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SHORT REPORTS

THE CYANOGENIC GLYCOSIDE BARTERIN FROM *BARTERIA FISTULOSA* IS EPITETRAPHYLLIN B

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Key Word Index—*Barteria fistulosa*, Passifloraceae, barterin, epitetraphyllin B, cyanogenic glycosides, cyclopentenoid cyanogens

Abstract—Reisolation of the cyanogenic glycoside of *Barteria fistulosa* demonstrates that the structure of barterin, previously reported from this plant, is identical with that of epitetraphyllin B

INTRODUCTION

Paris *et al* [1] isolated a novel cyanogenic glycoside from *Barteria fistulosa* Mast which they named barterin and suggested a possible structure based on ^{1}H NMR spectral measurements in D_2O The compound has been thought to be identical with tetraphyllin B, a cyclopentenoid cyanogen [2] We have since demonstrated that it is not possible to distinguish different epimers of cyanogens with cyclopentenoid ring structures by ^{1}H NMR in this solvent [2]

RESULTS AND DISCUSSION

We reisolated the cyanogen of *Barteria fistulosa* and obtained a ^{1}H NMR spectrum in D_2O which was mostly identical to that previously reported We then determined the ^{1}H NMR spectrum for the TMSO derivative in $CDCl_3$, a method which distinguishes the epimeric pair tetraphyllin B and epitetraphyllin B The spectrum of the compound isolated is identical with that of epitetraphyllin B [3, 4]

EXPERIMENTAL

Plant material Barteria fistulosa Mast (*Gentry and Pilz* 32800), (MO 2925728), 1981 Nigeria

Isolation of glycoside Dried stem and leaf material (1 5 g) was ground in H_2O and filtered The filtrate was concd under vacuum and partitioned between $CHCl_3$ and H_2O The aq fraction was chromatographed on Whatman 3 MM paper in Me_2CO–H_2O (5 1) The cyanogen was located using a Feigl–Anger color test for cyanide [5] released upon enzymatic hydrolysis as previously described [6]

Enzyme preparation From leaves of *Passiflora foetida* L according to ref [7]

Preparation of derivatives The TMS ether was prepared as previously described [8]

Spectral determination. The ^{1}H NMR spectra were determined on a Nicolet NT-360 (360 MHz) instrument in D_2O and as the TMS ether in $CDCl_3$

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REFERENCES

1 Paris, M, Bouquet, A and Paris, A (1969) *C R Acad Sci Ser D* **268**, 2804
2 Seigler, D S, Spencer, K C, Statler, W S, Conn, E E and Dunn, J E (1982) *Phytochemistry* **21**, 2277
3 Spencer, K C and Seigler, D S (1982) *Onderstepoort J Vet Res* **49**, 137
4 Spencer, K C Seigler, D S and Domingo, J L (1983) *Phytochemistry* **22**, 1815
5 Feigl, F and Anger, V A (1966) *Analyst* **91**, 282
6 Spencer, K C, Seigler, D S, Fikenscher, L H and Hegnauer, R (1977) *Planta Med* **44**, 28
7 Spencer, K C and Seigler, D S (1980) *Phytochemistry* **19**, 1863
8 Seigler, D S (1975) *Phytochemistry* **14**, 9