

Volatile compounds detected in coconut shell liquid smoke through pyrolysis at a fractioning temperature of 350-420 C

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Abstrak

This study evaluated the volatile components of liquid smoke from coconut shells obtained through the pyrolysis process at fraction 350-420 °C. The volatile compounds of liquid smoke from a coconut shell were analyzed using gas chromatography and mass spectrometry (GC-MS). Nineteen peaks were detected by GC-MS in the coconut shell liquid smoke, and 19 compounds also were identified. The volatile compounds were identified as follows based on their function group's composition percentage: phenol (90.75%), carbonyl (3.71%), alcohol (1.81%), and benzene (3.73%), respectively. The liquid smoke contains a high ratio of phenol derivatives (90.75%) in volatile profile. The phenol derivatives were the major volatile compounds found in the coconut shell liquid smoke.

Senyawa Volatil terdeteksi pada Asap Cair Tempurung Kelapa melalui Pirolisis pada Suhu Fraksinasi 350-420 °C. Penelitian ini mengevaluasi komponen volatil asap cair dari tempurung kelapa yang diperoleh melalui proses pirolisis pada fraksi 350-420 °C. Senyawa-senyawa volatil asap cair dari tempurung kelapa dianalisis menggunakan kromatografi gas dan spektrometri massa (GC-MS). Sembilan belas puncak terdeteksi oleh GC-MS dalam asap cair tempurung kelapa, dan 19 senyawa juga telah diidentifikasi. Senyawa-senyawa volatil diidentifikasi berdasarkan persen komposisi dari gugus fungsi masing-masing sebagai berikut: fenol (90,75%), karbonil (3,71%), alkohol (1,81%), dan benzene (3,73%). Asap cair mengandung rasio tinggi turunan fenol (90,75%) yang mudah menguap. Derivatif fenol adalah senyawa volatil utama yang ditemukan dalam asap cair tempurung kelapa.