

the mescaline had Rf 0.48, and gave a single well-rounded spot, the residual material gave both a mescaline spot and a faint tail suggestive of presence of another alkaloid. This was not identified.

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Isolation of Evolitrine from *Cusparia macrocarpa*

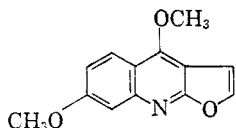
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Cusparia macrocarpa is a rutaceous plant indigenous to Brazil where the leaves and stems are used in folk medicine. As part of an investigation of Brazilian flora, we have examined this plant for alkaloids.

The residue from an alcoholic extract of the leaves and stems² was distributed between an aqueous phase, at various pH's, and ether, essentially following the general scheme used with *Balfourodendron riedelianum*.³ Further purification of the crude fractions was effected by chromatography on alumina.

Crystalline material resulted only from that fraction obtained by continuous extraction of the aqueous phase at pH 2. This very weakly basic compound had the composition C₁₃H₁₁O₃N. Its ultraviolet absorption (λ_{\max} 246, 308, 319, 333 m μ) was practically identical with that reported for evolitrine⁴ (I), and it formed a picrate with the



same melting point as reported⁴ for evolitrine picrate (201–202°). Direct comparison⁵ by ultraviolet and infrared absorption, and mixed melting point clearly established the identity of this alkaloid as evolitrine.

A paper chromatographic examination of the various fractions showed the absence of any other alkaloidal material. However, evidence was ob-

tained for the presence of a polar, non-extractable form of evolitrine which was converted to evolitrine by the action of alkali. This evidence was the fact that the ether extract of the pH 7 aqueous phase showed the complete absence of evolitrine, but when this extraction was continued at pH 10, evolitrine was found in the ether phase. Efforts to isolate this polar form by addition of chloride ion and extraction with butanol failed.

EXPERIMENTAL

The isolation scheme was the same as that used previously.³ From 2.3 kg. of plant material (leaves and stems) were isolated ether extracts from the aqueous phase at pH 2, 4, 7, and 10. These fractions were chromatographed on alumina using benzene, benzene-chloroform, and chloroform for elution. Recombination on the basis of ultraviolet absorption and crystallization from benzene-hexane led to 600 mg. of evolitrine from the pH 2 extract. This material, after sublimation, melted at 113–114° (reported⁴ m.p. 114–115°). It formed a picrate with alcoholic picric acid, m.p. 201–202° (reported⁴ 201–202°).

Paper chromatography of the various fractions and sub-fractions was carried out by the ascending method with 1-butanol–5% acetic acid as solvent and Dragendorff's reagent for detection.

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Some Reactions of Triphenylethoxysilane

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In connection with studies on the comparison of organosilicon compounds with their carbon analogs,¹ some reactions of triphenylethoxysilane have been examined.

Alkoxytriphenylsilanes resemble alkoxytriphenylmethanes in one respect; they react with potassium metal to give triphenylsilylpotassium² and triphenylmethylpotassium,³ respectively. However, the reaction of triphenylethoxysilane with sodium does not give the silylsodium compound or hexaphenyldisilane. Under similar conditions, triphenylchlorosilane reacts with sodium to give high yields of hexaphenyldisilane.⁴

When triphenylmethyl ethyl ether is treated with phenyllithium or with *n*-butyllithium, 9-phenylfluorene is formed on hydrolysis.⁵ How-

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(5) We are grateful to Dr. R. G. Cooke, University of Melbourne, for this sample.

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