INTISARI

Senyawa tetrahidroheksagamavunon-5 (THHGV-5) merupakan senyawa turunan kurkumin hasil sintesis senyawa heksagamavunon-5 (HGV-5) melalui reaksi hidrogenasi dan diketahui memiliki aktivitas antioksidan lebih baik dari HGV-5 dan vitamin E. Sebelum dikembangkan menjadi suatu zat aktif untuk sediaan obat, THHGV-5 perlu dilakukan pengujian lanjutan salah satunya uji nonklinik. Penelitian ini bertujuan untuk mengetahui nilai potensi ketoksikan akut (LD_{50}), gejala toksik klinik serta wujud efek toksik setelah pemberian senyawa THHGV-5 dosis tunggal.

Metode uji yang digunakan mengacu OECD 420 *Acute Oral Toxicity-Fixed Dose Procedure* terhadap tikus betina galur Wistar. Dua tahap pengujian, yaitu uji pendahuluan dan uji utama. Dosis awal uji pendahuluan yang digunakan 300 mg/kgBB dan dilanjutkan hingga 2000 mg/kgBB yang ditetapkan sebagai dosis pada uji utama. Hari ke 15 setelah pemejanan, seluruh hewan uji dikorbankan. Pengamatan kualitatif berupa kematian hewan uji, pengamatan gejala efek klinis dan histopatologi organ serta pengukuran kuantitatif berupa purata kenaikan berat badan per hari dan rasio bobot organ yang dianalisis statistik uji *Independent Sampel T-Test* dengan tingkat kepercayaan 95%.

Pemberian senyawa THHGV-5 dosis 2000 mg/kgBB secara oral tidak menimbulkan kematian, tidak menimbulkan gejala toksik klinik serta efek toksik pada pengamatan histopatologi organ vital tikus betina galur Wistar. Senyawa THHGV-5 termasuk dalam kategori 5 (*unclassified*) manurut kategori GHS dengan nilai LD_{50} > 2000 mg/kgBB.

Kata Kunci: Toksisitas akut oral, Tikus, THHGV-5, LD_{50}, Histopatologi

ABSTRACT

Tetrahydrohexagamavunon-5 (THHGV-5) is a curcumin derivative compound produced by the synthesis of hexagamavunon-5 (HGV-5) through a hydrogenation reaction and is known to have antioxidant activity better than HGV-5 and vitamin E. Before it was developed into an active substance for drug, THHGV-5 needs further testing, one of them is nonclinical testing. This study aims to determine the potential value of acute toxicity (LD_{50}), clinical toxic symptoms, and the manifestation of toxic effects after administration of a single dose of THHGV-5.

The test method used refers to the OECD 420 Acute Oral Toxicity-Fixed Dose Procedure on Wistar strain female rats. Two stages of testing, namely the preliminary test and the main test. The initial dose of the preliminary test used was 300 mg/kgBW and continued to 2000 mg/kgBW which was determined as the main test dose. The 15th day after treatment, all test animals were sacrificed. Qualitative observations in the form of death of test animals, observation of clinical effects, and histopathology of organs and quantitative measurements in the form of mean weight gain per day and organ weight ratio were analyzed statistically by independent sample t-test with 95% confidence level.

Oral administration of THHGV-5 compound of 2000 mg/kgBW does not cause death, does not cause clinical toxic symptoms and toxic effects on histopathological observations of vital organs Wistar strain female rats. LD_{50} THHGV-5 category is unclassified (>2000 mg/kgBB) following GHS classification.

Keywords: acute oral toxicity, THHGV-5, LD_{50}, histopathology