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ANALISIS KADAR TIMBAL (Pb) DALAM LIPSTIK STIK DAN LIPSTIK LIQUID YANG DIJUAL DI PASAR BANJARHARJO KABUPATEN BREBES MENGGUNAKAN METODE SPEKTROFOTOMETRI UV-VIS

ABSTRAK

Latar Belakang: Berdasarkan temuan BPOM pada tahun 2014, yaitu menemukan 10 kosmetika berbahaya yang salah satunya adalah lipstik yang mengandung timbal berlebihan. Penelitian ini bertujuan untuk menganalisis kadar timbal pada lipstik yang dijual di Pasar Banjarharjo Kabupaten Brebes menggunakan metode spektrofotometri UV-Vis.

Metode: Penelitian ini merupakan penelitian eksperimental dengan teknik *insidental sampling* dilihat dari kriteria inklusi. Pengambilan 6 sampel yang dijual di Pasar Banjarharjo Kabupaten Brebes. Analisis Kualitatif Menggunakan Metode Preparasi dan Analisis Kualitatif menggunakan metode Spektrofotometri UV-Vis, serta Validasi metode yang meliputi uji linearitas, uji presisi, uji akurasi dan uji LOD dan LOQ.

Hasil: Hasil analisis Kualitatif, sampel lipstik Stik dengan kode A dan Sampel Liquid dengan kode A dikatakan positif mengandung timbal dengan kadar 1,80% ± 0,009 dan 1,46% ± 0,015 Panjang gelombang maksimum yang dipeoleh pada Ph 4 yaitu 515 nm dan persamaan garis linear y= 0,0087x + 0,0396 Validasi metode mendapatkan R 0,9949 Yang menandakan linear, RSD sebesar 0,231 ≤ 2% presisi yang baik, dan % *recovery* sebersar 98,15 % 95,03 % dan 97,18 %,LOD sebesar 0,01366149ppm Dan LOQ Sebesar 0,04553831ppm .

Simpulan: Berdasarkan hasil penelitian, sampel lipstik Stik dengan kode A dan Liquid juga dengan kode A dikatakan positif mengandung timbal dengan kadar lipstik stik sebesar 1,80% ± 0,009 dan lipstik liquid 1,46% ± 0,015 sedangkan untuk lipstik sitk B,C dan liquid B,C tidak mengandung Timbal.

Kata Kunci: Lipstik; timbal; spektrofotometri UV-Vis; validasi

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ANALYSIS OF LEAD (Pb) LEVELS IN STICK LIPSTICK AND LIQUID LIPSTICK SOLD IN BANJARHARJO MARKET, BREBES DISTRICT USING UV-VIS SPECTROPHOTOMETRY METHOD

ABSTRACT

Backround: Based on findings of the National Food and Drug Agency in 2014, they found 10 dangerous cosmetics, one of which is lipstick that contains excessive lead. This study aims to analyze the levels of lead in lipstick sold at Banjarharjo Market, Brebes Regency using the UV-Vis spectrophotometry method.

Methods: This research is an experimental research with incidental sampling technique seen from the inclusion criteria. Taking 6 samples sold at the Banjarharjo Market, Brebes Regency. Qualitative Analysis Using the Preparatory Method and Qualitative Analysis using the UV-Vis Spectrophotometry method, as well as method validation which includes linearity tests, precision tests, accuracy tests and LOD and LOQ tests.

Results: The results of the qualitative analysis, the lipstick stick sample with code A and the liquid sample with code A were said to be positive for lead with levels of $1.80\% \pm 0.009$ and $1.46\% \pm 0.015$. The maximum wavelength obtained at Ph 4 was 515 nm and the equation of the linear line $y = 0.0087x + 0.0396$ Validation of the method to get R 0.9949 Which indicates linear, RSD of $0.231 \leq 2\%$ good precision, and % recovery of 98.15% 95.03% and 97.18%, LOD of 0.01366149ppm and LOQ of 0.04553831ppm.

Conclusion: Based on the results of the study, lipstick stick samples with codes A and Liquid as well as with code A were said to contain positive lead with levels of lipstick sticks of $1.80\% \pm 0.009$ and liquid lipsticks $1.46\% \pm 0.015$ while for sitk lipsticks B, C and liquid B, C did not contain lead.

Keywords: Lipstick; lead; UV-Vis spectrophotometry; validati