

Pectin extraction from cocoa pod husk (*Theobroma cacao L.*) by hydrolysis with citric and acetic acid

Marsiglia D.E., Ojeda K.A.*, Ramírez M.C., Sánchez E.

¹Chemical Engineering Program, Faculty of Engineering. Universidad de Cartagena,
Campus Piedra de Bolívar. Street 30 # 48-152. Cartagena, Colombia.

Abstract : Cocoa crops development presents challenges concerning the proper disposal of waste generated by this activity, and the obtaining of value-added products. Thus, the aim of this study was to obtain pectin from cocoa pod husk (*Theobroma cacao L.*). Infrared spectrum results showed peaks of galacturonic acid functional groups, indicating the presence of pectin in the cocoa husk. In extraction stage was carried out acid hydrolysis with citric or acetic acid at different pH (2, 2.5 and 3), 90°C temperature and 90 minutes, and was evaluated its influence on yield, methoxyl and galacturonic acid content. From the established extraction conditions, aqueous citric acid at pH 2.0 provided the highest yield and methoxyl content, 18.12% and 15.5% respectively. While the galacturonic acid content showed better results with acetic acid at pH 3 with an 83.1%. Finally, it was concluded that cocoa pod husks are suitable to obtain pectin, and a marked influence of the type of acid on response variables in the pectin extraction process was observed.

Keywords: Pectin, cocoa pod husk, hydrolysis, citric acid, acetic acid.

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