DETERMINATION OF FLAVONOID CONTENTS IN LIQUID SMOKE OF VITEX PINNATA, ALSTONIA CHOLARIS, TRISTANIOPSIS MERGUENSIS GRIFF WOOD WITH UV-Vis SPECTROPHOTOMETRY

ABSTRACT

From the pyrolysis results obtained, a study was carried out on determining the flavonoid content of liquid smoke from vitex pinnata, alstonia cholaris and tristaniopsis merguensis griff wood using UV-vis spectrophotometry. This stage begins with cutting the wood into smaller sizes ranging from 5 cm long and 3 cm wide. Then put the Vitex Pinnata, Alstonia Cholaris and Tristaniopsis merguensis griff wood samples into the pyrolysis pan (reactor), then cover and adjust the temperature to reach ±450 °C. The quality of Leban wood liquid smoke has a pale yellow color. After testing the pH of the liquid smoke, it shows that it is at pH 2-3, which is acidic. Then phytochemical tests and determination of flavonoid levels using the results of pyrolysis research obtained from Leban wood biomass with a density of 1.017 gr/ml with a yield of 30.51% from 450 ml volume of liquid smoke. Each biomass uses a weight of 1.5 kg and the same pyrolysis time of 6 hours. Phytochemical testing produces secondary metabolite compounds such as alkaloids, flavonoids and tannins. The flavonoid level obtained from Leban wood liquid smoke was 79,058 µg/ml.

Key words: pyrolysis, liquid smoke, phytochemicals, secondary metabolites

PENENTUAN KADAR FLAVONOID ASAP CAIR KAYU *VITEX PINNATA, ALSTONIA CHOLARIS, TRISTANIOPSISMERGUENSIS GRIFF* DENGAN SPEKTROFOTOMETRI UV-Vis

ABSTRAK

Dari hasil pirolisis yang telah didapatkan kemudian dilakukan kajian tentang penentuan kadar flavonoid asap cairkayu *vitex pinnata, alstoniacholaris*dan *tristaniopsis merguensis griff*dengan spektrofotometri uv-vis. Tahapan ini diawali dengan memotong kayu mejadi ukuran yang lebih kecil berkisar panjang 5 cm dan lebar 3 cm. Kemudian dimasukkan sampel kayu*Vitex Pinnata, AlstoniaCholaris* dan *Tristaniopsis merguensis griff* ke dalam panci pirolisis (reactor), lalu ditutup dan diatur suhunya hingga mencapai ±450 °C. Adapun kualitas dari asap cair kayu leban memiliki hasil berwarna kuning pucat, setelah dilakukan pengujian pH asap cair menunjukkan pada pH2-3 yaitu bersifat asam. Kemudian uji fitokimia dan penentuan kadar flavonoid dengan hasil penelitian pirolisis yang diperoleh dari bioamassa kayu leban dengan densitas 1,017 gr/ml dengan rendemen sebesar 30,51% dari 450 ml volume asap cair. Dari masing-masing biomass menggunakan berat 1,5 kg dan 6 jam waktu pirolisis yang sama.Pengujian fitokimia menghasilkan senyawa metabolit sekunder seperti alkaloid, flavonoid dan tanin.Kadar flavonoid yang diperoleh dari asap cair kayu leban sebesar 79.058 µg/ml.

Kata kunci : pirolisis, asap cair ,fitokimia, metabolit sekunder