Chemistry of Natural Compounds, Vol. 47, No. 6, January, 2012 [Russian original No. 6, November–December, 2011]

CONSTITUENTS OF *Psidium cattleyanum*

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UDC 547.918

The *Psidium* genus (Myrtaceae) comprises around 110 to 130 species, distributed throughout tropical America [1]. *Psidium cattleyanum* Sabine (syn. *Psidium littorale* Raddi) is a shrub or small tree native to Brazil, popularly known as "araca" [2], which is grown throughout the tropics and subtropics for its edible fruits [3]. The leaves of *P. cattleyanum* are used in folk medicine as an anti-hemorrhagic, antispasmodic and anti-diarrheal agent [4, 5]. In biological studies carried out on this species, the methanol extract of the leaves showed antimicrobial activity against some gram-positive bacteria [5]. The essential oil exhibits antimicrobial and anti-inflammatory effects [6]. Species of the *Psidium* genus are notable for the presence of triterpenoids, carotenoids, and flavonoids [7, 8]. Recently, isoflavones were identified in *P. cattleyanum* [9].

This paper reports on a study of the chemical constituents of aerial parts of *P. cattleyanum*, where *β*-sitosterol (**1**), *β*-sitosterol-3-*O*-*β*-D-glucopyranoside (**2**), ursolic acid (**3**), oleanolic acid (**4**), and catechin (**5**) were isolated from this plant for the first time.

The IR spectrum was recorded on a Perkin–Elmer FTIR 16 PC spectrophotometer. NMR spectra were recorded on a Varian AS-400 spectrometer using TMS as the internal standard. Column chromatography was performed over silica gel 230–400 (Merck). TLC analysis was performed on silica gel glass plates 60 GF254 (Merck) and visualized under UV light and by spraying with anisaldehyde-sulfuric acid reagent followed by heating (100–110°C).

The aerial parts of *P. cattleyanum* were collected in Florianopolis (Santa Cartarina State, Brazil), identified by the botanist Daniel de B. Falkenberg, and deposited in the Herbarium FLOR (Universidade Federal de Santa Catarina) under reference No. 35.220. Dried and pulverized aerial parts of *P. cattleyanum* (413.0 g) were extracted at room temperature (ca. 25°C) with 96% EtOH to give 35.6 g of crude extract. The crude extract was suspended in a EtOH–H_2O (1:1) solution and stored in a refrigerator for one day. After this procedure, the extract was filtered, and an insoluble material was obtained, which is named resin (18.2%). The filtrate was then partitioned with solvents of different polarities to yield C_6H_{14} (0.12%) and EtOAc (16.4%) fractions.

The resin (6.4 g) was chromatographed over silica gel, eluting with C_6H_{14} gradually increasing the polarity with EtOAc and EtOH. Thirty five fractions were collected, monitored by TLC, and then grouped according to their chromatographic profile. Some of these fractions, after grouping, were purified by successive recrystallization with EtOAc and MeOH, providing 51.0 mg of *β*-sitosterol (**1**), 14.3 mg of *β*-sitosterol-3-*O*-*β*-D-glucopyranoside (**2**), and a mixture (62.1 mg) of triterpenes, ursolic acid (**3**), and oleanolic acid (**4**). The EtOAc fraction (400.0 mg) was chromatographed over Sephadex LH-20 eluting with acetone–$CHCl_3$ 70:30. The collected fractions were monitored by TLC, furnishing 18.7 mg of the catechin (**5**). Physical data, spectroscopic data (^1H and ^{13}C NMR, IR), and comparison with the data from the literature were utilized to identify compounds **1** [10], **2** [11], **3** [12], **4** [12], and **5** [13].

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