

BAB V

KESIMPULAN DAN SARAN

V.1. Kesimpulan

Pada penelitian ini diketahui bahwa perbandingan CaCl_2 : Cu asetat 4:2 memberikan yield biodiesel yang tertinggi yaitu 91,82% pada minyak kedelai. Hasil setelah modifikasi dengan trichloro(hexyl)silane menunjukkan penurunan yield biodiesel menjadi 86-88 %. Pada hasil percobaan dengan kondisi subkritis, diketahui bahwa yield yang relatif sama, yaitu 92,59% untuk minyak kedelai dan 84,63% untuk CPO, hal ini membuktikan bahwa hasil pada minyak kedelai lebih baik dibandingkan dengan CPO. Hasil pemakaian kembali katalis dengan CPO sebagai minyak nabati menunjukkan bahwa pada pemakaian pertama menghasilkan yield sebesar 83,05% dan menjadi 75,12% pada pemakaian yang keempat. Untuk kemurnian biodiesel didapatkan dari minyak kedelai adalah sebesar 22,49% dan dari CPO adalah sebesar 96,48%.

V.2. Saran

Pada penelitian selanjutnya dapat diteliti efek dari metode sintesa pada yield biodiesel, metode sintesa yang dapat dipilih seperti sol-gel, hidrotermal, dan *wet impregnation*. Pada modifikasi permukaan katalis dapat dilakukan dengan variasi pH saat pemodifikasian dan juga dapat digunakan agen selain dari golongan organochlorosilane. Dengan tujuan peningkatan stabilitas, katalis juga dapat digabungkan dengan support seperti mesoporos silika atau

gamma alumina. Selain itu untuk mempelajari efek subkritis dengan lebih, dapat dilakukan percobaan dengan variasi suhu dan juga variasi metanol:minyak dan juga dapat dilakukan percobaan transesterifikasi non katalis.

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