# **GC** Application

ID No.: 23969



Products used in this application:

## FAMEs In Palm Oil by GC/FID on Zebron ZB-FAME

Add 2 mL of deionized water and vortex
Leave to separate until upper layer becomes clear

12. Extract upper layer for GC analysis

Zebron ZB-FAME, GC Cap.Column 60m x 0.25mm x 0.2um, Ea Column: Phase: **Dimensions:** 60 meters x 0.25 mm x 0.2 µm **Order No:** 7KG-G033-10 180 °C isothermal **Oven Profile: Carrier Gas:** Constant Flow Helium, 1.2 mL/min Injection: Split 100:1 1 µL @ 240°C **Detection:** Flame Ionization (FID) (240°C) Analyst Note: Recommended Accessories: 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 0.2 g of sample into a glass test tube 2. Add 3.8 mL of hexane and vortex 3. Condition SPE tube (Strata® Si-1, 2 g/12 mL, Part No.: 8B-S012-KDG) under vacuum with 6 mL of hexane; do not let bed go dry 4. Load sample with light vacuum 5. Elute with 5 mL of hexane:ethyl acetate (87:13) 6. Evaporate under nitrogen at 35 °C 7. Reconstitute with 4 mL of hexane 8. Add 200  $\mu$ L of 2 M potassium hydroxide/methanol solution and vortex 9. Leave at room temperature for 5 minutes

23969 3 6 5 2 1 89 10 8 10 12 14 16 18 20 min 6

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## **ANALYTES:**

- **1** C12:0
- 2 C14:0
- 3 C16:0
- C16:1 cis 9 4
- 5 C18:0
- 6 C18:1 cis 9
- C18:2 cis 9,12 7
- C18:3 cis 9,12,15 8
- 9 C20:0
- 10 C20:1 cis 11

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#### **PRODUCT DESCRIPTION:**

Strata $\circledast$  SI-1 Silica (55  $\mu$ m, 70 Å), 2 g / 12 mL, Giga Tubes , 20/Pk

Order No.: 8B-S012-KDG

#### SOLID PHASE EXTRACTION (SPE) PRODCEDURE:

**Note:** The solvent volumes shown below are for a 2 g bed mass.

The solvent volumes will need to be adjusted for a smaller or larger bed mass.

#### **Condition:**

## Load:

Add 0.2 g oil to 3.8 mL Hexane, load onto cartridge

Dry:

Elute:

#### Final Prep and Analysis:

To reconstituted sample, add 200  $\mu L$  of 2 M potassium hydroxide in methanol, cap tube and vortex. Wat 5 minutes. Add 2 mL Milli-Q® water, vortex. Allow solution to settle then transfer

Inject: 1  $\mu L$  on HPLC Flame Ionization (FID) @  $\$  (240°C)

ANALYTES:		Spiked Conc. (ng/mL)	Log P	рКа	% Rec	%RSC (n=0)
1	C12:0	0				
2	C14:0	0				
3	C16:0	0				
4	C16:1 cis 9	0				
5	C18:0	0				
6	C18:1 cis 9	0				
7	C18:2 cis 9,12	0				
8	C18:3 cis 9,12,15	0				
9	C20:0	0				
10	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.

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