

BAB V

KESIMPULAN DAN SARAN

5.1 Kesimpulan

Bedasarkan penelitian yang telah dilakukan, kesimpulan yang diperoleh dari penelitian ini adalah sebagai berikut:

1. Penambahan surfaktan ABS sebagai surfaktan anionik pada konsentrasi CMC mampu mencegah terjadinya fenomena aglomerasi pada partikel nikel hidroksida dengan ukuran partikel diantara 3,12 – 4,47 nm.
2. Kemurnian nikel hidroksida yang dihasilkan sudah tinggi, tetapi masih ada pengotor berupa surfaktan dan NiSO₄ yang tidak dapat hilang pada saat proses pencucian.
3. Nanopartikel nikel hidroksida yang disintesis dengan penambahan surfaktan ABS, SDS, CTAB, dan PVP memiliki kemurnian yang lebih rendah yaitu secara berturut – turut sebesar 94,85 %-b, 95,11 %-b, 90,29 %-b, dan 95,20 %-b dibandingkan dengan nanonikel hidroksida yang disintesis tanpa penambahan surfaktan yaitu sebesar 96,41 %-b.

5.2 Saran

Bedasarkan penelitian yang telah dilakukan, maka saran saya yang dapat diberikan untuk penelitian selanjutnya adalah sebagai berikut:

1. Perlu dilakukannya analisis FTIR untuk melihat gugus surfaktan yang masih terdapat pada nanopartikel nikel hidroksida.
2. Perlu dilakukannya proses sonikasi pada proses presipitasi nikel hidroksida dengan surfaktan untuk menghilangkan fenomena aglomerasi.
3. Perlu dilakukan perbaikan pada proses pencucian presipitat dengan metode *ozonolysis* agar dapat menghilangkan surfaktan serta NiSO₄ pada presipitat.
4. Perlu dilakukannya analisis menggunakan HRTEM untuk menghasilkan gambar yang lebih baik pada nanopartikel nikel hidroksida.

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