

INTISARI

Daun pandan wangi lama digunakan oleh masyarakat secara turun temurun sebagai obat peluruh batu ginjal dalam bentuk rebusan. Dalimartha (1998) menulis daun pandan wangi mengandung flavonoid. Menurut Pramono (1986), salah satu mekanisme obat peluruh batu ginjal adalah membentuk kompleks kalsium-flavonoida sehingga batu ginjal dapat larut. Penelitian ini bertujuan mengetahui apakah infusa daun pandan wangi mengandung flavonoida dan mempunyai kemampuan melarutkan kalsium batu ginjal.

Penelitian ini termasuk penelitian eksperimental murni dengan menggunakan rancangan acak lengkap pola satu arah. Subyek batu ginjal dihomogenkan ukurannya dengan ayakan mesh 20/80, dilarutkan dengan HCl 0,3M dan filtrat diuji kualitatif kimiawi untuk mengetahui adanya kalsium. Infusa daun pandan wangi dianalisis kualitatif untuk mengetahui adanya flavonoida secara KLT. Batu ginjal dibagi menjadi tujuh kelompok, masing-masing direndam dalam aquadest, larutan Calculosol® 1,2% b/v , infusa daun pandan wangi 5% b/v , 10% b/v , 15% b/v , 20% b/v , dan 25% b/v . Filtrat perendaman dianalisis dengan metode spektrofotometri serapan atom.

Analisis kualitatif kalsium batu ginjal menunjukkan hasil positif. Analisis kualitatif flavonoida dengan KLT fase diam selulosa, fase gerak asam asetat 15% deteksi dengan uap amonia menghasilkan bercak infusa berwarna kuning Rf 0,85 serta bercak standar rutin warna kuning dengan Rf 0,72. Fase gerak n-butanol : asam asetat : air (4:1:5 v/v fase atas) deteksi uap amonia menghasilkan bercak infusa berwarna kuning dengan Rf 0,81 dan bercak standar rutin warna kuning memiliki Rf 0,65. Analisis data dengan uji *One Way Anova* menunjukkan jumlah kalsium batu ginjal terlarut dalam kontrol negatif aquadest, kontrol positif Calculosol® 1,2% b/v , infusa daun pandan wangi 5% b/v , 10% b/v , 15% b/v , 20% b/v , dan 25% b/v berbeda bermakna dengan jumlah masing-masing $1,7500 \pm 0,2754$ ppm; $33,0500 \pm 0,7136$ ppm; $26,7000 \pm 0,4359$ ppm; $44,4500 \pm 0,6500$ ppm; $61,6500 \pm 0,7632$ ppm; $84,7500 \pm 0,8720$ ppm; dan $118,1875 \pm 1,1831$ ppm.

Hasil penelitian menunjukkan bahwa infusa daun pandan wangi mengandung flavonoida dan mampu melarutkan kalsium batu ginjal.

ABSTRACT

Pandanus amaryllifolius Roxb. folium has been used from generation to generation as kidney stones medicine. Dalimartha (1998) in his book said that *Pandanus amaryllifolius* Roxb. folius has flavonoid as one of the constituents. In accordance with Pramono (1986), one of the kidney stones medicine mechanism is by forming dissolvable calcium-flavonoid complex. The experiment was purposed to know whether water extract of *Pandanus amaryllifolius* Roxb. folium contains flavonoid and could dissolve calcium contained in kidney stones.

This experiment includes pure experimental research using one way complete random sampling method. Kidney stones as subject were homogenized its size and sefted using a mess 20/80 sieve, dissolved with HCl 0,3M and it's filtrate qualitatively analized chemically. *Pandanus amaryllifolius* Roxb. folium extracted with water and get analized qualitatively with TLC. The kidney stones divided into seven group, each of them soaked in aquadest, Calcosol 1,2% solution, *Pandanus amaryllifolius* Roxb. Folium extract 5% b/v , 10% b/v , 15% b/v , 20% b/v , and 25% b/v . Quantitative analize with atomic absorption spectrophotometer was done to the solution after soaking.

Qualitative analysis of kidney stones calcium shows positive results. Flavonoid qualitative analysis with TLC cellulose as stationary phase and 15% acetic acid as mobile phase method detected with ammonia resulted yellow water extract spot Rf 0,85 and the yellow spot of rutin standart with Rf 0,72. The n-butanol : acetic acid : water (4:1:5 v/v upper phase) mobile phase detected by ammonia resulted yellow water extract spot Rf 0,81, the standar spot, yellow, have Rf 0,64. Atomic Absorption Spectrophotometer data analysis by One Way Anova shows significant differentiation the amount of dissolved kidney stones calcium in aquadest negative control and 1.2% Calcosol as positive control are 1.7500 ± 0.2754 ppm and 33.0500 ± 0.7136 ppm. The 5% b/v , 10% b/v , 15% b/v , 20% b/v , and 25% b/v pandanus folium extract could dissolved kidney stones calcium 26.7000 ± 0.4359 ppm; 44.4500 ± 0.6500 ppm; 61.6500 ± 0.7632 ppm; 84.7500 ± 0.8720 ppm; and 118.1875 ± 1.1831 ppm.

The experiment result shows that water extract of *Pandanus amaryllifolius* Roxb folium contains flavonoids and could dissolve calcium in kidney stones.

Keywords : *Pandanus amaryllifolius* Roxb., kidney stone, calcium, atomic absorption spectrophotometer