



Analysis of Isopropyl Methylphenol (Substitute for Triclosan)

In September of 2016, Food and Drug Administration (FDA) announced that the sales of antibacterial soap, containing 19 components including triclosan, in the USA will be banned within one year. In response to this announcement, the Ministry of Health, Labour, and Welfare will conduct necessary study to replace the already approved medicated soap products containing those components as the active ingredients by other soap products without the components. The Ministry will accept the application for a substitute product or conduct the approval cancellation by September 30, 2017 (PSEHB/PED Notification No. 0930-4, PSEHB/SD Notification No. 0930-1) This time, body soap containing isopropyl methylphenol, which is drawing attention as the substitute for triclosan, was analyzed and the result is introduced here. The analysis was conducted by connecting UV and fluorescence detectors in series, by reference to the qualitative and quantitative analysis methods using a high performance liquid chromatography which are described in the analysis method for perfumery and cosmetics.



High-performance Liquid Chromatograph Chromaster®

Analysis of Isopropyl Methylphenol in Body Soap

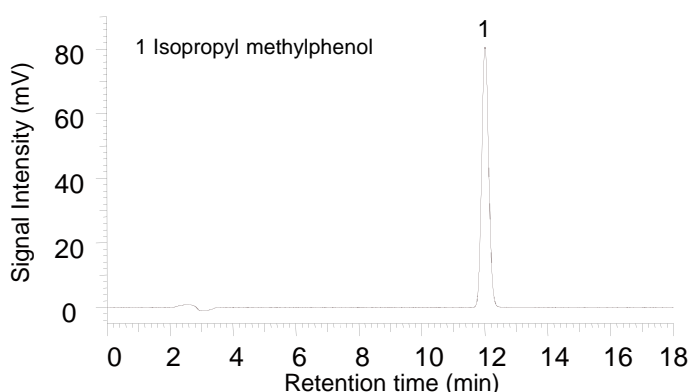


Figure 1 Chromatogram (FL) of Standard Solution (5 µg/mL)

Table 1 Analytical Conditions

Column	LaChrom II C18 (5 µm) 4.6 mm I.D. x 250 mm
Mobile phase	A : H ₂ O B : CH ₃ CN A / B = 50 / 50
Flow rate	1.0 mL/min
Column Temp	40°C
Detection wavelength	FL Excitation wavelength: 280 nm Emission wavelength: 305 nm UV 278 nm
Injection vol.	10 µL

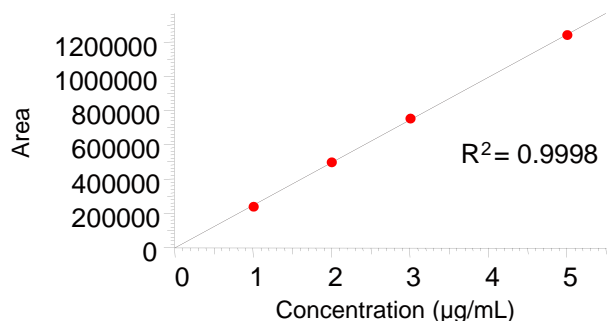


Figure 2 Calibration Curve (FL)

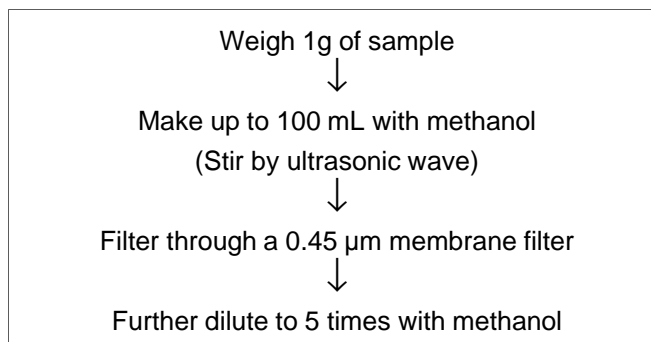


Figure 3 Sample Preparation Method

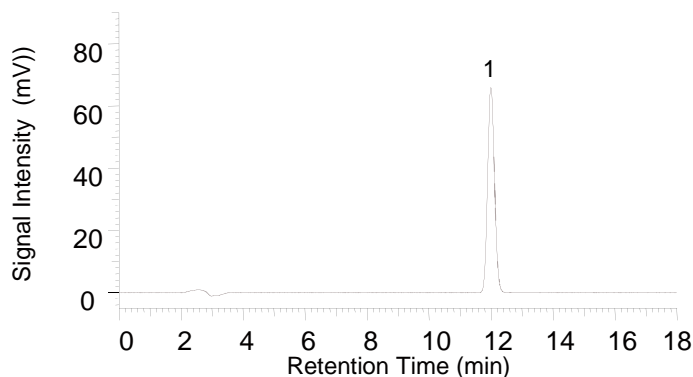


Figure 4 Chromatogram of Body Soap (FL)

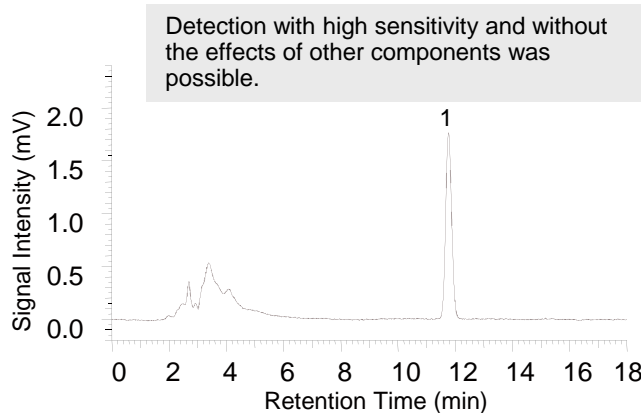


Figure 5 Chromatogram of Body Soap (UV)

The sample was provided by Futaba Chemical Co., Ltd.

NOTE: These data are an example of measurement; the individual values cannot be guaranteed.