

17. COMPARISON OF STEREOCHEMISTRY FOR STRYCHNOBILINE AND ISOSTRYCHNOBILINE, THE MAIN ALKALOIDS ISOLATED FROM THE ROOT BARKS OF STRYCHNOS VARIABILIS.

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Strychnos variabilis is a small tree, endemic around Kinshasa in Zaïre. The golden fruit pulp is deliciously sweet but the root bark is a violent poison.

Up today, by chromatography, we have isolated 25 alkaloids from this plant (1).

The main alkaloids are unsymmetrical dimers characterized by a carbinolamine ether group in a hexacyclic ring. They give nice purple colours with a reagent containing ceric sulphate in sulfuric acid.

Their structures have been shown by correlation of the spectroscopic data with those of various monomeric alkaloids previously isolated from the same Strychnos species (2,3,4).

We compare here the plane pictures and the absolute stereochemistry of strychnobiline and isostrychnobiline (as well as cryptophenolic derivatives on C12').

This determination was achieved mainly by the analysis of their 300 MHz ¹H NMR spectra.

We are able to conclude that the two isomers distinguish themselves not only by the two asymmetrical carbons 16' and 17' but also by the conformation of the two monomeric parts.

- (1) M.Tits : Contribution à l'étude chimique du Strychnos variabilis, plante toxique du Bas-Zaïre. Isolement et détermination de structure de nouveaux alcaloïdes indoliques. Thèse de doctorat en sciences pharmaceutiques - Université de Liège (1982).
- (2) D.Tavernier, M.J.D.Anteunis, M.J.G.Tits and L.J.G.Angenot, Bull. Soc. Chim. Belg., 87, 595-607 (1978).
- (3) M.Tits, L.Angenot and D.Tavernier, Tetrahedron Letters, 21, 2439-2442 (1980).
- (4) M.Tits, D.Tavernier et L.Angenot, Phytochemistry, 19, n° 7, 1531-1534 (1980).
