

INTISARI

Jamu kunyit asam instan yang beredar di pasaran saat ini tersedia dengan berbagai macam merek dan komposisi. Salah satu jamu kunyit asam instan dengan komposisi 20 % ekstrak rimpang kunyit dan 10 % ekstrak daging buah asam jawa dilaporkan berdaya analgesik pada dosis 18200 mg/kg BB, sedangkan jamu kunyit asam segar pada komposisi yang sama berdaya analgesik pada dosis 5460 mg/kg BB (Rahmawati, 2008).

Penelitian ini termasuk dalam penelitian eksperimental murni dengan rancangan penelitian acak lengkap, pola satu arah. Metode yang digunakan adalah metode rangsang kimia untuk uji analgesik dan metode *Simplex Lattice Design* untuk perhitungan komposisi formula optimum. Sebanyak 45 ekor mencit betina, galur Swiss, berat badan 20-30 gram, usia 2-3 bulan dibagi 7 kelompok yaitu kontrol negatif (aquadest), kontrol positif (Asetosal 91 mg/kg BB), perlakuan dengan ekstrak rimpang kunyit dan ekstrak daging buah asam jawa yang diberikan secara per oral dalam 5 komposisi ekstrak rimpang kunyit : ekstrak daging buah asam jawa berturut-turut sebesar (25% : 5%), (20% : 10%), (15% : 15%), (10% : 20%), (5% : 25%). Tiga puluh menit kemudian mencit diinduksi asam asetat 1% dosis 25 mg/kg BB secara intraperitoneal. Geliat yang timbul diamati tiap 5 menit selama 60 menit. Jumlah kumulatif geliat diubah ke dalam bentuk prosentase penghambatan terhadap geliat. Data yang diperoleh dianalisis secara statistik dengan *One-way ANOVA* dilanjutkan dengan uji *Scheffe* taraf kepercayaan 95%. Data uji analgesik untuk metode *Simplex Lattice Design* dianalisis dengan F_{hitung} taraf kepercayaan 95 %.

Dosis efektif dari campuran ekstrak rimpang kunyit dan ekstrak daging buah asam jawa adalah 2730 mg/kg BB yang menghasilkan daya analgesik sebesar 71,90%. Dari hasil prediksi berdasarkan *Simplex Lattice Design*, komposisi campuran 20,7% : 9,3% adalah campuran yang optimum karena dapat menghasilkan % penghambatan sebesar 65,91579 % pada dosis 2730 mg/kg BB.

Kata kunci : analgesik, ekstrak rimpang kunyit dan ekstrak daging buah asam jawa, *Simplex Lattice Design*

ABSTRACT

The instant sour turmeric tonics mostly found in market nowadays are provided in various brand and composition. One of the instant sour turmeric tonics with the composition of 20% turmeric rhizome extract and 10% tamarind extract was reported as having the analgesic capacity at the dosage of 18200 mg/kg BB. Meanwhile, the fresh sour turmeric tonic with the same composition had the analgesic capacity at the dosage of 5460 mg/kg BB (Rahmawati, 2008).

This is a pure experimental research with one-way pattern, random, complete research design. The method used is chemistry stimulant method for the test of analgesic and *Simplex Lattice Design* method for the calculation of optimum formula composition. Approximately 45 female mice, Switzerland furrow, with weight around 20 – 30 grams and age 2 – 3 months were divided randomly into 7 groups. They were I) negative control given aqueduct, II) positive control given Asetosal 91 mg/kg BB, III) conduction with the extract of turmeric rhizome and the extract of tamarind which were given per orally in 5 compositions of turmeric rhizome extract : tamarind extract in a row as (25% : 5%), (20% : 10%), (15% : 15%), (10% : 20%), (5% : 25%). Thirty minutes later the mice were inducted acetate acid 1% dosage 25 mg/kg BB interperitonally. The behavior emerged then were being observed and recorded in every 5 minutes for 60 minutes. After that, the total of behavior cumulative was changed into the form of barrier percentage toward the behavior. Then the data achieved was analyzed statistically with *One-way* ANOVA and continued with Scheffe test which might be trusted up to 95%. Thus, the data of analgesic test for *Simplex Lattice Design* method was analyzed by using F_{hitung} with 95% in trust.

The analgesic capacity curve profile of the combination between the extract of turmeric rhizome and tamarind was dome-shape. It means that the mixture of both extract of turmeric rhizome and extract of tamarind will enhance the % response of barrier. Based on the prediction of *Simplex Lattice Design*, the mixture composition of 20.7% : 9.3 % was an optimum mixture since it could enhance % barrier about 65.91579% if it was consumed in 2730 mg/kg BB.

Key words : analgesic, the extract of turmeric rhizome and the extract of tamarind, *Simplex Lattice Design*