Quantitative analysis of euglobals in Eucalyptus loxophleba Leaves by qNMR

Sidana, J.* , Foley, W.J. , Singh, I.P.*

*Department of Natural Products, National Institute of Pharmaceutical Education and Research (NIPER), S.A.S. Nagar, Punjab-160062, India

Abstract

A simple, rapid, accurate and selective 1H NMR spectroscopic method to detect and quantify euglobals in the leaves of Eucalyptus loxophleba ssp. Isosphaeria has been developed. The method allows for the estimation of total concentration of dihydroxyphloroglucinol monoterpenic adducts, as well as the quantitation of sabinene- and euglobals. The method was validated for accuracy, precision and linearity using as reference standards 2-ethyl phenol and mixtures of jenzione, a monomeric formylated phloroglucinol, and 2-ethyl phenol.

Language of original document

English

Author keywords

Eucalyptus loxophleba; Euglobals; qNMR

Index Keywords

EMTREE drug terms: drug derivative; phloroglucinol; terpene

EMTREE medical terms: article; chemical structure; chemistry; Eucalyptus; methodology; nuclear magnetic resonance spectroscopy; plant leaf

MeSH: Eucalyptus; Magnetic Resonance Spectroscopy; Molecular Structure; Phloroglucinol; Plant Leaves; Terpenes

Medline is the source for the MeSH terms of this document.

Chemicals and CAS Registry Numbers

phloroglucinol, 108-73-6; Phloroglucinol, 108-73-6; Terpenes

References (14) View in table layout

1 Kozuka, M., Sawada, T., Mizuta, E.


E-Journal Portal

2 Bharate, S.B., Bhutani, K.K., Khan, S.I., Tekwani, B.L., Jacob, M.R., Khan, I.A., Singh, I.P.


View at publisher E-Journal Portal

3 Bharate, S.B., Khan, S.I., Tekwani, B.L., Jacob, M., Khan, I.A., Singh, I.P.

Singh, I.P.; Department of Natural Products, National Institute of Pharmaceutical Education and Research (NIPER), S.A.S. Nagar, Punjab-160062, India; email: ipsingh@niper.ac.in

© Copyright 2011 Elsevier B.V., All rights reserved.

Natural Product Communications
Volume 6, Issue 9, 2011, Pages 1281-1284
doi: 10.1016/j.bmc.2007.10.055

4 Takasaki, M., Konoshima, T., Kozuka, M., Haruna, M., Ito, K., Yoshida, S.
Four euglobals from Eucalyptus blakelyi

5 Takasaki, M., Konoshima, T., Etoh, H., Pal Singh, I., Tokuda, H., Nishino, H.
Cancer chemopreventive activity of euglobal-G1 from leaves of Eucalyptus grandis
doi: 10.1016/S0304-3835(00)00406-7

6 Fujimoto, Y., Usui, S., Making, M., Surnatra, M.
Phloroglucinols from Baeckea frutescens

7 Ito, H., Iwamori, H., Kasajima, N., Kaneda, M., Yoshida, T.
Kunzeanones A, B, and C: Novel alkylated phloroglucinol metabolites from Kunzea ambigua
doi: 10.1016/j.tet.2004.08.027

8 Amano, T., Komiya, T., Hori, M., Goto, M., Kozuka, M., Sawada, T.
Isolation and characterization of euglobals from eucalyptus globulus labill. by preparative reversed-phase liquid chromatography

9 Takasaki, M., Konoshima, T., Kozuka, M., Haruna, M., Ito, K., Crow, W.D., Paton, D.M.
Euglobal-In-1, a new euglobal from Eucalyptus incrassata

10 Eschler, B.M., Pass, D.M., Willis, R., Foley, W.J.
Distribution of foliar formylated phloroglucinol derivatives amongst Eucalyptus species
doi: 10.1016/S0305-1978(99)00123-4

11 del Campo, G., Berregi, I., Caracena, R., Zuriarrain, J.
Quantitative determination of caffeine, formic acid, trigonelline and 5-(hydroxymethyl)furfural in soluble coffees by 1H NMR spectrometry

12 Caligiani, A., Acquotti, D., Palla, G., Bocchi, V.
Identification and quantification of the main organic components of vinegars by high resolution 1H NMR spectroscopy

13 Pal Singh, I., Bharate, S.B.
Phloroglucinol compounds of natural origin
doi: 10.1039/b600518g

14 Boland, D.J., Brophy, J.J., Fookest, C.J.R.
Jensenone, a ketone from Eucalyptus jensenii

View search history | Back to results | 1 of 1