Catechin-3-\textit{O}-rhamnoside chain extender units in polymeric procyanidins from mangrove bark

Suminar Achmadi, Gustini Syahdirin, Elvin T. Choong\textsuperscript{a}\textsuperscript{,} \textsuperscript{b} and Richard W. Hemingway\textsuperscript{a}\textsuperscript{,} \textsuperscript{b}

\textsuperscript{a}School of Forestry, Wildlife, and Fisheries, Louisiana State University, Baton Rouge, LA 70803, U.S.A.

\textsuperscript{b}Southern Forest Experiment Station, USDA Forest Service, Pineville, LA 71360, U.S.A.

Faculty of Mathematics and Natural Sciences, Bogor Agricultural University, Bogor, Indonesia

Abstract

Acid-catalysed cleavage of ‘purified’ condensed tannin isolates from \textit{Bruguiera gymnorrhiza} (tancang) bark in the presence of phloroglucinol as a capture nucleophile gave, in addition to the expected procyanidin- and prodelphinidin-phloroglucinol adducts, 3-\textit{O}-\textit{a}-l-rhamnopyranosyl-(+)-catechin-(4\textalpha{}\rightarrow{}2)-phloroglucinol, thus providing evidence for covalently bonded glycoside moieties in the chain extender units of mangrove bark tannins.

Keywords: \textit{Bruguiera gymnorrhiza}; Rhizophoraceae; mangrove; bark; condensed tannins; proanthocyanidins; 3-\textit{O}-\textit{a}-l-rhamnopyranosyl-(+)-catechin-(4\textalpha{}\rightarrow{}2)-phloroglucinol; flavan-3-ol glycosides.