Phytochemistry, 1972, Vol. 11, p. 1500. Pergamon Press. Printed in England.

CAMPANULACEAE

FLAVONOIDS OF *CLERMONTIA PERSICIFOLIA* LEAVES

N. A. M. SALEH and G. H. N. TOWERS

Department of Botany, University of British Columbia, Vancouver 8, B.C., Canada

(*Received* 6 *November* 1971)

Plant. Clermontia persicifolia, Gaud. *Source.* Collected in Oahu, Hawaii by S. Sohmer, Department of Botany, University of Hawaii. *Previous work.* None.

Present work. The leaves were extracted with ethanol. The extract was first fractionated on a polyamide column followed by banding on paper. Identified were apigenin-7-glucoside, apigenin-7-rutinoside, luteolin-7-glucoside and luteolin-7-rutinoside.

The 7-glucosides were found to be identical through their R_f values and UV data with authentic samples. The rutinosides gave on acid hydrolysis, both glucose and rhamnose (1:1), while partial acid hydrolysis (0·1 N HCl) gave the 7-glucosides as intermediates. The UV data indicated that only position 7 of both rutinosides was occupied,[1] and finally, both rutinosides gave rutinose on permanganate oxidation,[2] which co-chromatographed with that from rutin.

Four minor flavonoids were also present, but in very low concentration; they are apigenin and luteolin glycosides with glucose and rhamnose or glucose alone as the sugar moiety. They are unaffected by alkaline hydrolysis, give the previously identified glycosides as intermediates and their colour properties indicate that positions 3′ or 4′, in the case of luteolin, and 4′ in case of apigenin are also occupied beside position 7. They are probably the 4′ (or 3′), 7-diglucosides and/or 4′ (or 3′)-glucoside-7-rutinosides.

Acknowledgement—The authors are grateful for the financial support of the N.R.C. of Canada.

[1] T. J. MABRY, K. R. MARKHAM and M. B. THOMAS, *The Systematic Identification of Flavonoids*, Springer-Verlag, New York (1970).
[2] B. V. CHANDLER and K. A. HARPER, *Austral. J. Chem.* **14**, 586 (1961).

Key Word Index—Clermontia persicifolia; Campanulaceae; flavonoids; 7-glucosides and 7-rutinosides of luteolin and apigenin.

Phytochemistry, 1972, Vol. 11, pp. 1500 to 1502 Pergamon Press. Printed in England.

CRASSULACEAE

ALKANES, ALKANOLS, TRITERPENES AND STEROLS OF *KALANCHOE PINNATA*

K. N. GAIND and R. L. GUPTA

Department of Pharmaceutical Sciences, Panjab University, Chandigarh, India

(*Received* 20 *November* 1971)

Kalanchoe pinnata is of ornamental importance and is also employed for wounds,[1]

[1] K. R. KIRTIKAR and B. D. BASU, *Indian Medicinal Plants*, Vol. 2, pp. 998–999, Lalit Mohan Basu, Allahabad (1935).