BAB V

KESIMPULAN DAN SARAN

5.1 Kesimpulan

1. Adsorben yang dihasilkan terdiri dari CNT, CNS, hematite, dan magnetite
2. Komposit CNT yang dihasilkan memiliki diameter sekitar 0,290 – 0,318 μm
3. Kondisi pH optimum diperoleh pada pH 6 dengan % removal sebesar 55,658%
4. % removal dari adsorben komposit CNT yang dihasilkan lebih baik dibandingkan dengan karbon aktif
5. Semakin tinggi konsentrasi awal ion logam berat Ni(II), semakin kecil % removal yang dihasilkan
6. Semakn besar massa adsorben yang digunakan, semakin besar % removal yang dihasilkan
7. Semakin tinggi temperatur operasi, semakin kecil % removal yang dihasilkan
8. Model kinetika adsorpsi yang paling sesuai mengikuti model kinetika adsorpsi pseudo orde dua
9. Model isotermal adsorpsi yang paling sesuai adalah model Langmuir yang menghasilkan kapasitas adsorpsi (qm) sebesar 50,25 mg logam Ni^{2+}/g komposit CNT dan konstanta Langmuir sebesar 0,059 L/mg logam Ni^{2+}
10. Komposit CNT yang dihasilkan mempunyai kemampuan adsorpsi yang baik

5.2 Saran

1. Bentuk besi selongsong untuk mengeluarkan material karbon nano dari dinding reaktor perlu dipertimbangkan agar mempermudah proses pengeluaran sampel.
2. Perlu dipikirkan cara untuk memperbesar %*yield* dari komposit CNT yang dihasilkan
3. Perlu menemukan metode analisa kadar logam Ni(II) yang lebih cepat

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