Uji efek hipoglikemik ekstrak etanol 70% buah oyong (Luffa acutangula (L.) Roxb.) terhadap mencit yang dibebani glukosa = Hypoglycemic effect of 70% ethanol extract of ridged gourd fruit (Luffa acutangula (L.) Roxb.) in glucose loaded Mmce

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Abstrak

Luffa acutangula (L.) Roxb. merupakan tumbuhan yang telah diteliti akan potensi aktivitas antidiabetesnya di luar Indonesia dan secara empiris telah digunakan di Indonesia. Tujuan penelitian ini adalah untuk meneliti efek hipoglikemik ekstrak etanol 70% buah oyong terhadap mencit yang dibebani glukosa. Ekstrak etanol buah oyong diskrining kandungan fitokimianya dan distandardisasi melalui ciri organoleptik, kadar fenolat total, kadar abu total dan kadar abu tidak larut dalam asam, serta susut pengeringan. Dua puluh lima ekor mencit galur ddY dikelompokkan menggunakan rancangan acak sederhana menjadi 5 kelompok, yaitu kontrol induksi glukosa, kontrol metformin (sebagai kontrol pembanding), dan 3 kelompok ekstrak etanol buah oyong (13,35; 26,69; dan 53,38 mg/20 g bb mencit). Setelah dipuasakan selama 16 jam, semua mencit diberikan bahan uji yang sesuai lalu dibebani glukosa monohidrat sebesar 2,2 g/kg bb mencit. Kadar glukosa darah diukur setelah puasa, tiga puluh menit setelah pemberian bahan uji, dan berturut-turut pada menit ke-30, 60, 90, dan 120 setelah pemberian glukosa menggunakan glukometer AccuChek Advantage II. Pemberian ekstrak etanol buah oyong dengan dosis 26,69 dan 53,38 mg/20 g bb mencit dapat menurunkan kadar glukosa darah yang bermakna pada menit ke-60 dan 90 setelah pemberian glukosa dengan persentase penurunan kadar glukosa darah sebesar 16-18%.

.....Luffa acutangula (L.) Roxb. is a plant which has been screened for its antidiabetic potential outside Indonesia and widely used in Indonesia. The aim of this study was to investigate the hypoglycemic effect of 70% ethanol extract of ridged gourd in glucose loaded mice. The extract was screened for its phytochemical constituents and standardized through organoleptic characteristic, total phenolic content, total ash value and acid insoluble ash value, and loss on drying. Using simple randomized design, twenty five ddY mice were divided into 5 groups: glucose induced control, metformin control (as a comparison), and 3 ridged gourd fruit extract groups (13,35; 26,69; and 53,38 mg/20 g b.w. mouse). After being fasted for 16 hours, all mice were administered with test samples and loaded with glucose monohydrate (2,2 g/kg b.w. mouse). Blood glucose concentration was measured after fasting, thirty minutes after administration, and subsequently at 30, 60, 90, and 120 minutes after glucose load using glucometer AccuChek Advantage II. Administration of the extract at dose level of 26,69 and 53,38 mg/20 g b.w. mouse were able to lower blood glucose concentration significantly at 60 and 90 minutes after glucose load with blood glucose concentration lowering percentage about 16-18%.