MYRICETIN, DIHYDROMYRICETIN, AND QUERCETIN GLYCOSIDES FROM *CATHA EDULIS*

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As a continuation of our studies of the chemistry and biology of "khat," *Catha edulis* Forsk. (Celastraceae) (1-5), we report the isolation and characterization of four flavonoid glycosides, three of which were not previously reported in "khat."

EXPERIMENTAL

PLANT MATERIAL.—Plants of *C. edulis* were collected during April-May 1984, from the Fifa area in the southern region of Saudi Arabia. A voucher specimen representing the collection is deposited in the herbarium of the Research Centre, College of Pharmacy, King Saud University.

EXTRACTION AND ISOLATION OF FLAVONOIDS.—Air-dried leaves and young shoots of *C. edulis* (1.5 kg) were exhausted with C_6H_6 followed by $CHCl_3$ and then EtOAC. Evaporation of EtOAC in vacuo afforded 20 g of a dark-brown solid residue. Chromatographic separation of 6 g using Sephadex LH-20, polyamide and cellulose columns, and a Me_2CO/H_2O mixture for elution yielded myricetin-3-*O*-β-D galactoside (80 mg), dihydromyricetin-3-*O*-rhamnoside (1.004 g), myricetin-3-*O*-rhamnoside (40 mg), and quercetin-3-*O*-β-D-galactoside (10 mg).

Identity of these glycosides was based on the standard spectral data of the orignal, hydrolytic, and methyl derivatives as well as by comparison with those reported in the literature (6-10). The structure of myricetin-3-*O*-β-D-galactoside was further confirmed by ^{13}C nmr. Details of the isolation and identification are available from the major author.

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