refractive Index (260°C)

**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. Strata® Si-1 Tube, 1 g/6 mL (Part No.: 8B-S012-JCH) on a vacuum or positive pressure manifold
2. Wash cartridge with 6 mL of hexane
3. Load oil solution (0.12 g of oil in 0.5 mL of hexane)
4. Elute with 10 mL of hexane/diethyl ether (87:13)
5. Evaporate eluate under a steady stream of nitrogen
6. Dissolve purified oil residue in 1mL of heptane
7. Add 0.1 mL of 2N potassium hydroxide in methanol to purified oil solution
8. Cap tube and shake vigorously for 15 seconds
9. Leave to separate until upper layer becomes clear
10. Extract upper layer for GC analysis


**Products used in this application:**

Zebron




### ANALYTES:

**1** C11:0
**2** C16:0
**3** C16:1cis 9
**4** C18:0
**5** C18:1 cis 9
**6** C18:2 cis 9,12
**7** C18:3 cis 9,12,15
**8** C20:0
**9** C20:1 cis 11



For more information contact your Phenomenex Representative at support@phenomenex.com

Phenomenex products are available worldwide.

# Sample Preparation Details

for **GC** Application ID No.: **23925**

## FAMEs In Extra Virgin Olive Oil by GC/FID on Zebron ZB-FAME (60 m)

### PRODUCT DESCRIPTION:

Strata® SI-1 Silica (55 µm, 70 Å), 1 g / 6 mL, Tubes , 30/Pk

Order No.: 8B-S012-JCH

### SOLID PHASE EXTRACTION (SPE) PRODCEDURE:

**Note:** The solvent volumes shown below are for a 1 g bed mass.
The solvent volumes will need to be adjusted for a smaller or larger bed mass.

**Condition:**

**Load:**

Add 0.12 g oil to 0.5 mL hexane and load onto cartridge

**Wash:**

**Dry:**

**Elute:**

**Final Prep and Analysis:**

To reconstituted sample, add 0.1 mL of 2 N Potassium hydroxide in methanol. Cap tube and shake vigorously for 15 seconds. Leave to separate until upper layer becomes clear. Extract

Inject: 1 µL on HPLC Refractive Index @ 0.0000000000 (260°C)

| | ANALYTES: | Spiked Conc. (ng/mL) | Log P | pKa | % Rec | %RSC (n=0) |
|---|---|---|---|---|---|---|
| **1** | C11:0 | 0 | | | | |
| **2** | C16:0 | 0 | | | | |
| **3** | C16:1cis 9 | 0 | | | | |
| **4** | C18:0 | 0 | | | | |
| **5** | C18:1 cis 9 | 0 | | | | |
| **6** | C18:2 cis 9,12 | 0 | | | | |
| **7** | C18:3 cis 9,12,15 | 0 | | | | |
| **8** | C20:0 | 0 | | | | |
| **9** | C20:1 cis 11 | 0 | | | | |

**Note:** *This method is designed as a convenient starting point for further investigation and can be tailored to meet your extraction goals. Call your local Phenomenex Representative for assistance in method development and optimization techniques.*