

INTISARI

Metilparaben dan propilparaben merupakan dua turunan paraben yang mempunyai daya antimikroba. Kedua senyawa tersebut banyak digunakan sebagai pengawet dalam sediaan kosmetik, salah satunya *cleansing milk*. Penggunaannya dibatasi oleh ketentuan dalam Keputusan Kepala Badan POM RI No.HK.00.05.4.1745 tanggal 5 Mei 2003 yang mencantumkan batas maksimum kadar pengawet paraben dan turunannya, yaitu 0,4% untuk ester tunggal dan 0,8% untuk ester campuran. Penelitian ini bertujuan untuk mengetahui validitas metode HPLC dalam menetapkan kadar metilparaben & propilparaben, untuk mengetahui kadar metilparaben dan propilparaben dalam *cleansing milk* dan apakah kadar tersebut masih dalam batas maksimum menurut Keputusan Kepala Badan POM RI tersebut.

Penelitian ini merupakan penelitian non eksperimental deskriptif. Analisis kuantitatif metilparaben dan propilparaben menggunakan metode *High Performance Liquid Chromatography* detektor UV 257 nm dengan kolom RP C₁₈, fase gerak campuran metanol : air (4:6) dan *flow rate* 1,2 ml/menit. Kadar metilparaben dan propilparaben diperoleh dengan cara memasukkan data AUC (*area under curve*) ke dalam persamaan kurva baku. Parameter-parameter validitas metode yang diteliti meliputi *specificity*, *accuracy*, *precision*, *sensitivity*, *linearity*, LOD (*Limit of Detection*), dan LOQ (*Limit of Quantitation*). Hasil validasi menunjukkan bahwa metode HPLC memiliki validitas yang baik dalam menetapkan kadar metilparaben dan propilparaben dalam *cleansing milk*.

Hasil penelitian menunjukkan bahwa rata-rata kadar metilparaben dalam *cleansing milk* merk P sebesar $0,20 \pm 0,00^1$ % b/v; merk Q sebesar $0,14 \pm 0,00^3$ % b/v; dan merk R sebesar $0,17 \pm 0,00^1$ % b/v. Rata-rata kadar propilparaben dalam *cleansing milk* merk P sebesar $0,04 \pm 0,00^1$ % b/v; merk Q sebesar $0,09 \pm 0,00^1$ % b/v; dan merk R sebesar $0,08 \pm 0,00^1$ % b/v. Kadar metilparaben dan propilparaben dalam *cleansing milk* merk P, Q dan R masih di bawah batas maksimum menurut Keputusan Kepala Badan POM RI No.HK.00.05.4.1745 tanggal 5 Mei 2003.

ABSTRACT

Methylparaben and propylparaben are two of paraben derivatives that was had an activity antimicrobial. Both of the compounds most used as preservative element at cosmetic product, one of them is cleansing milk. The used of them limited by regulation in decision of the chief of Badan POM RI No.HK.00.05.4.1745 on May 5th 2003, it is mentioned that the maximum concentration of paraben and their derivatives are 0,4% for the single ester and 0,8% for the mixed esters. The objective of this research is to know validity of HPLC method in determination methylparaben and propylparaben, and to know exactly the concentration of the methylparaben and propylparaben in cleansing milk and their concentration still in maximum range according to Badan POM RI regulation.

This was non experimental research with descriptive planning. Methylparaben and propylparaben quantitative analysis use high performance liquid chromatography method with RP C₁₈ column, the mobile phase is a mixture of methanol : water (4:6) and flow rate 1,2 ml/minute. Concentration of methylparaben and propylparaben was gotten by substitution of its AUC (area under curve) in standard curve equation. Parametrics of validity method had studied were specificity, accuracy, precision, sensitivity, linearity, LOD (limit of detection), and LOQ (limit of quantitation). The result of validation method showed that HPLC method quite valid to be used to determining methylparaben and propylparaben in cleansing milk.

The research result showed that the average of methylparaben concentration in cleansing milk P is $0,20 \pm 0,00^1\%$ w/v; cleansing milk Q is $0,14 \pm 0,00^3\%$ w/v; and cleansing milk R is $0,17 \pm 0,00^1\%$ w/v. The average of propylparaben concentration in cleansing milk P is $0,04 \pm 0,00^1\%$ w/v; cleansing milk Q is $0,09 \pm 0,00^1\%$ w/v; and cleansing milk R is $0,08 \pm 0,00^1\%$ w/v. The concentration of methylparaben and propylparaben in cleansing milk P, Q, and R are still under maximum range according to regulation in decision of the chief of Badan POM RI No.HK.00.05.4.1745 on May 5th 2003.

Keyword: methylparaben, propylparaben, cleansing milk, High Performance Liquid Chromatography, RP C₁₈.