

EFFECT OF DISTILLATION TIME ON THE PHYSICOCHEMICAL PROPERTIES OF LEMONGRASS OIL

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ABSTRACT

Samples of lemongrass oil were obtained by steam distillation after 1,2,3,4 and 5 hours of distillation physicochemical properties of the oil samples were determined in each case, furthermore the oils were analysed by gas chromatography to identify the different components in the five oil samples.

The oil content after 2 hours of distillation was higher than that determined after 1 hour. The physicochemical properties of the oil samples were determined and the results were found to agree with the values reported in literature. The values of aldehyde content calculated as citral, the main component of the oil after 1,2,3,4 and 5 hours of distillation were 58.32%, 61.24%, 60.44%, 59.21% and 57.83% respectively. The gas chromatography analysis proved that the chemical composition of the oil samples was different. The main components in the oil were identified. Citral was the main component of the oil which amounted 37.18%, 36.57%, 33.75%, 31.32% and 30.20% 1,2,3,4 and 5 hours respectively.

Two hours of distillation was recommended to obtain the oil of lemongrass which gave the higher yield of the oil in addition to its high citral content.