

SHORT COMMUNICATION

UBIQUINONES OF *HEVEA BRASILIENSIS*

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Plant. Hevea brasiliensis.

Source. The leaves and commercial latex used were a gift from Dr. B. G. Audley, The Natural Rubber Producers' Research Association, Welwyn Garden City, Herts.

Previous work. Whittle, Audley and Pennock¹ reported that *Hevea* latex contains ubiquinone-9 (the numeral refers to the number of isoprene units/mole) and possibly ubiquinone-8.

Compounds isolated. The lipid (2.12 g) of *H. brasiliensis* leaves (83 g wet wt.) was extracted by our routine procedure;² that (1 g) of *Hevea* latex (100 ml of commercial Malayan latex stabilized with ammonia) was extracted by the procedure of Whittle *et al.*³ The lipid extracts were chromatographed on columns of acid-washed alumina (Brockman grade III) developed by stepwise elution with 0.25, 1, 3 and 5% solutions of diethylether in light petroleum (b.p. 40–60°).⁴

The ubiquinones, present in the 3- and 5% diethylether light petroleum fractions, were purified by a combination of adsorptive and reversed-phase TLC.⁵ This afforded the isolation of 940 µg of ubiquinone-10 and 60 µg of ubiquinone-9 from the leaf lipids and 336 µg of ubiquinone-9 and 30 µg of ubiquinone-8 from the latex lipids.

The identities of the ubiquinone homologues were established by reversed phase TLC,⁵ u.v. spectroscopy⁶ and mass spectrometry.⁶

Significance. This is the first report of an organism which possesses tissues whose principal ubiquinone homologues differ, i.e. *Hevea* leaves contain ubiquinone-10 whereas *Hevea* latex contains ubiquinone-9.

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¹ K. J. WHITTLE, B. G. AUDLEY and J. F. PENNOCK, *Biochem. J.* **103**, 21 (1967).

² G. R. WHISTANCE, D. R. THRELFALL and T. W. GOODWIN, *Biochem. J.* **105**, 145 (1967).

³ K. J. WHITTLE, P. J. DUNPHY and J. F. PENNOCK, *Biochem. J.* **100**, 138 (1966).

⁴ D. R. THRELFALL and T. W. GOODWIN, *Biochem. J.* **103**, 573 (1967).

⁵ D. R. THRELFALL and G. R. WHISTANCE, *Phytochem.* **9**, 355 (1970).

⁶ G. D. DAVES, JR., P. FRIIS, R. K. OLSON and K. FOLKERS, *Vitamin Hormone* **24**, 427 (1966).