

ABSTRAK

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PENGARUH JENIS ADSORBEN TERHADAP RASA PAHIT DAN AKTIVITAS ANTIDIABETES DAUN PEPAYA (*Carica papaya L.*)
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(xv + 41 halaman, 8 tabel, 13 gambar, 8 lampiran)

Tumbuhan pepaya dikenal memiliki banyak manfaat dan sebagai pengobatan alami beberapa jenis penyakit. Daun pepaya mengandung banyak senyawa bioaktif dan dapat berperan sebagai salah satu agen antidiabetes. Namun, daun pepaya masih jarang dikonsumsi karena mengandung senyawa alkaloid yang menyebabkan rasa pahit saat dikonsumsi. Proses adsorpsi melibatkan adsorben dengan tujuan mengurangi rasa pahit pada produk pangan. Tujuan penelitian ini adalah untuk mengetahui pengaruh jenis adsorben dan metode perlakuan terhadap rasa pahit dan aktivitas antidiabetes, serta komponen fitokimia pada daun pepaya. Jenis adsorben yang digunakan yaitu bentonit, diatomit, dan atapulgit aktif. Metode perlakuan yang diterapkan adalah metode rebus, rendam, serta rendam dengan peremasan. Kemudian, daun akan dianalisis melalui evaluasi sensori untuk mengetahui intensitas rasa pahit dan komponen fitokimia meliputi fenolik dan flavonoid, serta aktivitas antidiabetesnya. Hasil menunjukkan bahwa daun pepaya yang menggunakan adsorben bentonit dengan metode rebus mengurangi rasa pahit paling tinggi, namun menurunkan komponen fitokimia serta aktivitas antidiabetesnya. Secara keseluruhan, daun pepaya dengan perlakuan rebus bentonit dapat menghilangkan 89% rasa pahit, namun menurunkan aktivitas antidiabetesnya hingga 2 kali lipat dibandingkan daun pepaya kontrol. Kandungan total fenolik dari daun pepaya menggunakan perlakuan ini sebesar 11,801 mg GAE/g ekstrak dan kandungan total flavonoid sebesar 1,169 mg QE/g ekstrak.

Kata kunci : α -glukosidase, adsorben, antidiabetes, atapulgit, bentonit, diatomit, daun pepaya.

Referensi : 68 (1995-2020)

ABSTRACT

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EFFECT OF DIFFERENT ADSORBENTS TOWARDS BITTERNESS AND ANTI-DIABETIC ACTIVITY OF PAPAYA (*Carica papaya* L.) LEAVES
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(xv + 41 pages, 8 tables, 13 figures, 8 appendices)

Papaya plant is known to have many benefits and as a traditional treatment for several types of diseases. Papaya leaves contain many bioactive compounds and can act as an antidiabetic agent. However, papaya leaves are still rarely consumed because they contain alkaloid compounds that cause a bitter taste when consumed. The adsorption process involves adsorbents with the aim of reducing the bitter taste in food products. The purpose of this study was to determine the effect of the type of adsorbent and the treatment method on bitter taste and antidiabetic activity, as well as the phytochemical components of papaya leaves. The types of adsorbents used were bentonite, diatomite, and active attapulgit. The treatment method applied was the method of boiling, submerging, and submerged with squeezing. Then, the leaves will be analyzed through sensory evaluation to determine the intensity of bitter taste and phytochemical components including phenolics and flavonoids, as well as their antidiabetic activity. The results showed that papaya leaves using bentonite adsorbent with boiled method reduced the highest bitter taste, but reduced its phytochemical components and antidiabetic activity. Overall, papaya leaves treated with bentonite boiled removed 89% of the bitter taste however, it decreased its antidiabetic activity by 2 times. In addition, the total phenolic content of this treatment was 11.801 mgGAE / g extract and the total flavonoid content was 1.169 mg QE / g extract.

Keywords : α -glucosidase, antidiabetic, attapulgit, bentonite, bitterness, diatomite, papaya leaves

References : 68 (1995-2020)