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Harborne, J.B. and Williams, C.A. 2000. Advances in flavonoid research since 1992. *Phytochemistry* **55**, 481-504.

Mabry, T., Markham, K.R. and Thomas, M.B. 1971. *The Systematic Identification of Flavonoids*. Springer Verlag, New York, p. 43.

Harborne, J.B. 1983. In: *Chemistry and Chemical Taxonomy of the Rutales* (Waterman, P.G. and Grundon, M.F., Eds.), Academic Press, London, Chapter 2, pp. 147-173.

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