

SURAT PERNYATAAN PENGALIHAN HAK PUBLIKASI

Menyatakan bahwa makalah berjudul "*ANTIOXIDANT, CYTOTOXIC, ANTIHYPERURICEMIC ACTIVITIES AND CHEMICAL CONSTITUENTS OF SOME INDONESIAN FRUIT PEELS*" Karya Muhtadi, Haryoto, Tanti Azizah Sujono dan Andi Suhendi dari Fakultas Farmasi Universitas Muhammadiyah Surakarta telah dipresentasikan secara oral pada **Simposium Nasional Kimia Bahan Alam XXII (SimNasKBA-2014)**, yang diselenggarakan oleh Himpunan Kimia Bahan Alam Indonesia bekerjasama dengan Program Studi Kimia Fakultas Pendidikan Matematika dan Ilmu Pengetahuan Alam Universitas Pendidikan Indonesia di Auditorium FPMIPA UPI Bandung pada tanggal 21 – 22 Oktober 2014.

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Assalamu'alaikum Wr. Wb.

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Untuk Mempresentasikan ANTIOXIDANT, CYTOTOXIC, ANTIHYPERURICEMIC ACTIVITIES AND CHEMICAL CONSTITUENTS OF SOME INDONESIAN FRUIT PEELS dalam acara Seminar Nasional kimia bahan alam 2014 dengan tema "Keragaman Senyawa Bahan Alam Sebagai Bahan Baku Potensial Untuk Industri" yang dilaksanakan pada tanggal 21-22 Oktober 2014 di FMIPA UPI Bandung.

Demikian Surat Tugas ini di buat, untuk dapat dilaksanakan sebagaimana mestinya.


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Telah dilaksanakan sebagaimana mestinya

Mengetahui,



ANTIOXIDANT, CYTOTOXIC, ANTIHYPERURICEMIC ACTIVITIES AND CHEMICAL CONSTITUENTS OF SOME INDONESIAN FRUIT PEELS

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ABSTRACT

This study was designed to investigate the antioxidant, cytotoxic, antihyperuricemic activities and chemical constituent of the ethanolic extracts of some Indonesian fruit peels, namely Durian, Rambutan, Jeruk Manis and Kelengkeng. The peels of some Indonesian fruits had been extracted with the ethanol solvent and fractionated with the partition method, started n-hexane, chloroform, ethyl acetate and methanol-water solution. The antioxidant activities were evaluated by using DPPH radical scavenging assay. The strongest antioxidant activity was shown by the Rambutan peel extract, with IC_{50} values of $7.74 \mu\text{g/mL}$, more active than vitamin E ($IC_{50} = 8.48 \pm 0.1 \mu\text{g/mL}$). The cytotoxic activities were evaluated using MTT assay against HeLa, T47D and WiDR cell lines. The result of cytotoxic activities testing showed very weak against all cell lines tested. The antihyperuricemic activities were evaluated in mice Balb-C strain induced by potassium oxonate dose of 250 mg/kg body weight. The result of antihyperuricemic activities testing showed that the extracts of rambutan peel dose of 500 mg / kg bw had reduced strongest of uric levels acid in the blood serum of mice, with the value 91.81%, exceeds the activity shown by allopurinol 66.67%. The chemical constituents of Rambutan and Durian were successfully isolated using vacuum liquid chromatography and radial chromatography technique, and these structures were characterized based on the proton (^1H) and carbon (^{13}C) NMR spectra. The isolated compounds were **ethyl gallate (1)** from Rambutan (*Nephelium lappaceum* Linn.) rind, **4,4-dimethyl- poriferasta-18(19)-en-3-ol (2)** and **3 α -E-ferulyloxy-lup-20(29)-en-28-oic acid (3)** from Durian (*Durio zibethinus* Murr.) peels.

Key words : *Antioxidant, cytotoxic, antihyperuricemic, chemical constituents, some Indonesian fruit peels*

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SERTIFIKAT

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