

Analysis of Hair Tonics

Hair tonic gives a refreshing feeling to the scalp, stimulates it, relieves itching on the scalp, and is effective in accelerating the circulation of blood and in

activating the hair root. Besides, it also works as a perfume and a disinfectant to protect the scalp from microorganisms and bacteria.

■ Analysis of Hinokitiol

Hinokitiol is well known as a substance with a sterilizing effect. Shown in Figure 1 is a chromatogram of Hinokitiol standard and in Figure 2, a chromatogram of Hinokitiol contained in a hair tonic. In this analysis, the hair tonic was diluted with methanol and a sample of it was injected into the HPLC for analysis.

Table 1 Analytical Conditions

Instrument	: Shimadzu LC-9A System
Column	: Asahipak ODP-50(4.6mmI.D.×15cmL.)
Mobile Phase	: A ; 10mM NaH ₂ PO ₄ Solution (adjusted to pH2.0 with H ₃ PO ₄) B ; Acetonitrile A/B=1/1(v/v)
Flow Rate	: 0.5mL/min.
Temperature	: 55°C
Detection	: SPD-6A 240nm

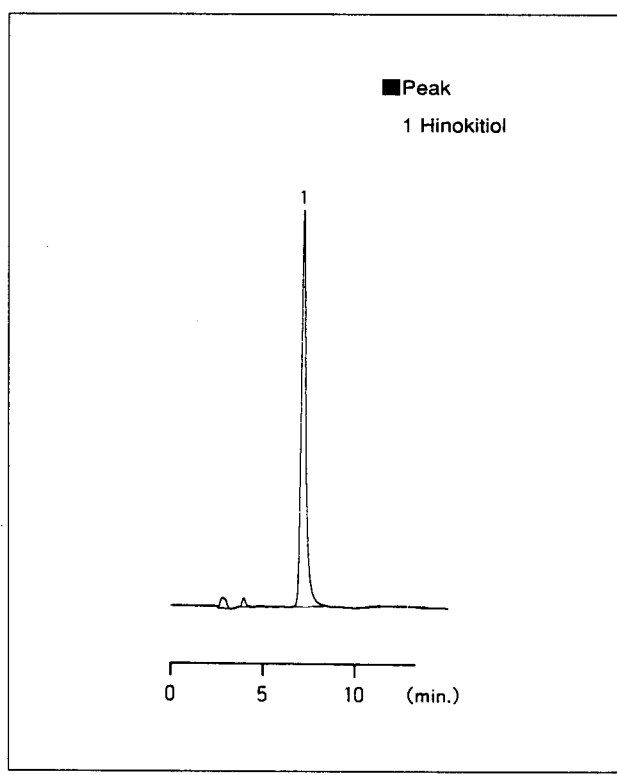


Fig.1 Chromatogram of Hinokitiol Standard

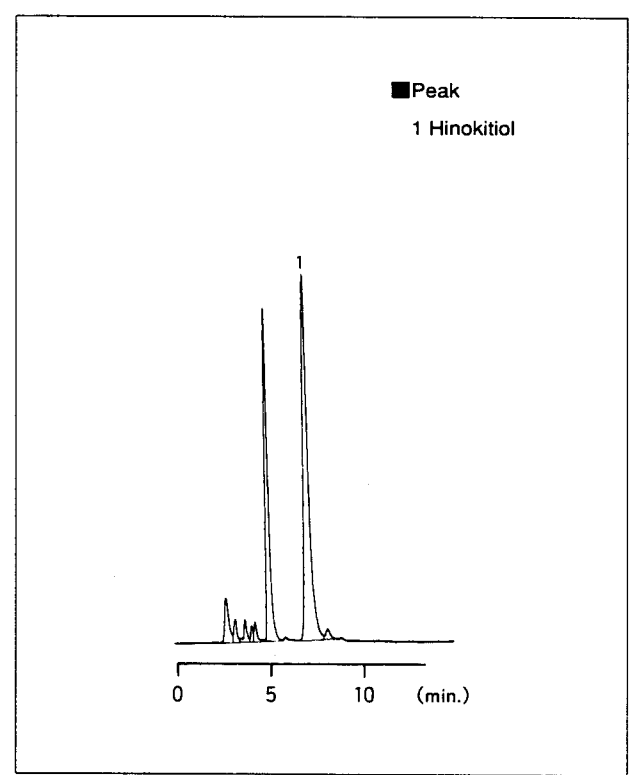


Fig.2 Chromatogram of Hair Tonic A

■ Analysis of Resorcinol, D-Panthenol and Vitamin B₆

Resorcinol, D-Panthenol and Vitamin B₆, which are all considered to be efficacious for sterilization, itching and falling-out of hair. Figure 3 shows

chromatogram of standard samples, and Figure 4 and 5, chromatograms of Figure 5.

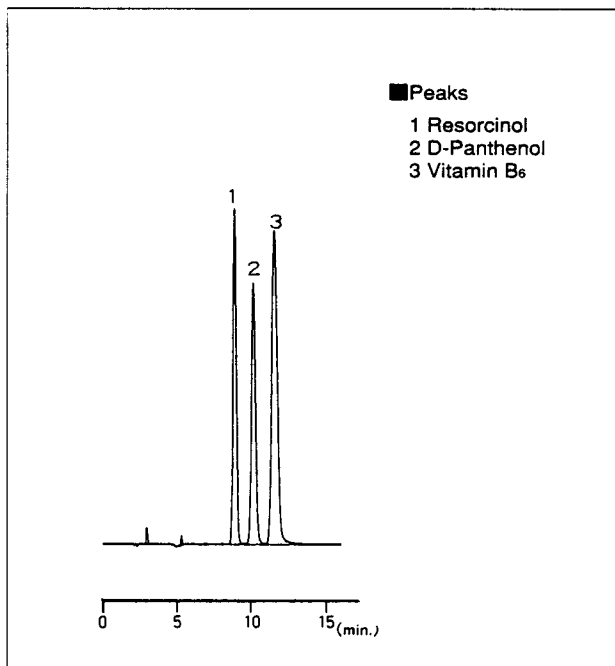


Fig.3 Chromatogram of Resorcinol, D-Panthenol and Vitamin B₆ Standard

Table 2 Analytical Conditions

Instrument	: Shimadzu LC-9A System
Column	: Shim-pack CLC-ODS(6.0mm I.D.×15cmL.)
Mobile Phase	: A ; 10mM Phosphate buffer(pH2.6) including 10mM(Sodium) Pentane Sulfonate B ; Methanol A/B=9/1(v/v)
Flow Rate	: 1.0mL/min.
Temperature	: 50°C
Detection	: SPD-6A 210nm

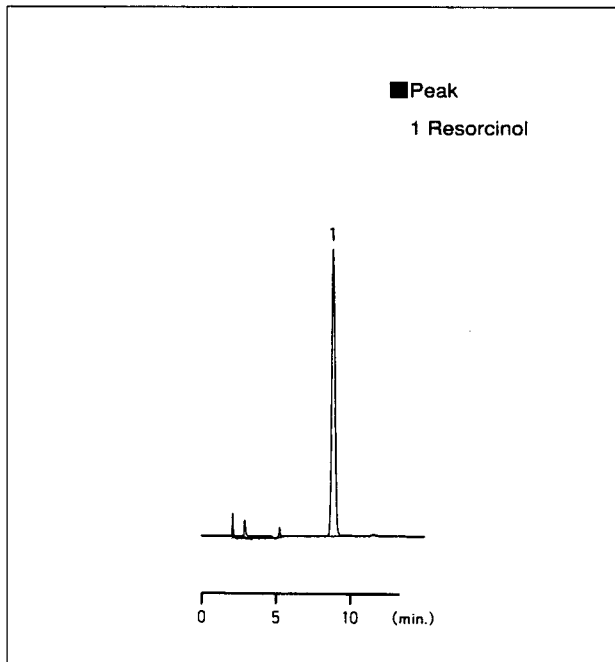


Fig.4 Chromatogram of Hair Tonic B

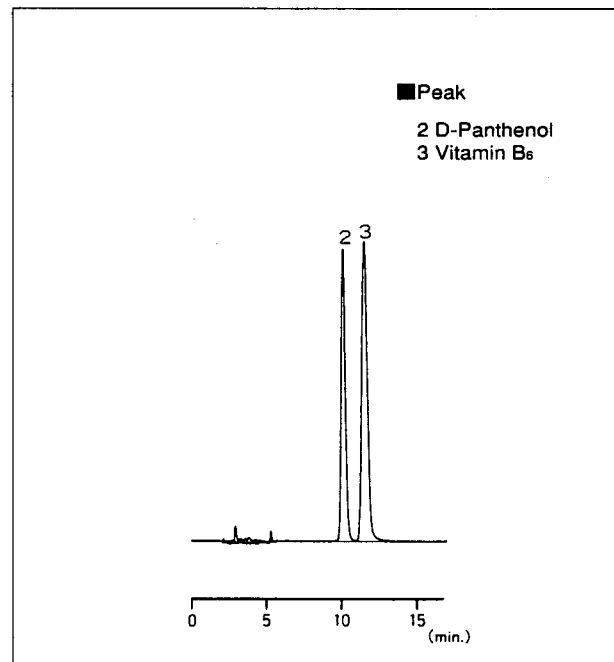


Fig.5 Chromatogram of Hair Tonic C

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