

BAB V

KESIMPULAN & SARAN

V.1. Kesimpulan

Kesimpulan yang didapat dari penelitian adalah :

1. Perbandingan *solid-liquid* pada substrat mempengaruhi penurunan kadar lignin untuk setiap mikroorganisme, dimana :
 - Fungi *Trichoderma viride* memiliki hasil penurunan kadar lignin yang lebih tinggi pada perbandingan *solid-liquid* = 1:30, dengan persentase delignifikasi yaitu 13,76%.
 - Bakteri *Escherichia coli* memiliki hasil penurunan kadar lignin yang lebih tinggi pada perbandingan *solid-liquid* = 1:50, dengan persentase delignifikasi yaitu 12,48%.
2. Pada delignifikasi dengan menggunakan kombinasi *Trichoderma viride* dan *Escherichia coli*, penurunan kadar lignin tertinggi dicapai pada perbandingan Tv : Ec = 2:1, dengan persentase delignifikasi yaitu 18,57%.
3. Berdasarkan hasil pembacaan analisis FT-IR, diketahui bahwa pada sampel hasil delignifikasi masih mengandung lignin dilihat dari gugus fenolik sebagai salah satu unsur penyusun lignin.

V.2. Saran

1. Kombinasi mikroorganisme *Trichoderma viride* dan *Escherichia coli* menghasilkan penurunan kadar lignin yang lebih tinggi dibandingkan penggunaan kedua mikroorganisme tersebut masing-masing .

2. Untuk meningkatkan persentase delignifikasi, dapat dilakukan dengan menambahkan durasi proses fermentasi.

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