Sintesis turunan lawson 2-hidroksi-1,4-naftoquinon dari sinamaldehida menggunakan nanokatalis cufe2o4 = Synthesis of lawsone 2 hydroxy 1 4 nafthoquinone derivates from cinnamaldehyde using nanocatalyst cufe2o4

Saidah, author

Abstrak

ABSTRAK
Metode sederhana untuk mensintesis turunan lawson 2-Hidroksi-1,4-naftoquinon dari sinamaldehida telah berhasil dilakukan menggunakan nanokatalis CuFe2O4. Nanokatalis CuFe2O4 diperoleh dengan metode kopresipitasi dan dikarakterisasi menggunakan XRD, TEM, dan PSA. Hasil TEM menunjukkan nanokatalis CuFe2O4 yang memiliki ukuran 15-36 nm. Nanokatalis CuFe2O4 mampu mengkatalis pembentukan senyawa turunan lawson 2-Hidroksi-1,4-naftoquinon dan dapat digunakan sampai 5 kali pengulangan reaksi dengan recovery yang baik. Senyawa turunan lawson yang diperoleh dikarakterisasi melalui Spektrofotometer UV-Vis, Spektroskopi IR, dan GCMS. Produk yang dihasilkan memiliki yield sebesar 48,62 hingga 81,52 dan memiliki aktivitas antioksidan dengan nilai IC50 sebesar 8 ppm, 50 ppm dan 77 ppm.
<hr />
ABSTRACT
A simple method for synthesis of derivates lawsone 2 hydroxy 1,4 nafttoquinone from cinnamaldehyde has been successfully synthesis used nanocatalyst CuFe2O4. Nanocatalyst CuFe2O4 were obtained from co precipitation methode and characterized by XRD, TEM and PSA. The result of TEM show that CuFe2O4 nanocatalyst that were 15 36 nm. Nanocatalyst CuFe2O4 was able catalyzed the formation of the lawsone derivatives 2 hydroxy 1,4 naftoquinone and can be used up to 5 times in the same reaction procedure with good recovery. The compounds obtained were characterized by Spectrofotometry UV Vis, Spectroscopy IR and GCMS. The product is obtained in fairly high yield from 48,62 to 81,52 and has antioxidant activity with IC50 value 8 ppm, 50 ppm and 77 ppm.