

## Product Information

### Sigma-Aldrich 05904 Lab Kit

For the Evaluation of Fatty Acid Status in Blood (n-3 + n-6 PUFA)

#### Kit Contents

100 Screw cap vials 10 mL with PTFE liners containing 1 mL 1.25 M MeOH/HCl each  
250 mL distilled water  
250 mL saturated KCl solution  
500 mL n-Hexane

#### Material Number

17935-100X1ML  
95283-250ML  
60135-250ML  
52760-500ML

#### Description

The method provides useful information on the dietary habits of a given population and on the fatty acid (FA) profile of an individual.

Dried blood samples obtained from collecting with the sampler kit are used for the evaluation of FA status in blood (n-3 + n-6 PUFA).

#### Use

1. Detach one rectangular sample dipstick from the blood collection area, perforated for easy removal from the device, with tweezers (for the double-test), and place each sample into a 10 mL screw cap vial containing 1 mL 1.25 M MeOH/HCl.
2. Maintain the vial in a dry bath at 70 °C for 60 minutes.
3. Bring the vial to room temperature and add 2 mL of distilled water and 2 mL of saturated HCl solution sequentially.
4. Mix and extract fatty acid methyl esters (FAME) using 2 mL n-hexane twice.
5. FAME are performed as duplicates by injecting approximately 80 µL of extract into a gas chromatograph, equipped with a 30 m capillary column (Omegawax® Capillary GC Column, Product No. Supelco 24152), PTV injector, FID, and a dedicated data system. Temperature programming goes from 170 to 205 °C at the same rate. Peaks are identified by the use of pure reference compounds.

#### Reference

"A method for the direct evaluation of the fatty acid status in a drop of blood from the fingertip in humans: applicability to nutritional and epidemiological studies."; Marangoni, F.; Colombo, C.; Galli, C. *Anal. Biochem.* **2004**, *326*, 267-272.

#### Order Information

Lab Kit (Material No. 05904-1KT)

#### Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.