West African Timbers. Part X
The Structure of *Cedrela odorata* Substance B

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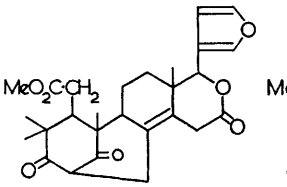
WE have recently[1] described the isolation from the timber of *Cedrela odorata* of two substances A and B, of which the first was shown to be 7-deacetyl-7-oxogedunin. We have now deduced for the

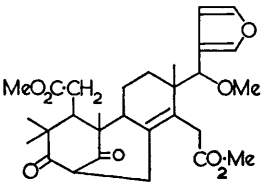
[1] C. W. L. Bevan, J. W. Powell, and D. A. H. Taylor, *J. Chem. Soc.*, 1963, 980.

second, Compound B, the structure (I). This structure has very recently[2] been suggested for a substance mexicanolide, isolated by Conolly, McCrindle, and Overton from *Cedrela mexicana*, and which is undoubtedly the same as Compound B. We have arrived at the structure (I) for our compound by arguments very similar to those used by Overton *et al.*, based mainly on the alkaline isomerisation, which it seems unnecessary to repeat.

On treatment with methanolic sulphuric acid, Compound B undergoes another transformation, leading by the addition of the elements of dimethyl ether to a compound which we call Compound C. This is shown by its n.m.r. spectrum to have a new methyl ester group and also a methyl ether; we therefore supposed that it was obtained by protolytic opening of the lactone ring in Compound B in which the C-17 oxygen atom is eliminated and replaced by a methoxyl group and the carboxyl is esterified, giving Compound C the structure (II). Compound C is stable to mild alkaline treatment, and on reduction with borohydride it gives an alcohol, which can be reoxidised to Compound C. The structure of this has been confirmed by an *X*-ray crystal structure determination of the iodoacetate obtained from the alcohol, carried out by S. Adeoye and A. Bekoe of the University of Ghana, which will be reported shortly.



(I)



(II)

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[2] J. D. Conolly, R. McCrindle, and K. H. Overton, *Chem. Comm.*, 1965, 162.