

ABSTRACT**VALIDATION METHOD OF HPTLC-DENSITOMETRIC FOR DETERMINATION OF DIMETHYL PHTHALATE AND DI(2-ETHYLHEXYL) PHTHALATE IN LIQUID BODY SOAPS**

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Dimethyl phthalate (DMP) and Di(2-ethylhexyl) phthalate (DEHP) are found in many of cosmetic products such as liquid body soaps. Moreover, these compound can cause several toxicological effect as an Endocrine Disrupting Chemical (EDCs) and also have toxicological effect in both male and female reproductions. This study aims to validate HPTLC-Densitometric Method that have to meet the requirements of validation method which is selectivity, linearity, limit of detection, limit of quantification, precision and accuracy. This analysis used TLC Scanner Camag 4 at wavelength 280 nm. Silica Gel 60F 254 used as the stationary phase and n-hexane : ethyl acetate (8:2) as the mobile phase. The result showed that this method was selectively separate DMP and DEHP from other components, shown by resolution (R_s) ≥ 1.5 . And also there was a good correlation between concentration and area shown from the r value of DMP 0.9985 and DEHP 0.9980. Limit of detection of DMP is 0.74 ppm and DEHP is 4.05 ppm. Limit of quantification of DMP is 2.46 ppm and DEHP is 13.51 ppm. Percentage of recovery for accuracy of DMP is $(99.39 \pm 2.03)\%$ and for DEHP is $(97.93 \pm 1.30)\%$. And the relative standard deviation of DMP is 2.19% and for DEHP is 1.57%. As result, this method can be used to determine DMP and DEHP in liquid soaps that spread at the local market in Indonesia.

Keywords: Dimethyl phthalate (DMP), Di(2-ethylhexyl) phthalate (DEHP), HPTLC-Densitometric