Phytochemical and biological investigation of Leptadenis heterophylla Decne. fruit and its latex

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Abstract

Preliminary phytochemical screening of the fruits of Leptadenia heterophylla Decne., GLC analysis of the unsaponifiable and saponifiable matters were investigated. The percentage of both unsaturated and saturated fatty acids was found to be 56.2% and 36.7% respectively. Chromatographic fractionation of the alcoholic extract of the fruits resulted in the isolation of (12) compounds. The structure determination of these isolated compounds was established upon their physicochemical and spectral data [U.V, 'H, 13C-NMR and M.S] as well as comparison with the available reference samples and published data. These compounds were identified as: lupeol acetate (1), β-amyrin (2), α-amyrin (3), β-sitosterol (4), apigenin (5), luteolin (6), quercitin (7), luteolin-7-O-glucoside (8), quercitin-3-O-β-galactopyranoside (hyperoside) (9), apigenin-7-neohesperidoside (rhoifolin) (10), β-sitosterol glucoside (11), and leucanthemeitol (12). Fractionation and chromatographic screening of the fruit latex revealed nearly the same compounds previously isolated from the alcoholic extract of the fruit with the absence of compound (12). Pharmacological screening for the different extracts of the fruit as well as the collected latex viz.:- LD50, analgesic, anti-inflammatory, antipyretic, anticonvulsant and anti-ulcerogenic activities were studied. Moreover, antimicrobial, antifungal and cytotoxic activities were investigated and significant results were obtained.