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Free radicals scavenging capability from different fractions of cocoa fresh beans aqueous extract

Samuel Yap Kian Chee

Malaysian Cocoa Board, Malaysia

Cocoa fresh beans aqueous extract shows high free radicals scavenging capability from various studies based on DPPH assay. Studies also showed that cocoa fresh beans aqueous extract contains few compounds which were believed contributing to the free radicals scavenging property. Nevertheless, report on which compounds or fractions from these cocoa fresh beans extract appears to be major sources in the free radicals scavenging capability is limited. Cocoa fresh beans were extracted by water incubation at 80°C for 15 minutes. The extract was fractioned using LC-Prep system fixed with C18 (21.2x150 mm) column and DAD detector at 280 nm wavelength. Each fraction was dried under nitrogen stream at 80°C and reconstituted with 2 ml distilled water. Free radicals scavenging capability of the extract and its fractions were determined based on 0.06 mM DPPH solution. Results showed that the cocoa fresh beans extract contains four prominent fractions as detected and isolated by LC-Prep., namely fraction 1 to fraction 4. From these four fractions, only fraction 1 and fraction 2 showed positive result in free radicals scavenging capability. Fraction 1 and fraction 2 were identified as catechin and epicatechin respectively based on their retention time and mass spectrum.

Biography

Samuel Yap Kian Chee has completed his PhD from National University of Malaysia. He is a Researcher of Malaysian Cocoa Board, a government research institute. His expertise is cocoa based products development. Currently, he works on the potential uses of cocoa as an anti-oxidant in topical application product development.

samuel@koko.gov.my

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