

# Two Xanthenes from *Polygala paniculata* and Confirmation of the 1-Hydroxy-2,3,5-trimethoxy-xanthone at Trace Level by HRGC-MS

Rodrigo Cristiano<sup>a</sup>, Moacir G. Pizzolatti<sup>a,\*</sup>, Franco Delle Monache<sup>b</sup>,  
Claudia M. Rezende<sup>c</sup>, and Alessandro Branco<sup>a</sup>

<sup>a</sup> Departamento de Química, Universidade Federal de Santa Catarina,  
98010-970 Florianópolis, SC, Brazil. Fax: +55 48 31 97 11. E-mail: mgpizzo@qmc.ufsc.br

<sup>b</sup> Centro Chimica Recettori, CNR, 00168, Roma, Itália

<sup>c</sup> Instituto de Química, Universidade Federal do Rio de Janeiro, 21949-970, Rio de Janeiro,  
RJ, Brazil

\* Author for correspondence and reprint requests

Z. Naturforsch. **58c**, 490–494 (2003); received December 30, 2002/March 1, 2003

*Polygala paniculata* L. yielded the xanthenes 1-hydroxy-5-methoxy-2,3-methylenedioxy-xanthone (**1**) and 1,5-dihydroxy-2,3-dimethoxyxanthone (**2**), together with coumarin murragatin and flavonol rutin. Their structures were established by chemical and spectroscopic methods (EIMS, IR, <sup>1</sup>H and <sup>13</sup>C NMR, NOE difference spectroscopy). By posterior analysis of an apolar crude extract using high resolution gas chromatography coupled to mass spectrometry (HRGC-MS) it was possible to characterize two sterol (spinasterol and  $\Delta^{25}$ -spinasterol) and the minor 1-hydroxy-2,3,5-trimethoxyxanthone (**3**). Thus, the xanthone **3** was confirmed through of co-injection HRGC-MS of the respective extract with a certified standard obtained by methylation of **2** with diazomethane.

*Key words:* *Polygala paniculata*, Xanthenes, HRGC-MS