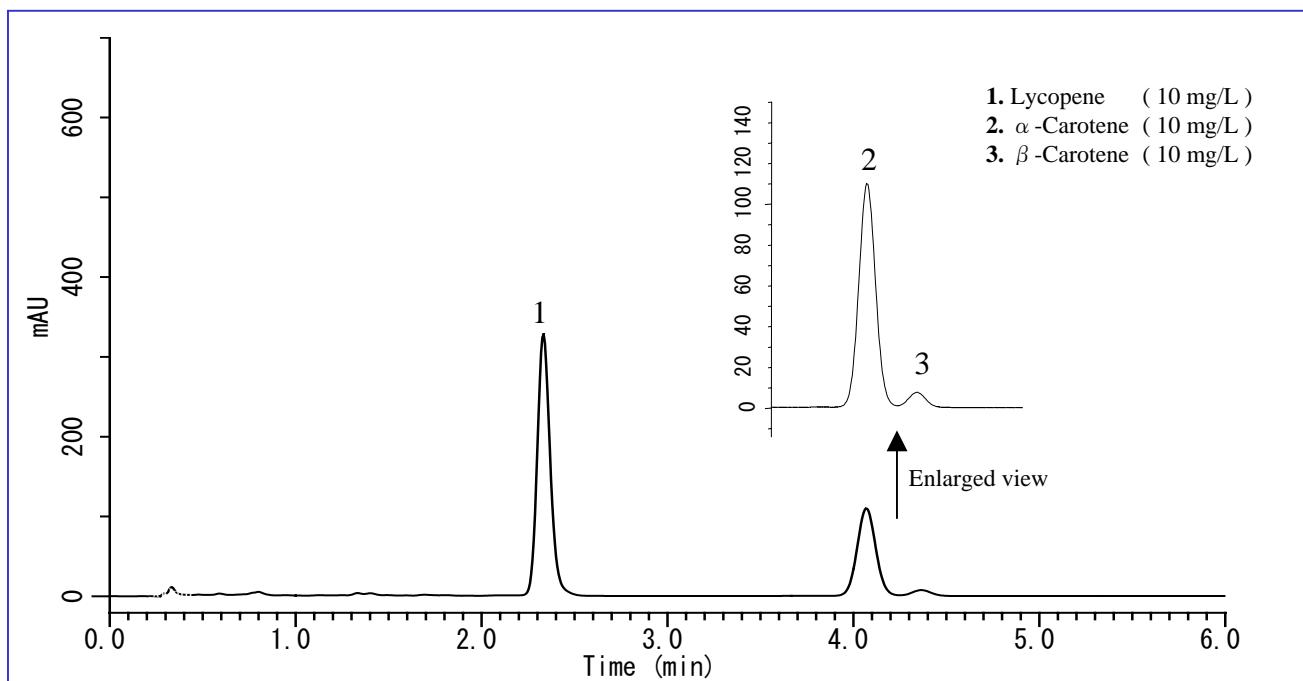


Lycopene is a type of carotenoid. It is found in red fruits and vegetables such as tomatoes, and known to have strong anti-oxidative effect. This note describes a determination method for lycopene in food samples using an HPLC system. In this method, not only retention time of lycopene but also those of α -carotene and β -carotene were determined.

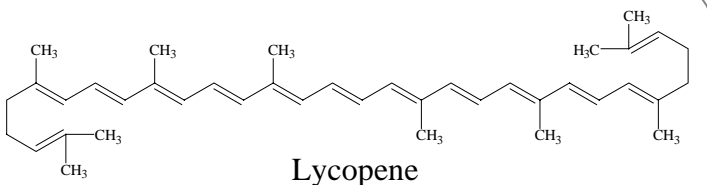
The sample pretreatment is consisted of only liquid extraction and centrifugation. For the HPLC separation, 50 mm length Inertsil ODS-3 column packed with 2 μ m particle was used. As a result, sharp peaks were obtained from standard solution and food samples within 5 min under lower pressure than 15 MPa.

(K. Suzuki)

A chromatogram obtained from standard solution



Chemical structure



Structures are created using Chemistry 4-D Draw which is provided by ChemInnovayion Software, Inc.

Conditions

Column : Inertsil ODS-3
(2 μ m, 50 x 3.0 mm I.D.)
Cat.No. 5020-84662

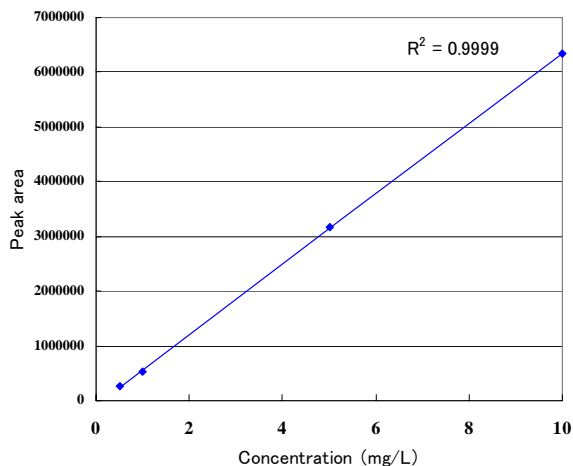
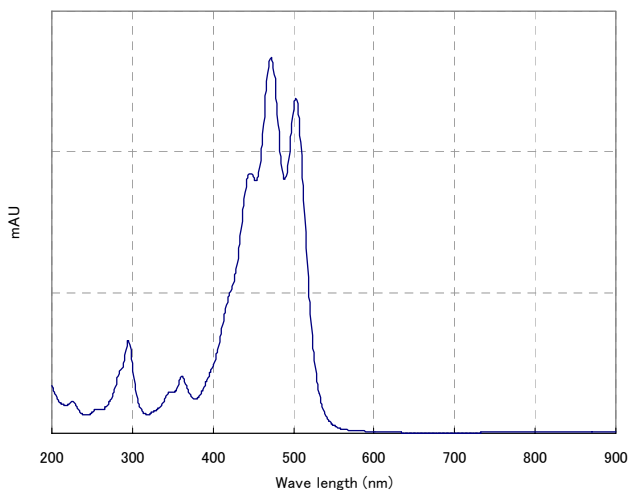
Eluent : CH₃CN

Flow rate : 1.2 mL/min (Approx. 14 MPa)

Col. Temp. : 45 °C

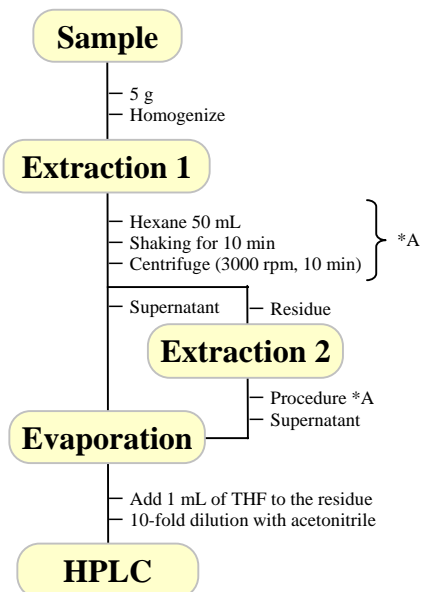
Detection : PDA 470 nm

Inj. Vol. : 20 μ L

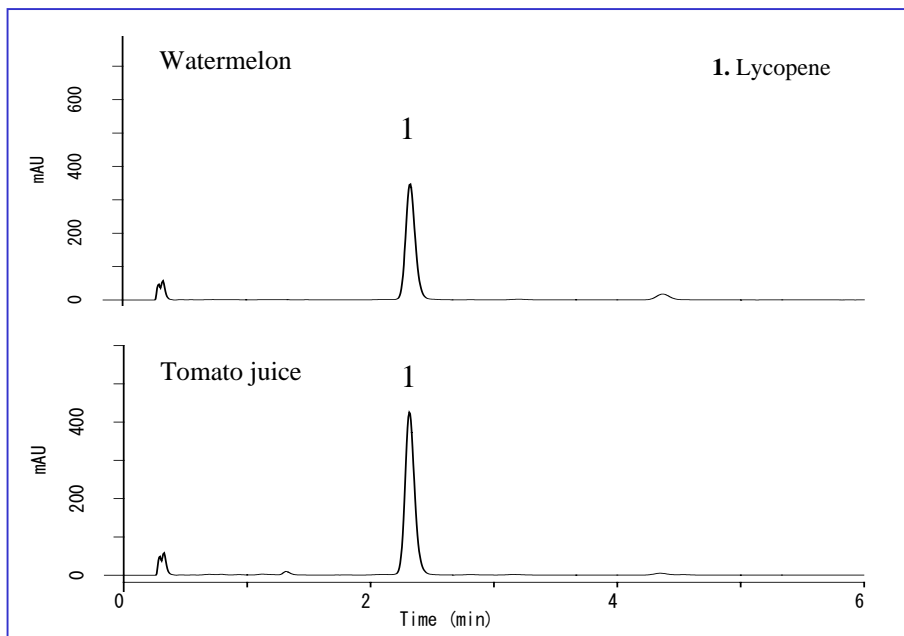


Chromatograms obtained from food samples

An example of sample pretreatment



If high recovery ratio is required, not single but multiple extraction (procedure *A) should be carried out.



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