

High Performance Liquid Chromatography

Applications of an HPLC Organic Acid Analysis System (No.1) - Analysis for Foods -

Shimadzu high-performance liquid chromatograph organic acid analysis system is enjoying a good reputation among the users in various fields as a unique analytical instrument to permit analysis by the combination of the ion-exclusion chromatography and the post-column pH-buffered electric conductivity detector. Particularly, inasmuch as organic acids are one of the important factors to determine the taste of foods together with amino acids and sugars, it is no wonder that this system, which allows selective analysis of organic acids by a simple pretreatment, finds a wide field of applications.

Introduced in this article are examples of the application of this system to the analysis of 4 kinds of foods.

Table 1 Analytical Conditions

For separation	
Column	: Shim-pack SCR-102H (8.0mm I.D. × 300mm L.) × 2
Mobile Phase	: 5mM p-toluenesulfonic acid
Flow Rate	: 0.8mL/min.
Temperature	: 40°C
For detection	
Reagent	: 5mM p-toluenesulfonic acid, 20mM Bis-Tris and 100µM EDTA
Flow Rate	: 0.8mL/min.
Temperature	: 43°C
Detector	: CDD-6A

1. Analysis of Tomato

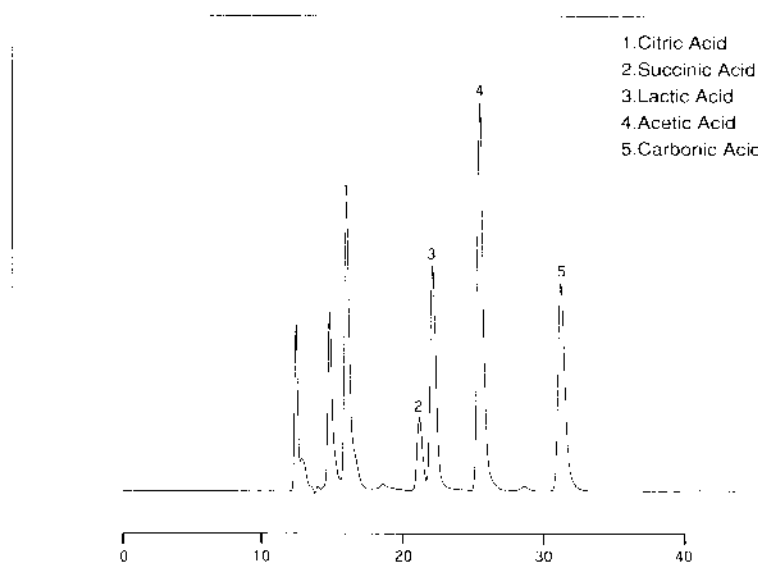
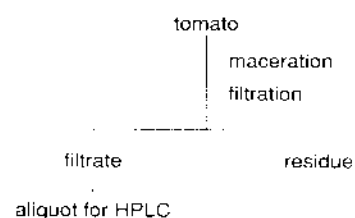


Fig.1 Chromatogram of Tomato Extract

Table 2 Pretreatment



2. Analysis of Umeboshi (Pickled Japanese Plum)

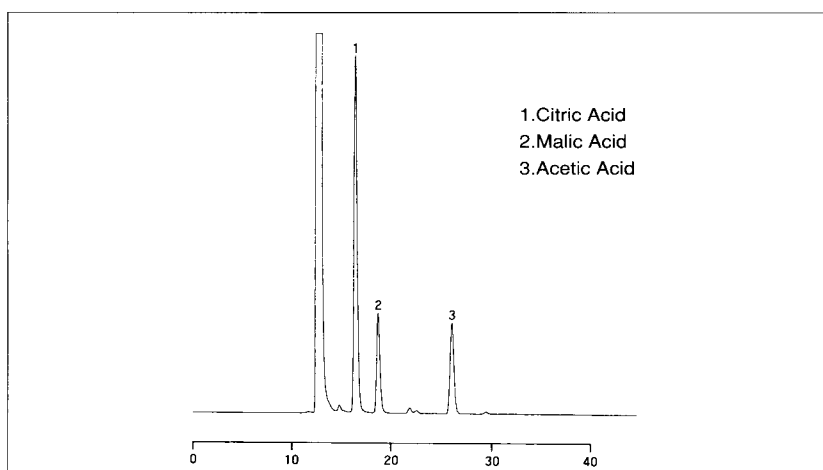
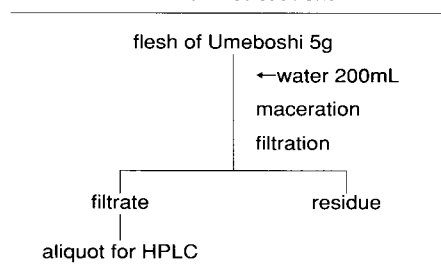


Fig.2 Chromatogram of Umeboshi Extract

Table 3 Pretreatment



3. Analysis of Sauce for Roast Meat

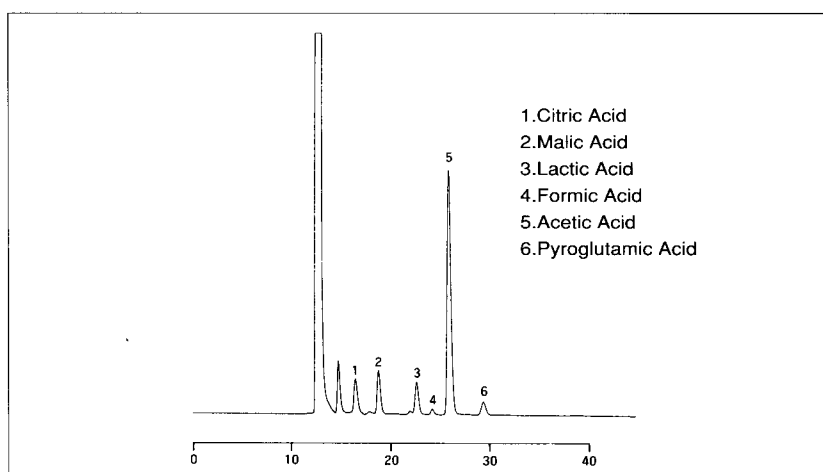
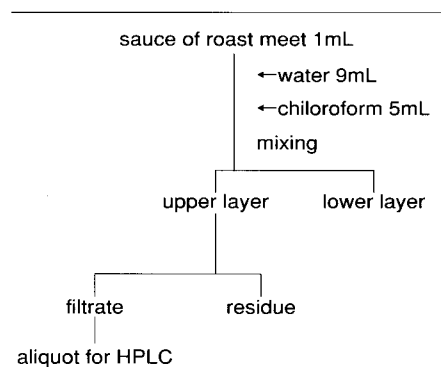


Fig.3 Chromatogram of Sauce Extract

Table 4 Pretreatment



■ Analysis of Sea Tangle

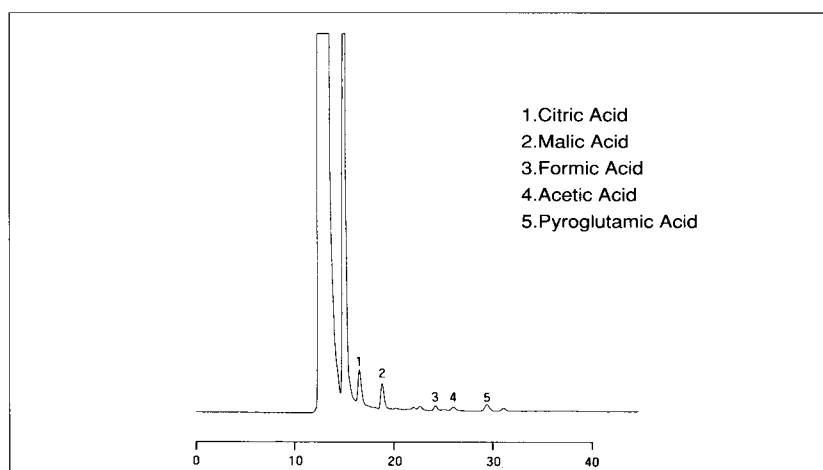


Fig.4 Chromatogram of Sea Tangle Extract

Table 5 Pretreatment

