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Characterization of Banana Peel Pectin (Musa acuminata Colla) as a Potential Halal Pharmaceutical Excipient
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Abstract
Indonesian Halal Product Assurance Law No. 33 of 2014 states all products circulating in Indonesia must be halal-certified, including pharmaceuticals. Banana peel waste has the potential to produce pectin compounds as pharmaceutical excipients. This study is aimed at determining the characteristics of banana peel pectin as a potential halal pharmaceutical excipient. It has involved qualitative tests and established characteristics of extract pectin by organoleptic test, acidity (pH) test, solubility, equivalent weight, methoxyl concentration, galacturonic acid concentration, esterification degree, moisture content, and ash content. The yield of pectin produced was 17.19%. The qualitative test showed positive pectin, the characteristics of a white powder that is slightly ash, odorless, has a pH of 6.02, is soluble in water, insoluble in ethanol 96%, has an equivalent weight of 5,000 mg, methoxyl concentration of 2.6%, galacturonic acid concentration of 73.92%, esterification degree of 20.19%, moisture content of 7.139% and ash content of 1.6%. Based on the characterization results, banana peel pectin is, by pectin quality standards, a pharmaceutical excipient, especially as a raw material for manufacturing capsule shells, thickeners, and coating and gelling agents.

Author Keywords
banana peel; excipients; halal; pectin; pharmaceuticals

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