ABSTRAK

Hiperurisemia adalah keadaan dimana kadar asam urat berlebih di dalam tubuh. Asam urat adalah produk dari metabolisme purin yang mengendap di persendian sehingga menimbulkan rasa nyeri yang hebat dan kaku. Xantin oksidase (XOD) mengkatalisasi oksidasi hipoksantin dan xantin menjadi asam urat, yang memiliki peran penting dalam pembentukan asam urat. Metabolit sekunder yaitu flavonoid yang terdapat pada tanaman daun salam dan daun sisik naga dapat berperan sebagai inhibitor xantin oksidase. Penelitian ini bertujuan untuk mengetahui aktivitas kombinasi infusa daun salam (*Syzygium polyanthum* (Wight) Walp dan daun sisik naga *(Pyrrosia piloselloides* (L.) M.G Price) dalam penghambatan enzim xantin oksidase. Tahapan penelitian ini meliputi penyiapan sampel, determinasi tumbuhan, pembuatan simplisia, pembuatan infusa, pengujian efek inhibisi enzim xantin oksidase untuk menentukan nilai IC_{50} dimana allopurinol digunakan sebagai pembanding, dan pengujian kandungan senyawa flavonoid dengan metode KLT.

Hasil pengujian KLT didapatkan bahwa daun sisik naga dan daun salam mengandung flavonoid. Hasil uji efek penghambatan enzim xantin oksidase pada infusa tunggal daun salam diperoleh nilai rata-rata IC_{50} sebesar 45.674 µg/mL, pada infusa tunggal daun sisik naga diperoleh nilai rata-rata IC_{50} sebesa 41.637 µg/mL, sedangkan pada kombinasi diperoleh nilai rata-rata IC_{50} sebesar 33.246 µg/mL. Berdasarkan hasil uji statistika dengan uji *one way* anova menyatakan bahwa hasil yang didapatkan berbeda bermakna secara signifikan antara sampel dengan allopurinol yang dinyatakan dengan $p<0.05$.

Kata kunci : Hiperurisemia, xantin oksidase, infusa daun salam, infusa sisik naga, konsentrasi inhibisi IC_{50}.

ABSTRACT

Hyperuricemia is a condition in which excess uric acid levels in the body. Uric acid is a product of purine metabolism which settles in the joints, causing intense pain and stiffness. Xanthine oxidase (XOD) catalyzes the oxidation of hypoxanthine and xanthine to uric acid, which has an important role in the formation of uric acid. Flavonoids as secondary metabolites found in salam leaves and sisik naga can act as xanthine oxidase inhibitors. This study aims to determine the activity of the combination of salam infusion (Syzygium polyanthum (Wight) Walp and sisik naga infusion (Pyrrosia piloselloides (L.) M.G Price) in the inhibition of xanthine oxidase enzymes. The stages of this research included sample preparation, plant determination, manufacturing of simplicia, making infusion, testing the inhibitory effect of the xanthine oxidase enzyme to determine the IC_{50} value where allopurinol was used as a comparison, and testing the content of flavonoid compounds using the TLC method.

The results of the TLC test showed that sisik naga leaves and salam leaves contain flavonoids. The test results of the inhibitory effect of the enzyme xanthine oxidase on a single infusion of salam leaves obtained an average IC_{50} value of 45,674 µg / mL, for single infusion of sisik naga leaves an average IC_{50} value was 41,637 µg / mL, and the combination obtained an average IC_{50} value. 33,246 µg / mL. Based on the results of the statistical test on the one way ANOVA test, it was stated that the results obtained were significantly different between the samples with allopurinol which was stated with $p < 0.05$.

Keywords: Hyperuricemia, xanthine oxidase, salam leaf infusion, sisik naga leaf infusion, inhibition concentration (IC_{50}).