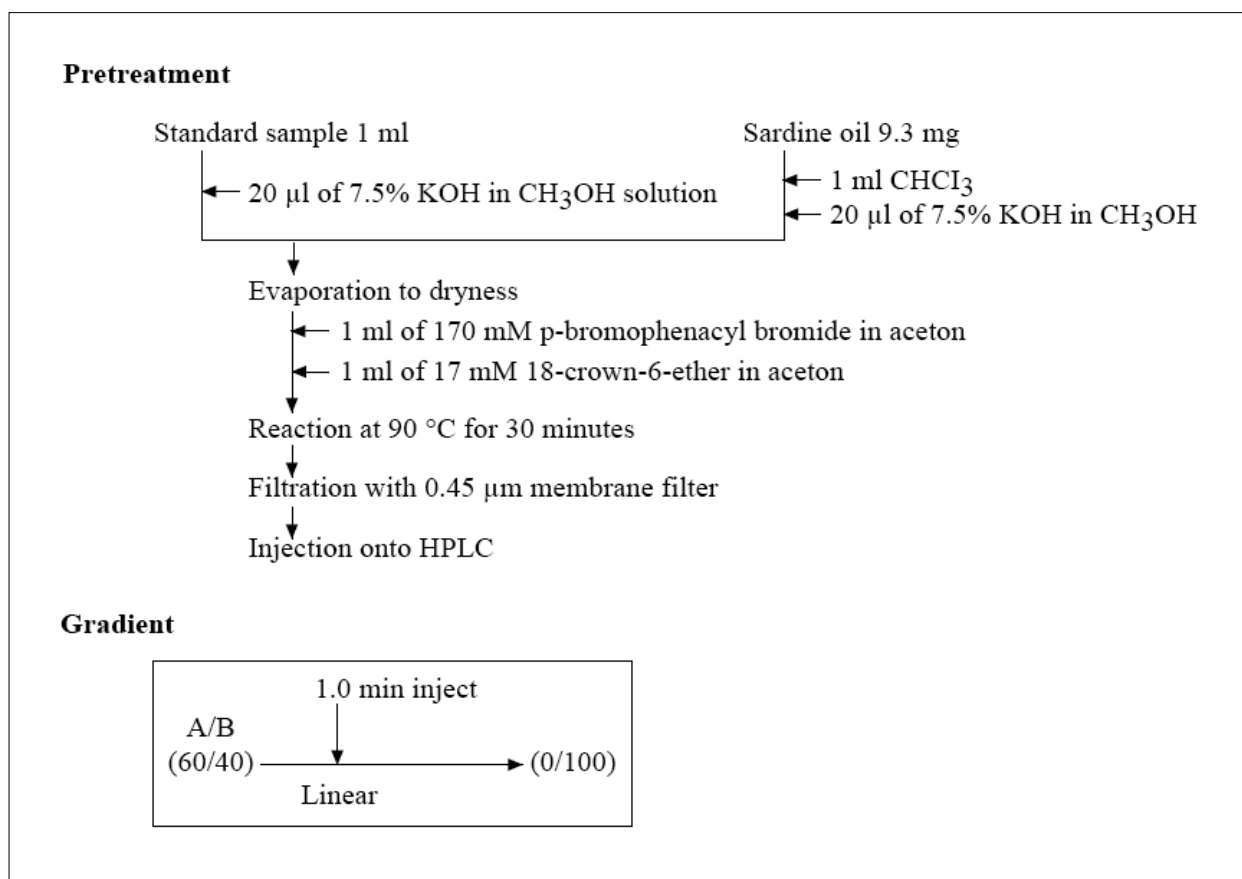


Analysis of free fatty acids in sardine oil

It is well-known that a lot of beneficial bioactive substances are included in sardine oil. The free fatty acids in sardine oil were analyzed by using pre-column derivatization method with p-bromophenacyl bromide in order to detect them with high sensitivity and selectivity. A silica C18 column Finepak SIL C18S was employed for the separation. A solution of acetonitrile and water was used for as mobile phase in gradient elution method.

Conditions:

Pump: PU-980
 Detector: UV-970
 Wavelength: 250 nm
 Column: Finepak SIL C18S
 Eluent: A: CH₃CN/H₂O (50/50)
 B: CH₃CN
 Flow rate: 1.0 ml/min
 Sample: C12, C14, C16, C18, C22
 Concentration of the standard sample:
 C12: 10.6 mg
 C14: 10.8 mg
 C16: 10.4 mg
 C18: 11.4 mg
 C22: 10.5 mg / 100 ml CHCl₃



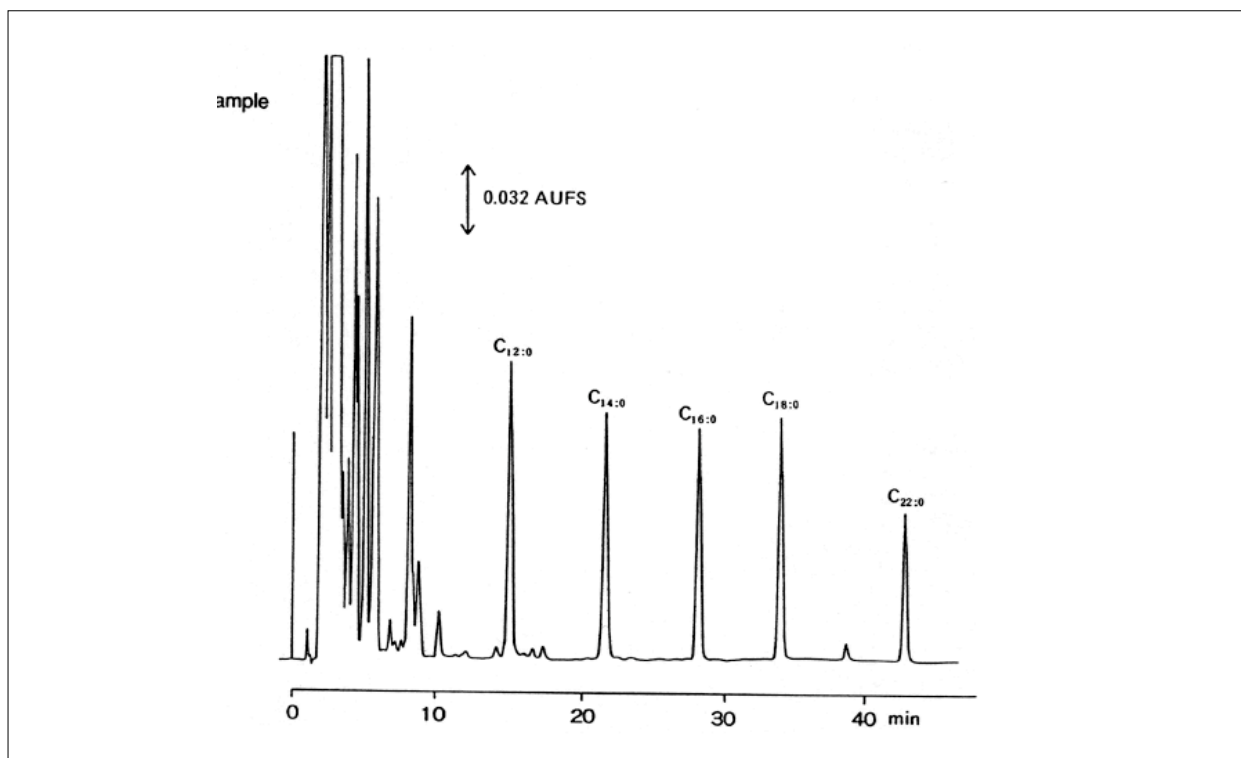


Fig. 1 Standard sample

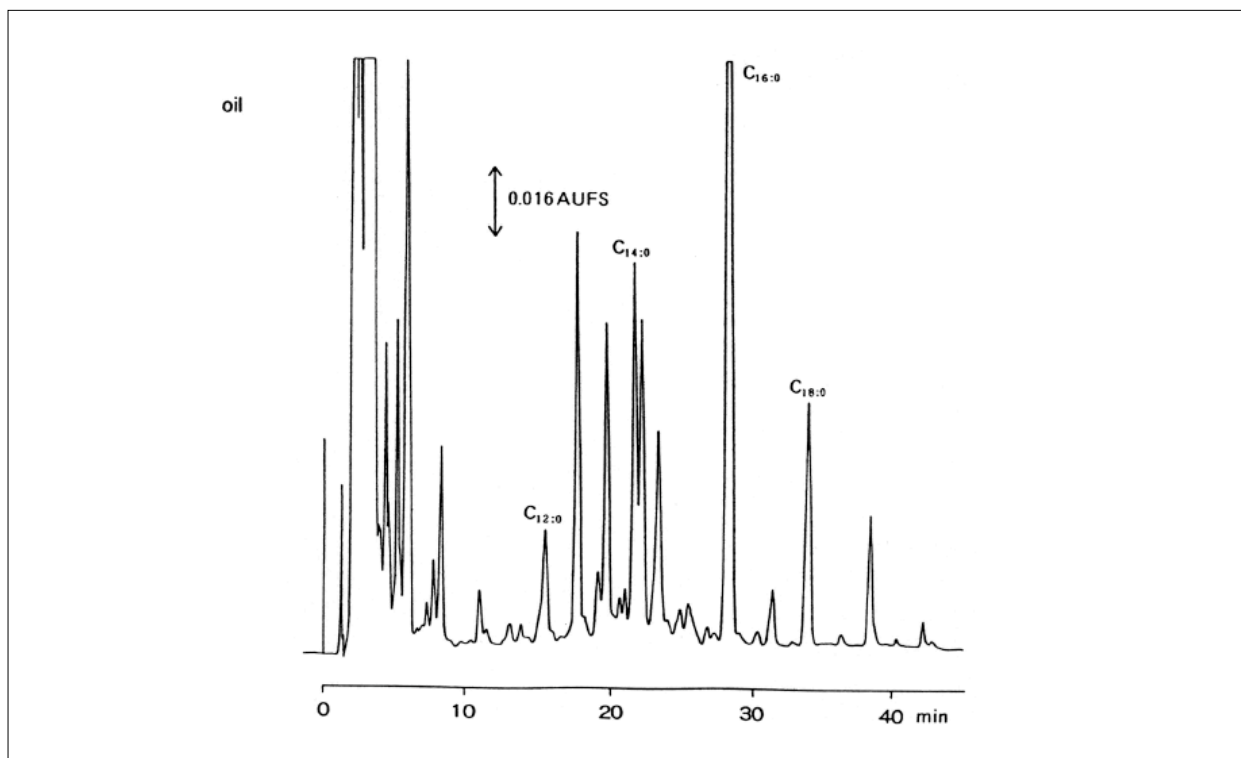


Fig. 2 Sardine oil