

ANALISIS KADAR *HYALURONIC ACID* (HA) DALAM LENDIR BEKICOT (*Lissachatina fulica*) MENGGUNAKAN METODE KOLORIMETRI

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ABSTRAK

Hyaluronic acid merupakan komponen penting dalam lendir bekicot yang memiliki potensi aplikasi dalam berbagai bidang, termasuk kedokteran dan farmasi, terutama kosmetik. Penentuan kadar *Hyaluronic Acid* pada lendir *Lissachatina fulica*, Sampel yang di gunakan dalam penelitian ini yaitu bekicot liar dan terpelihara menggunakan Spektrofotometri UV-Visible menggunakan pereaksi methylene blue pada panjang gelombang maksimum 664 nm. Hasil analisis menunjukkan persamaan linier $y = 0,0247x + 0,1008$ dengan koefisien determinasi R^2 sebesar 0,9991, menunjukkan hubungan yang sangat baik antara konsentrasi dan absorbansi. Evaluasi akurasi metode ini menunjukkan rata-rata persen recovery sebesar 91,38%, 92,03%, dan 97,78%, yang berada dalam rentang 80-120%, menunjukkan akurasi yang baik. Presisi metode ini dievaluasi dengan %RSD pada tiga hari berturut-turut, yaitu 1,20%, 1,88%, dan 1,34%, yang menunjukkan presisi yang sangat baik karena $<2\%$. Analisis menunjukkan bahwa kadar hyaluronic acid rata-rata pada bekicot terpelihara (5,63%) lebih tinggi daripada pada bekicot liar (4,13%), memberikan informasi penting untuk pengembangan lebih lanjut di bidang farmasi dan kosmetik.

Kata kunci: Analisis kadar, hyaluronic acid, methylene blue, spektrofotometri UV-Visible

ANALYSIS OF HYALURONIC ACID (HA) LEVELS IN SNAIL SLIME (*Lissachatina fulica*) USING COLORIMETRIC METHOD

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ABSTRACT

Hyaluronic acid is an important component in snail mucus that has potential applications in various fields, including medicine and pharmacy, especially cosmetics. Determination of Hyaluronic Acid levels in *Lissachatina fulica* mucus, The samples used in this study were wild and maintained snails using UV-Visible Spectrophotometry using methylene blue reagent at a maximum wavelength of 664 nm. The results of the analysis showed a linear equation $y = 0.0247 \times + 0.1008$ with a determination coefficient R^2 of 0.9991, indicating a very good relationship between concentration and absorbance. Evaluation of the accuracy of this method showed an average percent recovery of 91.38%, 92.03%, and 97.78%, which were in the range of 80-120%, indicating good accuracy. The precision of this method was evaluated by %RSD on three consecutive days, which were 1.20%, 1.88%, and 1.34%, indicating excellent precision because it was <2%. The analysis showed that the average hyaluronic acid content in the reared snails (5.63%) was higher than that in the wild snails (4.13%), providing important information for further development in the pharmaceutical and cosmetic fields.

Keywords: Content analysis, hyaluronic acid, methylene blue, UV-Visible spectrophotometry