EKSTRAKSI DAN KARAKTERISASI PEKTIN DARI KULIT DAUN LIDAH BUAYA (*Aloe vera L.*)

INTISARI

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Telah dilakukan ekstraksi dan karakterisasi pektin dari kulit daun lidah buaya (*Aloe vera L.*). Penelitian ini dilakukan untuk menentukan kualitas pektin hasil ekstraksi kulit daun lidah buaya berdasarkan karakteristik standar mutu pektin menurut *International Pectin Producers Association* (2002*), Food Chemical Codex* (1996), dan SNI 01-2238-1991 serta perbandingan spektrum FT-IR dengan pektin komersial. Pektin kulit daun lidah buaya diekstraksi dengan larutan asam asetat glasial dengan variasi pH 1, pH 2, dan pH 3, pada suhu ekstraksi 90 ℃ selama 120 menit. Pektin yang dihasilkan ditentukan karakterisasinya berupa rendemen, kadar air, kadar abu, berat ekivalen, kadar metoksil, kadar galakturonat, dan derajat esterifikasi. Hasil yang diperoleh berupa pektin kering dengan nilai rendemen tertinggi pada hasil ekstraksi pH 2 yaitu 26,48%. Karakteristik pektin yang diperoleh memiliki kadar air 0%, kadar abu 8,3% dan berat ekivalen 697,5 mg. Kandungan metoksil dalam pektin adalah 6,94%. Karakteristik kadar galakturonat diperoleh 45,05% dan pektin memiliki nilai derajat esterifikasi 87,51%. Pektin kulit daun lidah buaya yang diekstraksi pada pH 2 merupakan kategori pektin *High Methoxil Pectin (HMP)* dan memiliki kualitas yang baik serta sesuai dengan standar mutu pektin yang telah ditetapkan. Karakterisasi gugus fungsi FT-IR pektin ekstraksi dengan pektin komersial menunjukan kemiripan spektrum yang memperlihatkan adanya serapan gugus fungsi pada bilangan gelombang tertentu sesuai dengan struktur pektin.

Kata Kunci: *Ekstraksi, Karakterisasi, Pektin, Lidah Buaya, Fourier Transform Infra Red (FT-IR).*

EXTRACTION AND CHARACTERIZATION PECTIN FROM ALOEVERA LEAVES SKIN (*Aloe vera L.*)

ABSTRAC

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It has been done extraction and characterization of pectin from Aloe vera leaves skin (*Aloe vera L.*). This research was conducted to determine the quality of pectin from the extraction of aloe vera leaves skin based on the characteristics of pectin quality standards according to the International Pectin Producers Association (2002), Food Chemical Codex (1996), and SNI 01-2238-1991 and comparison of FT-IR spectrum with commercial pectin . Aloe vera leaves pectin was extracted with glacial acetic acid solution with a variation of pH 1, pH 2, and pH 3, at 90 ° C extraction temperature for 120 minutes. The resulting pectin was characterized by its yield, moisture content, ash content, equivalent weight, methoxyl content, galacturonic content, and degree of esterification. The results obtained in the form of dry pectin with the highest rendement value in extraction pH 2 were 26,48%. The characteristic of pectin obtained have a moisture content of 0%, 8,3% ash content, and an equivalent weight 697,5 mg. The methoxyl content in pectin is 6,94%. Characteristics of galacturonate levels were obtained by 45,05% and pectin have a value of esterification degree 87,51%. Aloe vera leaves pectin extracted at pH 2 was a category of pectin High Methoxyl Pectin (HMP) and had good quality and was in accordance with the established quality standards of pectin. The characterization of functional groups FT-IR pectin extraction with commercial pectin shows the similarity of the spectrum which shows the absorption of functional groups at certain wave numbers according to the structure of the pectin.

Key Words: *Extraction, Characterization, Pectin, Aloe vera, Fourier Transform Infra Red (FT-IR).*