



Purification of an isoflavonoid 7-O- β -apiosyl-glucoside β -glycosidase and its substrates from *Dalbergia nigrescens* Kurz

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Abstract

A β -glycosidase was purified from the seeds of *Dalbergia nigrescens* Kurz based on its ability to hydrolyse *p*-nitrophenyl β -glucoside and β -fucoside. This enzyme did not hydrolyze various glycosidic substrates efficiently, so it was used to identify its own natural substrates. Two substrates were identified, isolated and their structures determined as: compound **1**, dalpatein 7-O- β -D-apiofuranosyl-(1 \rightarrow 6)- β -D-glucopyranoside and compound **2**, 6,2',4',5'-tetramethoxy-7-hydroxy-7-O- β -D-apiofuranosyl-(1 \rightarrow 6)- β -D-glucopyranoside (dalnigrein 7-O- β -D-apiofuranosyl-(1 \rightarrow 6)- β -D-glucopyranoside). The β -glycosidase removes the sugar from these glycosides as a disaccharide, despite its initial identification as a β -glucosidase and β -fucosidase.

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