

BAB V

KESIMPULAN DAN SARAN

5.1 Kesimpulan

Dari penelitian pengolahan limbah LDPE menjadi bahan bakar cair, dapat disimpulkan bahwa :

1. Variasi rasio pelarut terhadap plastik (w/w) 5 : 1 merupakan variasi terbaik karena menghasilkan fraksi cair yang lebih besar daripada variasi rasio pelarut terhadap plastik (w/w) 4 : 1.
2. Proses *purging* tidak berpengaruh secara signifikan terhadap fraksi cair pada variasi temperatur yang lebih rendah.
3. Variasi temperatur 265 °C merupakan variasi temperatur terbaik karena pada variasi temperatur 265 °C juga ditemukan fraksi cair yang baik.
4. *Cracking* yang terjadi pada temperatur 265 °C dan 295 °C belum banyak sehingga menyisakan banyak residu (LDPE yang belum mengalami *cracking*).

5.2 Saran

Saran untuk penelitian pengolahan limbah LDPE menjadi bahan bakar cair adalah :

1. Dapat dicoba penggunaan jenis pelarut yang lain untuk menghasilkan fraksi cair yang lebih besar dan mengalami evaporasi lebih sedikit.
2. Dapat dilakukan penelitian mengenai pengaruh pengotor pada plastik terhadap fraksi cair.
3. Dapat dilakukan penelitian mengenai penggunaan rasio pelarut terhadap plastik (w/w) yang lebih besar dari 5:1.
4. Dapat dilakukan penelitian dengan penggunaan kondensor selama *run* percobaan untuk meningkatkan yield fraksi cair sebagai skema semi-batch ataupun kontinu.
5. Melakukan analisis GC-MS terhadap pelarut agar dapat lebih baik membedakan komponen-komponen pada produk dan pelarut.

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