

Efek Hiperglikemik Perasan Buah Labu Siam (*Sechium edule*, Jacq.) Pada Tikus
Diabetes Mellitus Tergantung Insulin (DMTI)

INTISARI

Di masyarakat perasan buah labu siam dikenal sebagai obat tradisional untuk pengobatan diabetes mellitus, karena di samping harganya relatif murah juga bahan bakunya mudah didapat. Tujuan penelitian ini untuk mendapatkan data dan bukti mengenai efek hiperglikemik perasan buah labu siam.

Penelitian ini dilaksanakan mengikuti rancangan rambang lugas pada sekelompok tikus yang dibuat diabetes dengan streptozotosin 50 mg/kgBB. Setelah 10 hari, sebanyak 3 ekor tikus dikorbankan untuk diamati dan dianalisis histopatologi sel pankreas dan sel hati serta 25 ekor tikus dibagi dalam 5 kelompok perlakuan yang terdiri dari kelompok I, sebagai kontrol negatif (air suling 10 mg/kgBB) secara peroral, kelompok II-V berturut-turut sebagai perlakuan perasan buah labu siam dosis 12,6; 15,7; 19,7; dan 24,6 g/kgBB secara peroral. Sampel darah diambil melalui vena lateralis ekor dan ditetapkan kadar glukosa darahnya pada menit 15, 30, 60, 90, 120, 180, 240, 300 setelah diinjeksi streptozotosin.

Perbedaan kadar glukosa darah di antara sekelompok perlakuan dianalisis secara statistik mengikuti tata cara split-plot design menggunakan rancangan rambang lugas pola dua arah, sedangkan luas daerah di bawah kurva (LDDK⁰⁻³⁰⁰) dengan pola searah.

Hasil penelitian menunjukkan bahwa perasa buah labu siam meningkatkan LDDK⁰⁻³⁰⁰ kadar glukosa darah sebesar 33,161%; 24,271% (dosis 15,7 dan 19,7 g/kgBB) terhadap kontrol negatif.

Kesimpulannya dari perasan buah labu siam cenderung bersifat hiperglikemik pada tikus DMTI dosis 15,7 dan 19,7 g/kgBB.

The Hyperglycemic Effect of Squash Squeezing (*Sechium edule*, Jacq.)
in Insulin Dependent Diabetic Mellitus Rats (IDDM)

ABSTRACT

In the society, the squash squeezing was known as a traditional medicine to be used as a medical treatment of diabetes, because the price was quite cheap and it was also easy to get its material. This study purposed to get data and proof concerning the hyperglycemic effect of the squash squeezing.

This study was carried out using direct random sampling design on some rats which were made to suffer diabetes by using streptozotosin 50 mg/kgBB. After 10 days, there were 3 rats killed in order to be observed, the pancreatic analysed and the liver were histopathologically and the other 30 rats were divided in to 5 treatment groups. They were consisted of group I, as a negative control (distilled water 10 mg/kgBB) orally, group II-V as the squash squeezing treatment and the dosage were 12,6; 15,7; 19,7; and 24,6 g/kgBB, orally. The blood sample was taken through the tail lateralis vena and it was determined that the blood glucose level in 0 minute before getting streptozotosin injection, and in the 15th, 30th, 60th, 90th, 120th, 180th, 240th, and 300th minute after getting injection of streptozotosin.

The differences of blood glucose contents among the treatment groups were analysed statistically with split-plot design method using direct random sampling of two way pattern, while the area under the curve (AUC⁰⁻³⁰⁰) with one way pattern.

The result showed that the squash squeezing increased AUC⁰⁻³⁰⁰ of the blood glucose level for about 33,161%; 24,271% (dosis 15,7 and 19,7 g/kgBB, respectively) to the negative control.

The conclusion is that the squash squeezing has a hyperglycemic effect on IDDM rat with dosis 15,7 and 19,7 g/kgBB.