PERPUSTAKAAN UNIVERSITAS KATOLIK PARAHYANGAN

BAB V

KESIMPULAN DAN SARAN

5.1 Kesimpulan

1. Suhu dan lama waktu aktivasi yang digunakan pada penelitian ini belum mampu memacu perkembangan struktur pori pada karbon aktif.
2. Hasil SEM menunjukkan bahwa variasi aktivasi yang digunakan belum memacu secara utuh perkembangan pori pada permukaan karbon aktif.
3. Hasil Analisa BET menunjukkan perkembangan luas permukaan yang kecil, yaitu sekitar 6-30 m^2/g. Berdasarkan adsorpsi isoterm dan *pore size distribution*, dapat diketahui bahwa karbon aktif yang dihasilkan memiliki bentuk pori relatif mesopori.
4. Hasil FTIR menunjukkan bahwa adanya perubahan gugus fungsi dari kulit salak, *hydrochar*, hingga menjadi karbon aktif. Selain itu, terlihat adanya pengurangan peak pada spektrum gugus fungsi dari *hydrochar* ketika diaktivasi menjadi karbon aktif. Bila dibandingkan dengan karbon aktif komersial, Hasil FTIR dari karbon aktif yang diperoleh memiliki spektrum yang mulai mendekati dengan karbon aktif komersial.

5.2 Saran

1. Adanya pengecekan alat pada reaktor superkritik yang digunakan agar tidak terdapat penyumbatan ataupun *leak* yang dapat menganggu hasil sampel.
2. Penggunaan suhu operasi yang cukup tinggi dan waktu aktivasi yang cukup lama agar dapat memacu perkembangan pori pada sampel karbon aktif.
3. Adanya perlakuan pada sampel *hydrochar* dengan menggunakan asam sitrat atau *cerous chloride* sebagai katalis sebelum diaktivasi untuk memacu perkembangan distribusi ukuran pori pada sampel karbon aktif.

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