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SINTESIS EMULSIFIER ESTER SUKROSA ASAM LEMAK (*FACE*) DARI
MINYAK JAGUNG MENGGUNAKAN Na_2CO_3

ABSTRAK

Telah dilakukan penelitian sintesis emulsifier ester sukrosa asam lemak (*FACE*) dari minyak jagung menggunakan Na_2CO_3 . Sintesis *FACE* dilakukan dengan metode refluks menggunakan metil ester asam lemak (*FAME*), sukrosa, pelarut metanol, dan katalis Na_2CO_3 dengan variasi rasio berat katalis terhadap *FAME* 1,5%, 3%, 4,5%, 6%, dan 7,5%. Kondisi optimum *FACE* terjadi pada *FACE* dengan rasio berat Na_2CO_3 6% dengan derajat transesterifikasi 1,169 dan waktu pecah emulsi 347,47 detik. Hasil analisis GC-MS pada *FAME* menunjukkan komposisi senyawa mayor penyusun *FAME* adalah metil ester asam linoleat, metil ester asam oleat, metil ester asam palmitat, dan metil ester asam stearat. Banyaknya katalis mempengaruhi *FACE* yang dihasilkan.

Kata kunci: minyak jagung, reaksi transesterifikasi, ester asam lemak sukrosa, emulsifier.

SYNTHESIS OF EMULSIFIER FATTY ACID SUCROSE ESTER (FACE) FROM
CORN OIL USING Na_2CO_3

ABSTRACT

Observation about synthesis of emulsifier fatty acid sucrose ester (*FACE*) from corn oil using Na_2CO_3 has been done. Synthesis *FACE* was done with reflux method using fatty acid methyl ester (*FAME*), sucrose, methanol, and Na_2CO_3 as catalyst with weight ratio variation of catalyst Na_2CO_3 to *FAME* 1,5%, 3%, 4,5%, 6%, and 7,5%. Optimum condition of *FACE* occur at *FACE* with weight ratio of Na_2CO_3 to *FAME* 6% with degrees of transesterification 1,169 and time break emulsion 347,47 second. The GC-MS analysis result of *FAME* indicate composition major compounds of *FAME* that is linoleic acid methyl ester, oleic acid methyl ester, palmitic acid methyl ester, and stearic acid methyl ester. The number of catalyst influence *FACE* produced.

Key words: corn oil, transesterification reaction, fatty acid sucrose ester, emulsifier.

Mengetahui,
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