

Cardiac glycosides from shoot cultures of *Cryptostegia grandiflora*

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ABSTRACT

Cardiac glycosides in shoot cultures of *Cryptostegia grandiflora* were identified when grown in modified MS medium. The change in shoot segments and cardiac glycosides content was followed between day zero and day 12 at 2-day intervals. The content of cardiac glycosides in leaves and shoot cultures of *Cryptostegia grandiflora* was monitored by HPLC. Two major compounds were detected and isolated from shoot cultures extract, named oleandrogenin 3-O-b 2 glucopyranosyl(1 4)-b 2 cymaropyranosyl-(1 4)-b-digitoxopyranoside (cryptostigmin I) and oleandrogenin 3-O-b 2 glucopyranosyl-(1 4)-a-rhamnopyranoside (cryptostigmin II). The structures of the isolated compounds were verified by means of MS and NMR spectral analysis, as well as by comparison with authentic samples. The leaves and shoot cultures were analyzed for their cardiac glycosides content. The shoot cultures inoculated into MS-based culture media supplemented with 0.1 mg L21 BA, 30 g L21 sucrose, 0.1 g L21 myo-inositol and 0.1 g L21 ascorbic acid were found to contain a quantity of cardiac glycosides that was about four fold the cardiac glycosides content of leaves extract.

KEYWORDS

Cardiac glycosides . *Cryptostegia grandiflora* . HPLC . MS medium . shoot cultures

REFERENCES