



BAB V

KESIMPULAN DAN SARAN

5.1 Kesimpulan

Kesimpulan dari penelitian “Kajian Penggunaan Berbagai Bahan Alami Indonesia Sebagai Koagulan Dalam Pengolahan Air Kaolin” adalah:

1. Koagulan alami biji petai cina, biji kelor, dan biji pepaya dapat dimanfaatkan sebagai koagulan alami.
2. Kondisi optimum yang diperoleh koagulan biji petai cina dengan memanfaatkan dosis sebesar 1 g/L dan pH 10, berhasil memperoleh persentase penurunan turbiditas sebesar 87,63.
3. Kondisi optimum yang diperoleh koagulan biji kelor dengan memanfaatkan dosis sebesar 0,5 g/L dan pH 9, berhasil memperoleh persentase penurunan turbiditas sebesar 98,83.
4. Pemanfaatan koagulan biji pepaya tidak menghasilkan kondisi optimum dikarenakan sudah berada pada kondisi yang sangat ekstrim dengan pH 13 dan dosis 0,25 g/L.
5. Berdasarkan analisa turbiditas koagulan kelor merupakan koagulan terbaik dimana koagulan kelor memiliki persentase penurunan turbiditas terbesar dibandingkan dengan koagulan biji petai cina dan biji pepaya.
6. Analisa *FTIR* memperlihatkan bahwa koagulan biji kelor memiliki nilai absorbansi lebih besar untuk gugus hidroksil, karboksil, dan protein apabila dibandingkan dengan koagulan biji pepaya dan biji petai cina.

5.2 Saran

Saran untuk penelitian selanjutnya dalam pemanfaatan bahan alam sebagai koagula alami adalah:

1. Perlu dilakukan ekstraksi terlebih dahulu dengan memanfaatkan pelatur yang sesuai agar komponen yang berperan dapat diperoleh lebih murni.
2. Perlu adanya parameter lain yang diperiksa tidak hanya turbiditas.



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