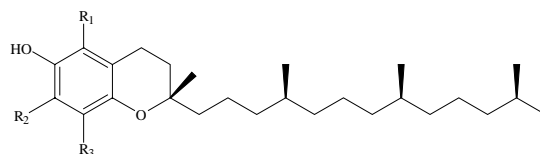


This is an application data of analyzing Vitamin E in food by HPLC. Vitamin E is a fat-soluble vitamin, which exists tocopherol and tocotrienol. Vitamine E were used as antioxidant.

Detection was made by Fluorescence detector and confirmed a good peak shape.

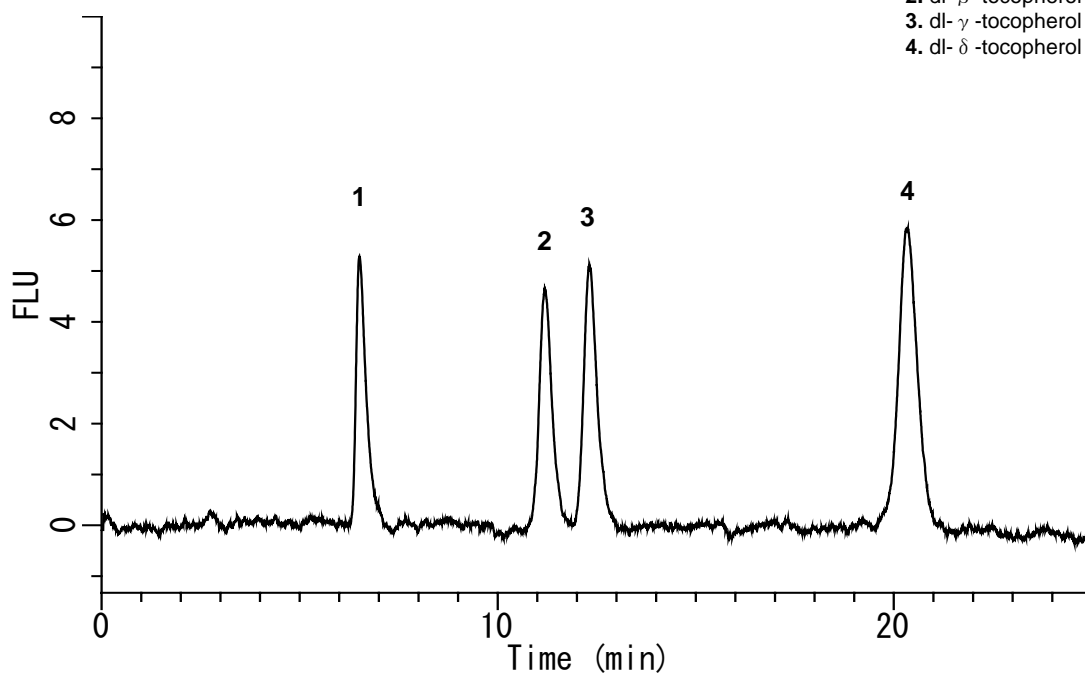
(K. Suzuki)

### Chemical Structures



V.E.	R1	R2	R3
$\alpha$ -tocopherol	CH3	CH3	CH3
$\beta$ -tocopherol	CH3	H	CH3
$\gamma$ -tocopherol	H	CH3	CH3
$\delta$ -tocopherol	H	H	CH3

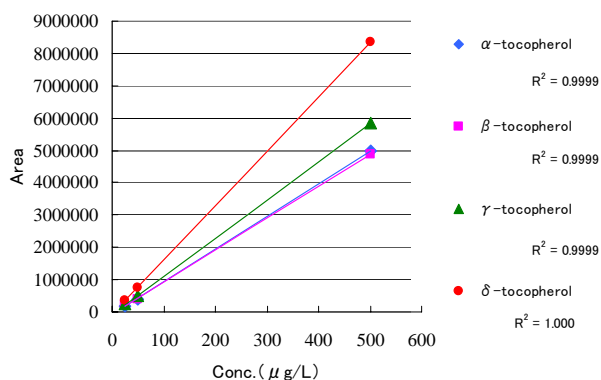
### Analysis of Standard Solution



1. dl- $\alpha$ -tocopherol (25  $\mu$ g/L)
2. dl- $\beta$ -tocopherol (25  $\mu$ g/L)
3. dl- $\gamma$ -tocopherol (25  $\mu$ g/L)
4. dl- $\delta$ -tocopherol (25  $\mu$ g/L)

#### HPLC Conditions

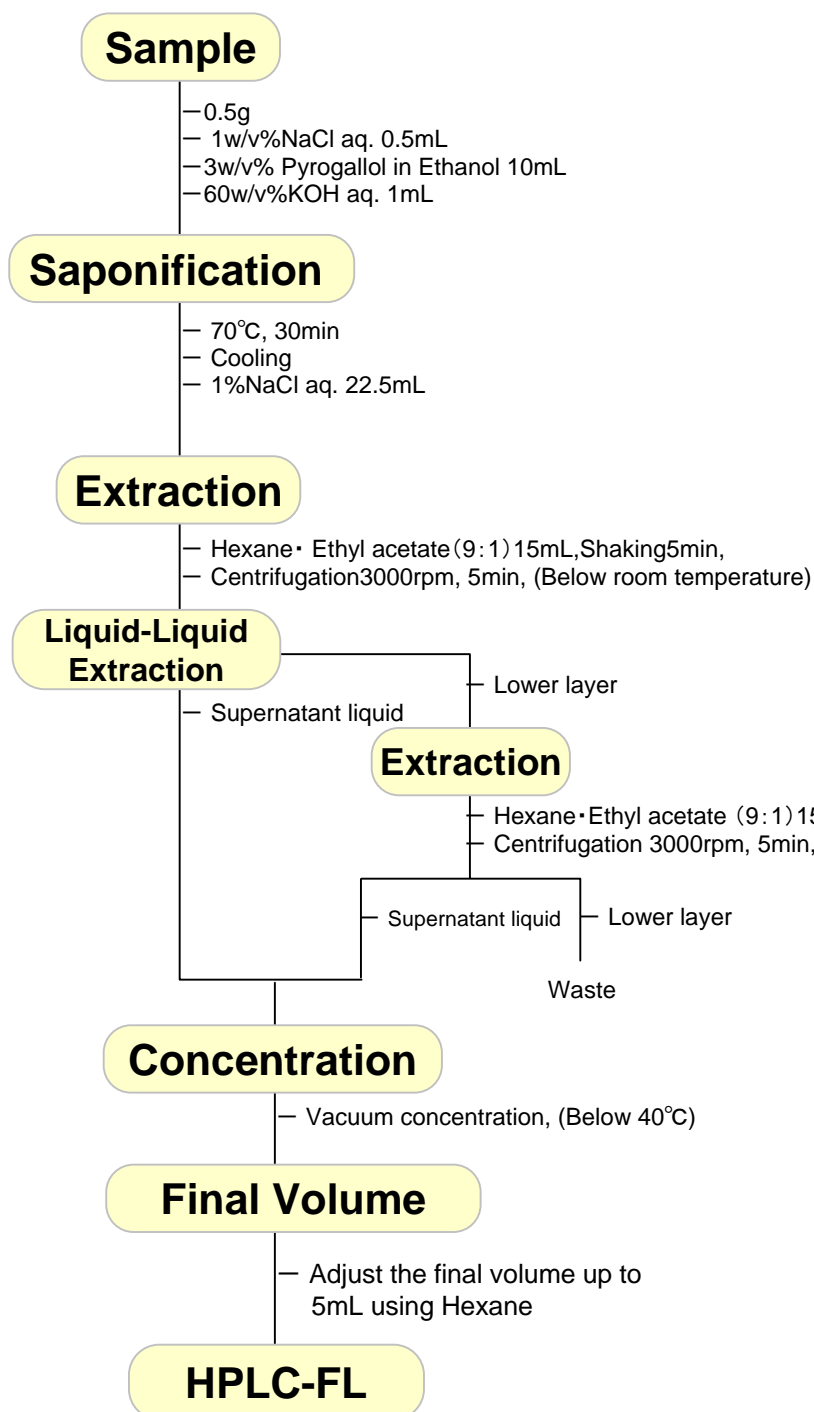
- Column : Inertsil NH2  
(5  $\mu$  m, 250 x 4.6 mm I.D.)
- Col. Temp. : 40°C
- Detection : FL Ex 298 nm Em 330 nm
- Eluent : A) CH<sub>3</sub>COOH  
B) 2-Propanol  
C) Hexane  
A/B/C = 5/6/1000, v/v
- Flow Rate : 1.2 mL/min
- Injection Vol. : 20  $\mu$  L



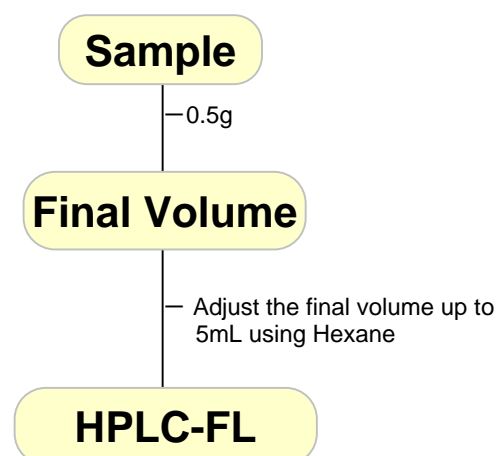
Calibration Curve

# Sample Preparation Method

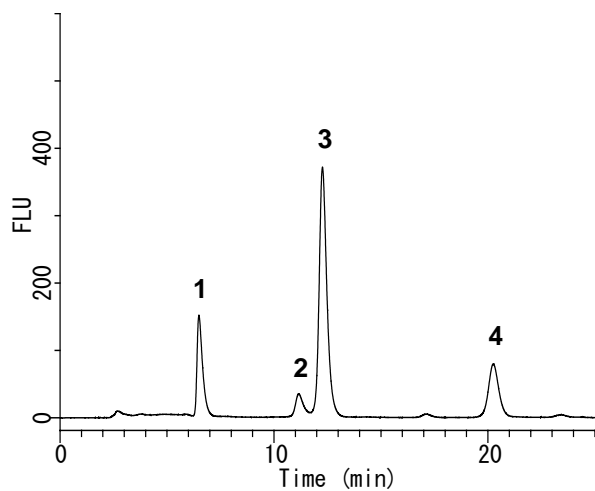
## General Foods



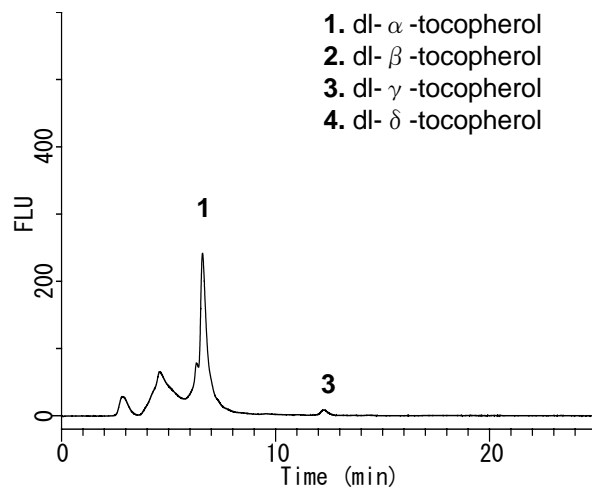
## Fat



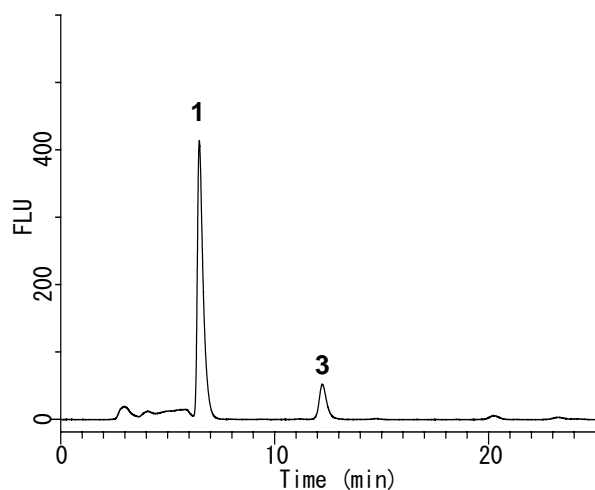
# Analysis of Foods



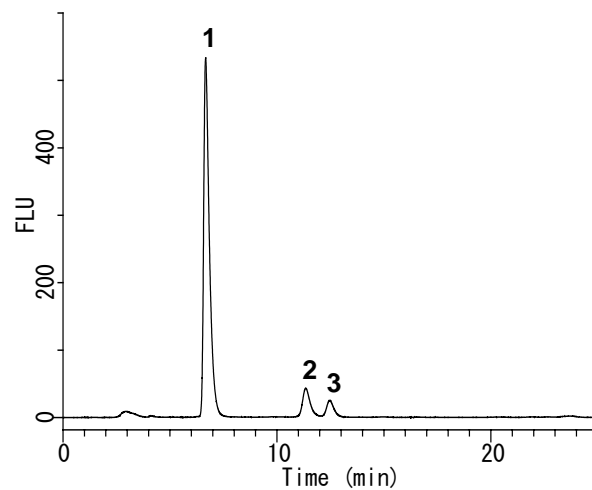
Cooking oil (a 10 times dilution)



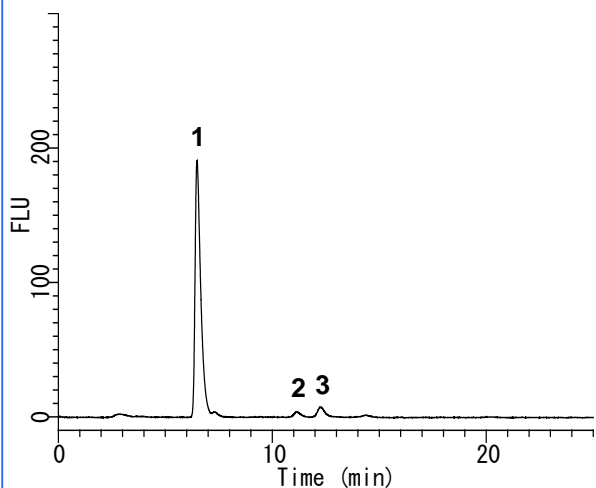
Butter



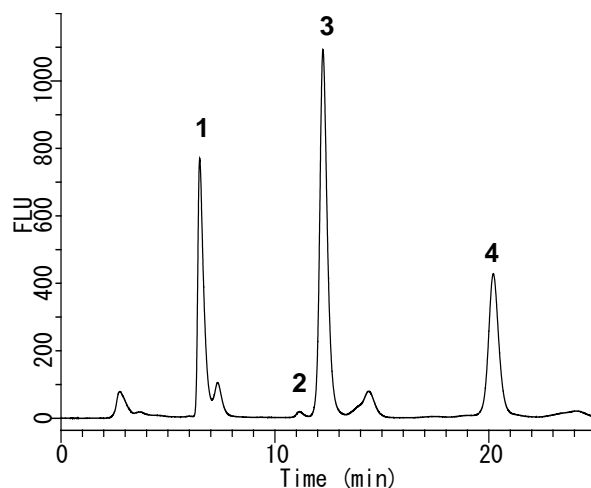
Broiled eel



Mulukhiya



Almond (a 10 times dilution)



Baby formula

- 1. dl- $\alpha$ -tocopherol
- 2. dl- $\beta$ -tocopherol
- 3. dl- $\gamma$ -tocopherol
- 4. dl- $\delta$ -tocopherol

## Inert Family

“**Inertsil**” High Performance LC Column

“**InertCap**” GC Capillary Column

“**InertSep**” Solid Phase Extraction for pretreatment of analysis

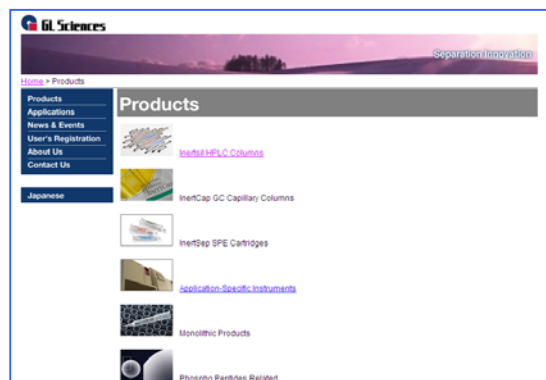


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GL Sciences also offers an extensive range of GC and LC consumables.



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