

## INTISARI

Produk GD merupakan pengembangan obat alami campuran ekstrak herba sambiloto (*Andrographidis Paniculatae Herbae Extractum*) dan ekstrak daun mimba (*Azadirachtae Indicae Folii Extractum*) yang membantu menurunkan kadar glukosa darah pada penderita diabetes. Campuran ekstrak tersebut banyak terdapat kandungan *andrografolid* dan flavonoid. Penelitian bertujuan untuk mengevaluasi ketoksikan subkronis pemberian sediaan uji produk GD campuran ekstrak herba sambiloto 50 mg dan ekstrak daun mimba 100 mg terhadap tikus jantan Wistar ditinjau dari aspek kimia darah dan urin.

Metode penelitian menggunakan uji toksisitas subkronis *guidline* OECD 408. Pengujian toksisitas subkronis menggunakan lima puluh ekor tikus jantan. Hewan uji dibagi menjadi 4 kelompok yaitu kontrol (Na-CMC 0,5 %), Dosis I (40,5 mg/kgBB), Dosis II (202,5 mg/kgBB), dan Dosis III (1012,5 mg/kgBB). Suspensi sediaan uji dipejankan secara per oral pada hewan uji sekali setiap hari selama 90 hari. Pengamatan meliputi gejala klinis, perkembangan berat badan, asupan makanan dan minuman, analisis kimia darah, dan pemeriksaan urin. Data dianalisis secara statistik menggunakan metode *one-way ANOVA* dan *Paired-sample T test* pada program SPSS 19.

Hasil penelitian menunjukkan bahwa pemberian sediaan uji produk GD campuran ekstrak herba sambiloto 50 mg dan ekstrak daun mimba 100 mg secara berulang selama 90 hari terhadap tikus jantan Wistar tidak mempengaruhi gejala-gejala klinis, tidak menyebabkan kematian, tidak mempengaruhi asupan makanan dan minuman, parameter kimia darah seperti SGPT, SGOT, glukosa, dan albumin serta pemeriksaan urin seperti pH, berat jenis, glukosa, bilirubin, dan protein. Dosis 1012,5 mg/kgBB menyebabkan penurunan bermakna pada kadar kreatinin dan terbalikkan setelah 28 hari. Kadar kolesterol mengalami peningkatan bermakna pada dosis 202,5 mg/kgBB dan penurunan bermakna pada dosis 1012,5 mg/kgBB. Penurunan dan peningkatan yang terjadi pada kadar kolesterol masih dalam rentang normal dan dapat terbalikkan setelah 28 hari masa reversibilitas.

Kata kunci: toksisitas subkronis, produk GD, ekstrak herba sambiloto, ekstrak daun mimba, kimia darah, urin.

## ABSTRACT

GD product is an invention of natural drug, consist of sambiloto herbs extracts (*Andrographidis Paniculatae Herbae Extractum*) and mimba leaves extracts (*Azadirachtae Indicae Folia Extractum*) that help to low the blood glucose level in diabetic. This product has many constituents of *andrografolid* and flavonoid. The study was aimed to evaluate sub chronic toxicity affect of GD product that consist of sambiloto herbs extracts 50 mg and mimba leaves extracts 100 mg to male rat of Wistar strain considered from biochemical of blood and urine.

The study used sub chronic toxicity guideline OECD 408. This study used fifty male rats. Experimental rats were divided into 4 groups: control groups (Na-CMC 0.5 %), Dose I (40.5 mg/kg BW), Dose II (202.5 mg/kg BW), and Dose III (1012.5 mg/kg BW). Suspension of GD product was given by per oral to experimental rats once a day during 90 days. Observation included clinical symptoms, body weight, food and water intake, biochemical of blood, and urine. Data were analyzed by statistic use method of one-way ANOVA and Paired-sample T test at program of SPSS 19.

Result of research indicated that treatment of GD product repeated during 90 days to male rat of Wistar strain did not influence clinical symptoms, body weight, food and water intake, biochemical parameter of blood like SGPT, SGOT, glucose, and albumin, and urine like pH, specific gravity, glucose, bilirubin, and protein. Dose of 1012.5 mg/kg BW caused significant reduction in creatinine level and reversible after 28 days. Cholesterol level increased significantly in dose of 202.5 mg/kg BW and significant reduction in dose of 1012.5 mg/kg BW. The reduction and increase of cholesterol level were normal and reversible after 28 days.

**Keyword:** sub chronic toxicity, GD product, sambiloto herbs extracts, mimba leaves extracts, biochemical of blood, urine.