

Common drugs we use every day include cold remedy, gastrointestinal drug, and ointment. Ointment and lotions for fighting itchiness, inflammation, rash, hemorrhoids, athlete's foot and others are household drugs. To analyze these medicines, conventionally, absorption spectrophotometry and neutral titration technique have been employed, but they require complicated pretreatment. By high performance liquid chromatography, active ingredients in products can be identified and determined in a short time, only by a very simple pretreatment.

This is to show examples of analysis of active ingredients contained in dermatosis remedies (impetigo, rash, purulent skin disease, etc.), anti-inflammatories (frostbite, arthritis, muscular pain, insect bite, etc.), and athlete's foot remedies (athlete's foot, ringworm, etc.).

The samples were presented from Belve Chemical Industrial Co.

### ■ Analysis of Ointment for Dermatitis

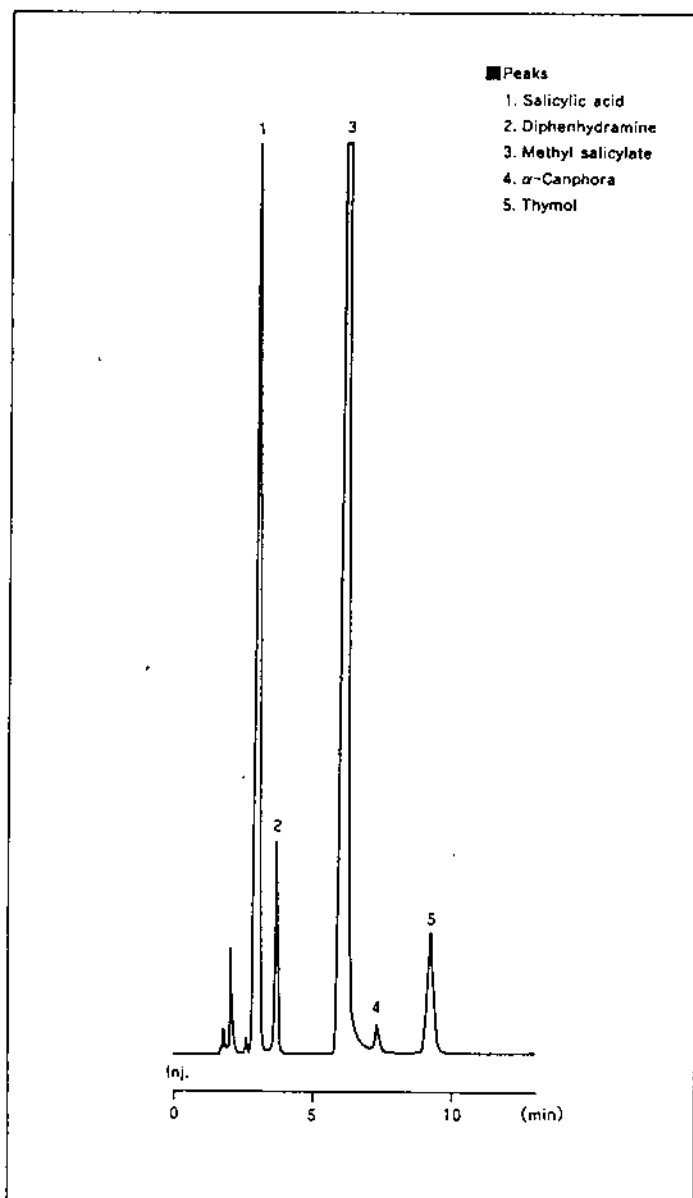


Fig.1

### ■ Analytical Conditions

Column : Shim-pack CLC-ODS  
(6.0mm I.D.  $\times$  150mm L.)

Mobile phase : 200mM NaClO<sub>4</sub> in 10mM (Sodium) phosphate (pH=2.6) / Methanol / Acetonitrile = 3/2/2

Temp. : 45°C

Flow rate : 1.5ml/min

Detection : UV at 210nm

### ■ Sample Pre-Treatment

Sample 500mg

┆ 100ml of the Solvent\*

\* Water/THF/Methanol = 2/1/2

Shake 10min

60°C

↓

Sentrifugal Separator

3500rpm 5min

↓

filtrate

↓

injection

## ■ Analysis of Ointment for Pyo-Dermatitis

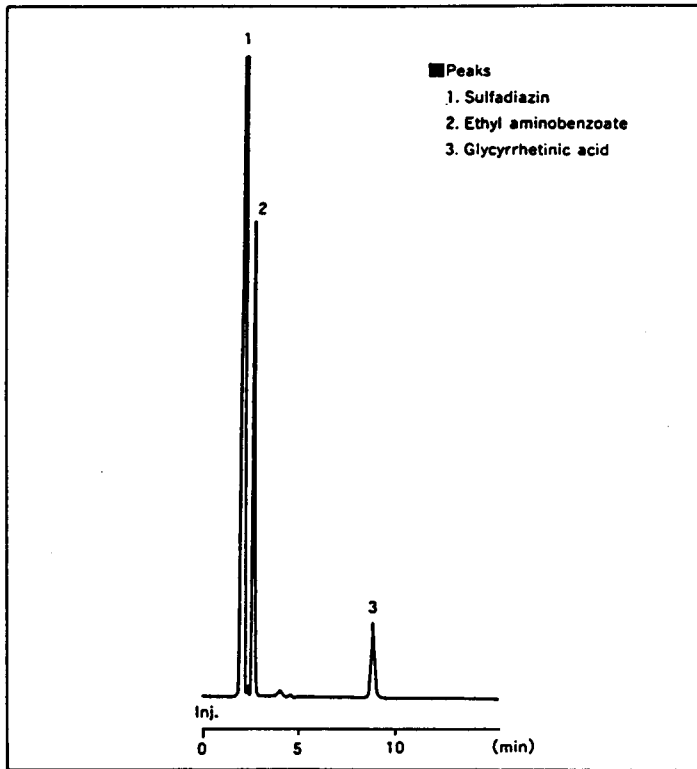


Fig.2

### ■ Analytical Conditions

Column : Shim-pack CLC-ODS  
 (6.0mm I.D. × 150mm L.)  
 Mobile phase : 10mM (Sodium) phosphate (pH = 2.6)  
 /Acetonitrile = 35/65  
 Flow rate : 1.5ml/min  
 Temp. : 40°C  
 Detection : UV at 250nm

### ■ Sample Pre-treatment

Sample 1g  
 ↓ ← 50ml of Solvent\*  
 60°C 15min \* Water/Methanol = 2/8  
 ↓  
 3000rpm 5min  
 ↓  
 filtrate  
 ↓  
 injection

## ■ Analysis of Solution for Athlete's Foot and Ringworm

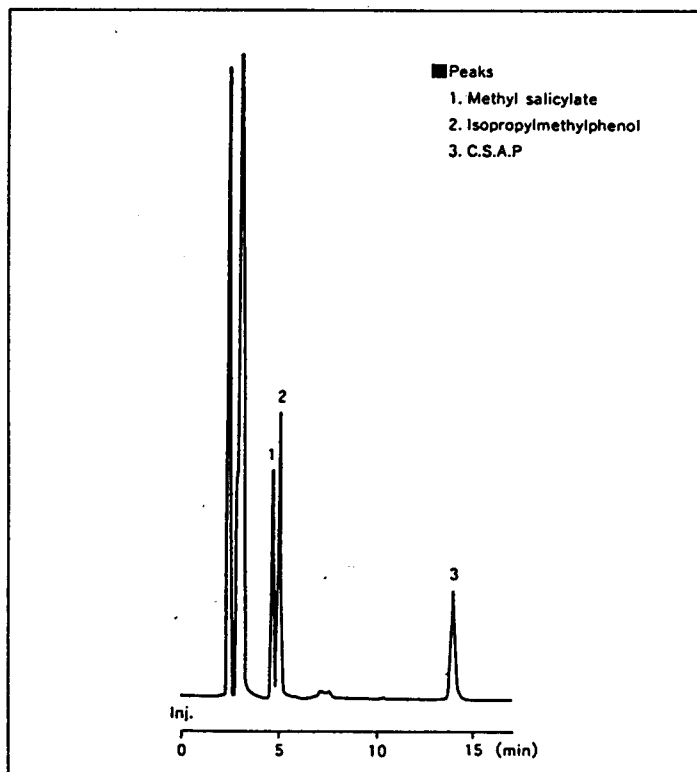


Fig.3

### ■ Analytical Conditions

Column : Shim-pack CLC-ODS  
 (6.0mm I.D. × 150mm L.)  
 Mobile phase : 10mM (Sodium) phosphate (pH = 2.6)  
 /Methanol/Acetonitrile = 2/3/2  
 Flow rate : 1.2ml/min  
 Temp. : 40°C  
 Detection : UV at 230nm

### ■ Sample Pre-treatment

Sample 1ml  
 ↓ ← Mess Up into 100ml by Methanol  
 ↓  
 filtrate  
 ↓  
 injection



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