STANDARDISASI SIMPLISIA DAN EKSTRAK KULIT BUAH JERUK KASTURI (*Citrus microcarpa* Bunge), PENETAPAN KADAR HESPERIDIN , SERTA UJI AKTIVITAS ANTIOKSIDAN DAN ANTIBAKTERI

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ABSTRAK

Dalam Farmakope Herbal Indonesia belum dijumpai monografi tentang kulit buah jeruk kasturi (*Citrus microcarpa* Bunge), maka perlu dilakukan standardisasi parameter spesifik dan non spesifik mutu dari simplisia dan ekstrak kulit buah jeruk kasturi. Sampel yang digunakan berasal dari tiga daerah yaitu Kota Bukittingi dan Padang, serta Kabupaten Pesisir Selatan, Sumatera Barat. Hasil pemeriaan simplisia kulit buah jeruk kasturi diperoleh permukaan luar berwana coklat dan bagian dalam berwarna kuning, sedikit berbau dan rasa asam. Pemeriksaan mikroskopis diperoleh fragmen pengenal kristal kalsium oksalat, serabut, parenkim dengan sel minyak, jaringan pengangkut berbentuk tangga. Kadar sari larut air dan etanol tidak kurang dari 19,73% dan 10,26%, nilai susut pengeringan tidak lebih dari 10,78%, serta kadar abu total dan abu tidak larut asam tidak lebih dari 4,33% dan 1,01%. Hasil pemeriaan ekstrak kulit buah jeruk kasturi berupa ekstrak kental, berbau khas, berwarna hitam dan rasa pahit. Pola KLT menggunakan pembanding hesperidin dengan nilai Rf 0,68, kadar hesperidin tidak kurang dari 4,78%, nilai randemen tidak kurang dari 25,33%, kadar air tidak lebih 17,47%, serta kadar abu total dan abu tidak larut asam tidak lebih dari 4,65% dan 0,13%. Aktivitas antioksidan ekstrak kulit buah jeruk kasturi dari daerah Bukittinggi, Padang dan Pesisir Selatan berturut turut diperoleh IC_{50} sebesar 980,54; 927,53; dan 897,84 µg/mL dengan kategori sangat lemah. Ekstrak kulit buah jeruk kasturi mempunyai aktivitas antibakteri pada konsentrasi 15% dan 20%.

Kata Kunci : Standardisasi, Kulit buah jeruk kasturi, *Citrus microcarpa* Bunge, antioksidan, antibakteri

STANDARDIZATION OF SIMPLICIA AND EXTRACT OF CALAMANSI (*Citrus microcarpa* Bunge) PEEL, QUALIFICATION OF HESPERIDINE, ANTIOXIDANT AND ANTIBACTERIAL ACTIVITIES

ABSTRACT

In the Indonesian Herbal Pharmacopoeia a monograph about calamansi (*Citrus microcarpa* Bunge) peel is not found yet, it is necessary to standardize specific and non-specific parameters of the simplicia and extract of calamansi peel. The samples were taken from three regions of West Sumatra such as, Bukittingi, Padang, and Pesisir Selatan. Research results were found that simplicia of calamansi peel were in the form of the outer surface is colored brown and the inside surface is colored yellow, has slightly smell and sour taste. The microscopic assay fragments as identified in the form of the calcium oxalate crystal, fibers, parenchyme with oil cells, ladder-shaped transport tissue. Water and ethanol soluble extract content was not less than 19.73% and 10.26%, the loss on drying was not more than 10.78%, total ash and acid insoluble ash content of simplicia was not more than 4.33% and 1.01%. The results of the extract of calamansi peel were in the form of a thick extract, specific odor, black color and bitter taste. Rf value chromatography pattern with compound of comparison hesperidin was 0.68, hesperidin content of extract was not less than 4.78%, yield of extract was not less than 25.33%, water content was not more than 17.47%, total ash and acid insoluble ash content of extract was not more than 4.65% and 0.13%. The antioxidant activity of calamansi peel extract from the Bukittinggi, Padang and Pesisir Selatan regions were obtained IC_{50} by 980.54, 927.53, and 897.84 µg/mL in the very weak category. Calamansi peel extract has antibacterial activity at concentrations of 15% and 20%.

Keywords : Standardization, calamansi peel, *Citrus microcarpa* Bunge, antioxidant, antibacterial