STUDI KOMPOSIT CaO/SiO2 SEBAGAI FASA DIAM PADA SISTEM KROMATOGRAFI

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ABSTRAK

Komposit CaO/SiO_2 sebagai material fasa diam pada sistem kromatografi dilakukan sebagai inovasi dalam memperbaiki karakteristik dari SiO_2. Pengujian material CaO/SiO_2 sebagai fasa diam dilakukan pada kromatografi lapis tipis (KLT). Material CaO/SiO_2 difabrikasi menggunakan metode casting dengan pelarut metanol : air (3:1). Material CaO/SiO_2 telah diuji performanya dalam mengelusidasi senyawa α-mangostin yang memiliki gugus fungsi bervariasi. Hasil uji performa material CaO/SiO_2 sebagai fasa diam menunjukkan bahwa variasi komposisi minimum yang mampu memisahkan senyawa α-mangostin yaitu pada variasi CaO 10% sedangkan komposisi maksimum dari variasi material fasa diam yang mampu memisahkan senyawa α-mangostin yaitu pada variasi CaO 60%. Karakterisasi material CaO/SiO_2 dilakukan menggunakan instrumen FTIR dan XRD. Hasil karakterisasi menunjukkan bahwa material CaO/SiO_2 memiliki bentuk semi kristalin yang ditandai dengan nilai persentase kristalinitas sebesar 38,90% dan memiliki ukuran kristal rata-rata 234,24 nm.

Kata kunci: CaO/SiO_2, kromatografi, α-mangostin, fasa diam.

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