

ANALISIS KADAR ASAM SALISILAT DENGAN METODE SPEKTROFOTOMETRI UV-VIS PADA SEDIAAN PEMBERSIH WAJAH (*FACIAL WASH*) DI TOKO KOSMETIKJODOH KOTA BATAM

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ABSTRAK

Asam salisilat adalah senyawa yang mengandung gugus fenol dan banyak digunakan sebagai bahan aktif dalam produk perawatan kulit, khususnya untuk mengatasi jerawat karena efek keratolitik dan antibakterinya. Namun, penggunaan asam salisilat dalam kadar yang berlebihan dapat menimbulkan iritasi, kekeringan kulit, bahkan keracunan sistemik pada pemakaian jangka panjang. Penelitian ini bertujuan untuk mengidentifikasi dan menentukan kadar asam salisilat pada sediaan *facial wash* yang beredar di wilayah Jodoh, Batam. Metode yang digunakan meliputi uji kualitatif dengan pereaksi FeCl_3 untuk mendeteksi keberadaan gugus fenol, serta uji kuantitatif menggunakan spektrofotometri UV-Vis. Pengambilan sampel dilakukan dengan metode *purposive sampling* pada lima merek *facial wash* anti jerawat. Hasil uji kualitatif menunjukkan tiga dari lima sampel positif mengandung asam salisilat. Analisis kuantitatif menunjukkan kadar asam salisilat pada sampel A sebesar 0,0013%, sampel C sebesar 0,0019%, dan sampel E sebesar 0,0020%. Nilai parameter validasi metode meliputi presisi (%RSD) sebesar 1,57%, akurasi 100,05%, LOD 0,000025 %, dan LOQ 0,000083 %, yang menunjukkan metode analisis memenuhi kriteria yang baik. Berdasarkan hasil analisis, tiga sampel positif yang mengandung asam salisilat, Seluruh kadar tersebut masih berada di bawah batas maksimum yang diperbolehkan, yaitu 2%, sehingga dapat dikatakan aman digunakan sesuai ketentuan yang berlaku.

Kata Kunci: Asam salisilat, uji kualitatif, uji kuantitatif, spektrofotometri UV-Vis, Facial Wash.

ANALYSIS OF SALICYLIC ACID LEVELS BY UV-VIS SPECTROPHOTOMETRIC METHOD IN FACIAL WASH PREPARATIONS AT JODOH COSMETIC SHOP IN BATAM CITY

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ABSTRACT

Salicylic acid is a compound containing a phenol group and is widely used as an active ingredient in skin care products, particularly for treating acne due to its keratolytic and antibacterial effects. However, excessive use of salicylic acid can cause irritation, dry skin, and even systemic toxicity with long-term use. This study aims to identify and determine the concentration of salicylic acid in facial wash products available in the Jodoh area of Batam. The methods used include qualitative testing with $FeCl_3$ reagent to detect the presence of phenolic groups, as well as quantitative testing using UV-Vis spectrophotometry. Sampling was conducted using purposive sampling on five brands of acne-fighting facial wash. Qualitative testing results showed that three out of five samples were positive for salicylic acid. Quantitative analysis showed salicylic acid concentrations of 0.0013% in sample A, 0.0019% in sample C, and 0.0020% in sample E. The method validation parameters included precision (%RSD) of 1.57%, accuracy of 100.05%, LOD of 0.000025%, and LOQ of 0.000083%, indicating that the analytical method meets the criteria for good performance. Based on the analysis results, the three positive samples containing salicylic acid all had concentrations below the maximum permitted limit of 2%, making them safe for use in accordance with applicable regulations.

Keywords: *Salicylic acid, qualitative test, quantitative test, UV-Vis spectrophotometry, Facial Wash.*

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