Complete assignment of 1H and 13C NMR data of dihydroxyflavone derivatives

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Abstract

Flavones are one of major flavonoid classes which consist of C6-C3-C6 skeleton.1 Since their chemical structures cause their various biochemical activities, their structural studies have been concerned. Even though flavone derivatives include the same chromen-4-one moiety, substitutions of phenyl ring result in the change of 1H and 13C NMR chemical shifts of chromen-4-one moiety.2 This work gives information about chemical shift changes caused by the substitutions of hydroxyl groups and methoxy groups in phenyl ring. Of six flavone derivatives tested, the 13C NMR data of three compounds were published already, but some assignments were misinterpreted. We report here the corrected data and the complete NMR data not previously published.

References

1. Cook NC, Samman S. (1996) J. Nutr. Biochem. 7, 66.
2. Harborne JB. (1994) The Flavonoids: Advances in Research. Chapmann & Hall, London.