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GC-MS Analysis and Antiinflammation of Lemongrass With Various Extraction Methods

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ABSTRACT

Lemongrass (*Cymbopogon citratus*) is one plant producing bioactive essential oil. This research aims to determine the percentage yield of extracts, GC-MS analysis of chemical compound profiles, and the antiinflammation activity of lemon grass with various extraction methods. Firstly, lemongrass bioactive compounds are extracted using maceration, ultrasonic, and distillation. Secondly, the antiinflammation activity was done using in vitro protein denaturation utilizing bovine serum albumin in Triss buffer. The highest percentage extract yield was from maceration extraction, namely 14.83%, ultrasonic extraction was 4.68%, and distillation extraction was 6.00%. The GC-MS results showed that the secondary metabolite compounds resulting from maceration, ultrasonic, and distillation contained geraniol, citronellal, and citronellol. The graniol compound group was obtained with the highest percentage from distillation extraction at 14.83%, followed by ultrasonic extraction at 2.23% and maceration extraction at 0.37%.

Keywords: Extraction, GC-MS, lemongrass (*Cymbopogon citratus*)