ALKALOIDS FROM *Annona muricata* LEAVES

S. Fofana,[1] R. Ziyaev,[2] A. Abdusamatov,[2] and S. Kh. Zakirov[2*]

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We studied the alkaloid composition of *Annona muricata* L. (Annonaceae) leaves collected in February 2009 in Conakry Botanical Garden (Republic of Guinea).

Ordinary $CHCl_3$ extraction afforded total alkaloids (0.125%) that were separated into phenolic and nonphenolic parts. Column chromatography over silica gel of the nonphenolic fraction isolated three bases; of the phenolic fraction, one. Spectral data, physical constants of the alkaloids and their salts, chemical transformation, and comparison with authentic samples identified the pure alkaloids.

Base 1, $C_{17}H_{15}NO_2$, mp 120–122°C, mass spectrum (*m*/*z*): 265 $[M]^+$, 264 $[M - 1]^+$ (100), 250, 236, 235; identified as anonaine [1, 2].

Base 2, isolated as the hydrochloride, $C_{19}H_{19}NO_3 \cdot HCl$, mp 244–246°C, identified as isolaureline [3, 4].

Base 3, $C_{18}H_{17}NO_3$, mp 124–126°C (acetone), UV spectrum (λ_{max}, EtOH): 219, 282 (log ε 4.49, 4.25), spectrum similar to that of isolaureline.

The mass spectrum of **3** had peaks for ions (*m*/*z*) 295 $[M]^+$, 294 $[M - 1]^+$, 280 $[M - 15]^+$, 266 $[M - 29]^+$, and 147.5 $[M]^{++}$ that were characteristic of noraporphine alkaloids. A comparison of spectral data of **3** and **2** in addition to the difference in the molecular weights by 14 mass units suggested that **3** was norisolaureline.

In fact, Hess methylation of **3** produced a base that was identical to **2**. According to these results, **3** was identified as xylopine [2, 5].

Base 4, $C_{17}H_{19}NO_3$, phenolic crystalline base, mp 218–220°C (acetone), identified as coclaurine [6, 7].

Thus, we studied the alkaloid composition of *Annona muricata* leaves and isolated for the first time and identified the aporphine alkaloids anonaine, isolaureline, and xylopine and the benzyltetrahydroisoquinoline alkaloid coclaurine, which was isolated previously from this plant [7].

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1) Kindii University Center, Republic of Guinea; 2) Tashkent State Agrarian University, Tashkent, e-mail: zs-chem@mail.ru. Translated from Khimiya Prirodnykh Soedinenii, No. 2, p. 287, March–April, 2011. Original article submitted September 20, 2010.

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