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.