

Trans fatty acid

1. Method

1) Sample

* Hydrolysis of fat : Sample 25mg => Add 0.5N Methanolic NaOH 1.5ml and mix

=> Heating at 100 °C for 5min => Cool down up to 30-40 °C

* Derivatization of fatty acid : Add 14% BF₃ in Methanol 2ml and mix

=> Heating at 100 °C for 2min => Cool down up to 30-40 °C

=> Add isoctane 1ml and,then, stir it for 30 sec

=> Add saturated NaCl 5ml and stir => Layer separation at room temp.

=> Sampling from the upper layer

2) Standard : 37 types of Fatty Acid Methyl Esters

18:2, 18:3의 Cis, trans Isomer Standards

2. Analysis Condition

Capillary Column : SP-2560(100m*0.25mm*0.2um)

Injector : Capillary 280 °C Column flow 1ml/min

Detector : FID 280 °C

Oven program : 180 °C(40min)-> Heating 3°C/min -> 230°C(10min)

Split ratio 50:1

Injection Volume : 1ul

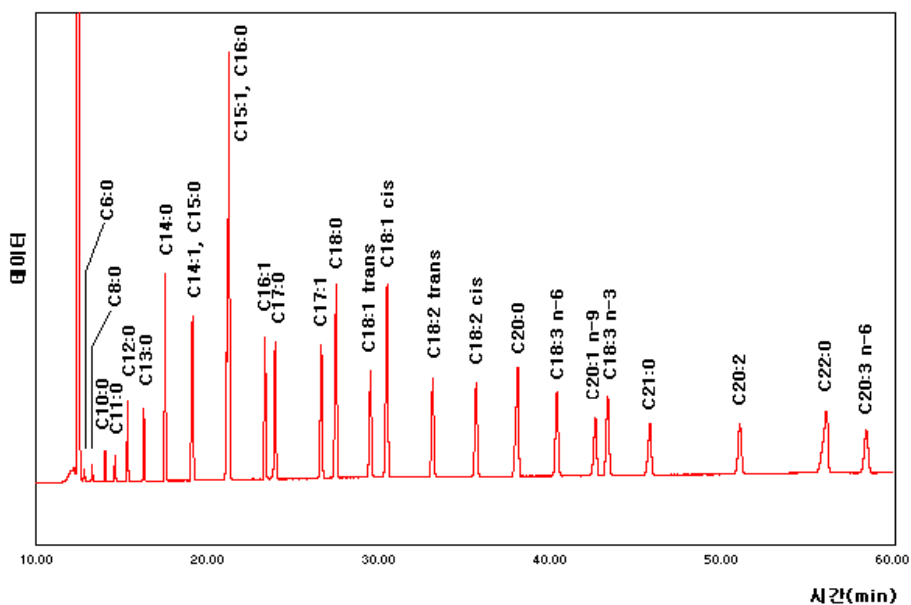




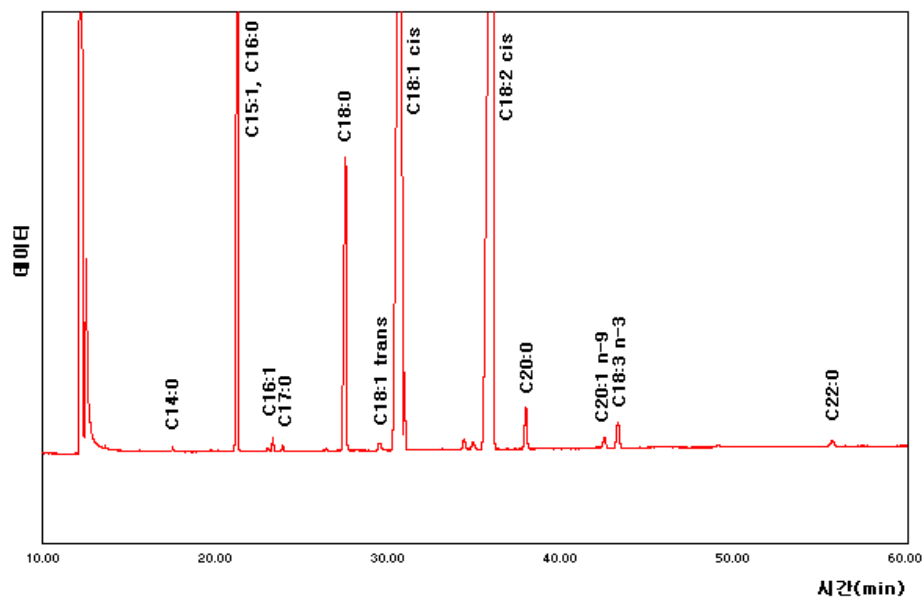
Trans fatty acid

3. Chromatogram

Standard



Sample



Trans fatty acid

4. Results

<Distinction of trans fatty acid among the sample>

