# ISOLASI PATCHOULI ALKOHOL DARI MINYAK NILAM MELALUI DISTILASI FRAKSINASI PENURUNAN TEKANAN SERTA SINTESIS SENYAWA PATCHOULI PROPIONAT DENGAN KATALIS HOMOGEN DAN HETEROGEN

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## INTISARI

Penelitian mengenai isolasi patchouli alkohol dari minyak nilam perdagangan serta sintesis senyawa patchouli propionat berbahan dasar patchouli alkohol telah dilakukan. Tujuan dari penelitian ini adalah mengisolasi patchouli alkohol dari minyak nilam dengan metode distilasi fraksinasi pengurangan tekanan dan melakukan reaksi esterifikasi terhadap patchouli alkohol dengan asam propionat dengan katalis homogen (HCl pekat) dan heterogen (bentonit teraktivasi asam). Produk esterifikasi dikarakterisasi dengan spektrometer FT-IR dan GC-MS.

Hasil penelitian menunjukkan bahwa patchouli alkohol berhasil diisolasi dari minyak nilam dengan rendemen 27% dengan kemurnian 94%. Reaksi esterifikasi antara patchouli alkohol dan asam propionat dengan katalis HCl pekat dan bentonit teraktivasi asam menghasilkan patchouli propionat dengan rendemen berturut-turut sebesar 27% dan 21%.

Kata kunci: distilasi vakum; katalis heterogen; katalis homogen; patchouli alkohol; patchouli propionat

# ISOLATION PATCHOULI ALCOHOL FROM PATCHOULI OIL USING FRACTIONAL DISTILLATION UNDER REDUCED PRESSURE AND SYNTHESIS OF PATCHUOLI PROPIONATE USING HOMOGENEOUS AND HETEROGENEOUS CATALYST

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## ABSTRACT

Research on the isolation of patchouli alcohol from commercial patchouli oil and the synthesis of patchouli propionate from patchouli alcohol have been carried out. The purposes of this research were to isolate the patchouli alcohol from patchouli oil using fractional distillation under reduced pressure and to perform the esterification reaction between patchouli alcohol and propionic acid in the presence of homogeneous (concentrated HCl) and heterogeneous (acid-activated bentonite) catalysts. The isolated patchouli alcohol and esterification product were characterized using FT-IR and GC-MS spectrometers.

The results showed that patchouli alcohol has been isolated from patchouli oil in 27% yield and in 94% purity. The esterification reaction between patchouli alcohol and propionic acid in the presence of concentrated HCl catalyst and acid-activated bentonite produced patchouli propionate in 27% and 21% yield, respectively.

Key words: heterogeneous catalyst; homogeneous catalyst; patchouli alcohol; patchouli propionate; vacuum distillation