

Encapsulation of Gemor Bark Extract Using Cetyltrimethylammonium bromide -Modified Nanocellulose

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Abstract. Gemor (*Nothaphoebe coriacea*) is one of the plants of Non-Timber Forest Product typical of wetlands with secondary metabolite compounds such as alkaloids, steroids, flavonoids, triterpenoids, and phenolics. Besides being used as an insecticide, gemor bark also has antioxidant activities, anti-influenza, antiviral, antiherpes, and anti-inflammatory. This study aimed to encapsulate gemor bark extract using cetyltrimethylammonium bromide (CTAB)-modified nanocellulose to increase the effectiveness of its use. The result showed that the gemor bark extract had the IC₅₀ value of antioxidant activity was 39,97 ppm while encapsulating gemor bark extract using CTAB-modified nanocellulose gave encapsulation efficiency of 53,70%, which had a good antioxidant activity with an IC₅₀ value is 98,41 ppm.

Keywords: gemor bark; encapsulation; nanocellulose, CTAB, antioxidant activity