

which shows the same oxygenation pattern as the novel isoflavanone here described. Padmakastein is 2,3-dihydroprunetin, and, indeed, prunetin (5,4'-dihydroxy-7-methoxyisoflavone) is found in the same plant.¹² This situation is paralleled in the present case. 5,7-Dihydroxy-4'-methoxyisoflavanone is 2,3-dihydrobiochanin-*A*, and co-occurs with biochanin-*A* in *Andira parviflora*.

Plant. *Diploptropis purpurea* (Rich.) Amsl., trivial name 'sapupira', tree, subfamily Leguminosae-Lotoideae.² *Source.* Manaus, Brasil.

Trunk wood. The C₆H₆ extract was chromatographed on silica giving sitosterol, stigmasterol, lupeol, (–)-maackiain [(6*aR*,11*aR*)-3-hydroxy-8,9-methylenedioxypterocarpan], m.p. and lit.³ m.p. 178–179°, (2*R*)-7-hydroxyflavanone, m.p. and lit.¹ m.p. 190–191°, formononetin, m.p. and lit.¹³ m.p. 260–261°, isoliquiritigenin (4,2',4'-trihydroxychalcone), m.p. and lit.¹⁴ m.p. 202–203°, liquiritigenin [(±)-7,4'-dihydroxyflavanone], m.p. and lit.¹⁵ m.p. 206–207°.

¹¹ NARASIMHACHARI, N. and SESHADRI, T. R. (1952) *Proc. Indian Acad. Sci.* **35A**, 202; RAMANUJAN, S. and SESHADRI, T. R. (1958) *ibid.* **48**, 175.

¹² DEAN, F. M. (1963) *Naturally Occurring Oxygen Ring Compounds*, p. 384, Butterworths, London.

¹³ BATE-SMITH, E. C., SWAIN, T. and POPE, G. S. (1953) *Chem. Ind. (London)* 1127.

¹⁴ BATE-SMITH, E. C. and SWAIN, T. (1953) *J. Chem. Soc.* 2185.

¹⁵ SHINODA, J. and UEEDA, S. (1934) *Chem. Ber.* **67**, 434.

Phytochemistry, 1973, Vol. 12, p. 1186. Pergamon Press. Printed in England.

PHYSCION AND PHYTOSTEROL FROM THE ROOTS OF *CASSIA OCCIDENTALIS*

JAWAHAR LAL* and PURAN CHANDRA GUPTA

Department of Chemistry, University of Allahabad, Allahabad, India

(Received 24 November 1972. Accepted 14 December 1972)

Key Word Index—*Cassia occidentalis*; Leguminosae; physcion; phytosterol.

Plant. *Cassia occidentalis* L. *Uses.* Medicinal.¹ *Previous work.* Seeds,^{2–6} Roots.⁷

Present work. Air dried *Cassia occidentalis* roots were powdered and extracted with light petrol. (60–80°) and benzene. The light petrol. extract was saponified with 5% alcoholic KOH. Non saponifiable matter (chromatographed over neutral alumina) yielded a mixture⁶ of equal portions of sitosterol and campesterol.

The benzene extract (chromatographed over silica gel) yielded golden yellow needles, m.p. 204–206°, acetate m.p. 185–186°, methyl derivative m.p. 226–227°, demethylation yielded emodin, these studies along with IR and UV spectra showed it to be physcion, identity confirmed by m.m.p. and co-chromatography with an authentic sample of physcion.

Acknowledgement—The author J. Lal thanks C.S.I.R., New Delhi, India for financial assistance.

* Present address: Division of Physiology & Pharmacology, I.V.R.I., Izatnagar, U.P., India.

¹ BASU, B. D. and KIRTIKAR, K. R. (1933) *Indian Medicinal Plants*, Vol. II, p. 860, Lalit Mohan, Basu.

² BRUERE, P. J. (1942) *J. Pharm. Chim.* **2**, 321.

³ KING, N. M. (1957) *J. Am. Pharm. Assoc.* **46**, 271.

⁴ VALERI, H. and GIMENO N. F., (1952) *Rev. Med. Vet. Parasitol. Maracay* **11**, 121.

⁵ STEGER, A. and VAN LOON, J. (1934) *Rev. Trav. Chim.* **53**, 28.

⁶ RIZVI, S. A. I., LAL, J. and GUPTA, P. C. (1971) *Phytochemistry* **10**, 670.

⁷ ALVES, A. C. (1964) *Anais Fac. Farm. Porto* **24**, 65.