BAB 5

KESIMPULAN DAN SARAN

5.1 Kesimpulan

Berdasarkan hasil percobaan yang telah dilakukan, dapat disimpulkan beberapa hal sebagai berikut:

1. Rasio impregnasi, jenis *activating agent* dan waktu aktivasi memberikan pengaruh yang signifikan terhadap kapasitas adsorpsi karbon aktif yang dihasilkan.
2. Rasio impregnasi 1:4 memberikan hasil karbon aktif yang paling baik.
3. *Activating agent* K_2CO_3 memberikan kapasitas adsorpsi karbon aktif yang lebih kecil dibandingkan H_3PO_4.
4. Semakin lama waktu aktivasi kapasitas adsorpsi karbon aktif semakin besar.
5. Kadar air, kadar abu, *volatile matter* dan *fixed karbon* pada karbon aktif dari buah bintaro yang dihasilkan telah memenuhi standar SNI 06-3730-1995.
6. Penggunaan H_3PO_4 dengan rasio impregnasi 1:4 dan lama waktu aktivasi 24 jam memberikan hasil terbaik yaitu kapasitas adsorpsi 125,93 mg/g.
7. K_2CO_3 sebagai alternatif *activating agent* ramah lingkungan dianjurkan karena memberikan hasil yang baik dengan kapasitas adsorpsi 124,03 mg/g.

5.2 Saran

Berdasarkan percobaan yang telah dilakukan, beberapa saran yang dapat diberikan untuk penelitian selanjutnya adalah sebagai berikut:

1. Pada proses impregnasi menggunakan alat pengaduk agar *activating agent* tersebar rata.
2. Perlu alat pemotong yang lebih tajam atau penggiling agar proses *pretreatment* lebih efektif.
3. Perlu dikaji lebih lanjut analisa kuantitatif seperti analisa SEM, BET, XRD dan FTIR untuk mengetahui karakteristik karbon aktif yang diperoleh.

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