

ANTIOXIDANT PROPERTIES OF COCOA (*Theobroma cacao*) POD HUSK

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There is a large demand for the foods with natural ingredients, specially those with health promoting additives. Antioxidants are food additives which prevent harmful free radical activities. Other than the food industry, there are large number of industries use antioxidants to avoid the consequences of free radical activity. This project was aimed to study antioxidant properties of cocoa pod husk, which is an industrial waste in Sri Lanka.

Thin layer Chromatograms suggests that there are some phenolic constituents in cocoa extracts and the best solvent system to separate components in methanolic crude extract is ethyl acetate: methanol, 7:3 ratio. The fractions separated in preparative column chromatography using elution medium as ethyl acetate to methanol ratio 7:3 and 6:4 showed red, green spots in Thin Layer plates when stained with P- Anisaldehyde Sulphuric acid leading to the conclusion that the polyphenol constituents may present in cocoa pod husk.

Experiments that have been carried out to test for total flavonoid content and total polyphenol content in cocoa pod husk suggest that there are some antioxidant compounds present. But according to the results of DPPH antioxidant capacity cocoa husk shows an IC₅₀ value of 135 ppm compared to IC₅₀ of 10 ppm for standard antioxidant α -tocopherol.

It can be concluded that catechin may be present in cocoa pod husk from HPLC results