Isolation and partial characterization of alkylferulate from *Entada africana* (Guill. & Perr.) stem bark extract

A. Kwaji*a, H. M. Adamu*b, I. Y. Chindo*b

*aDepartment of Chemistry, P. M. B. 127 Gombe State University, Gombe, Nigeria
bDepartment of Chemistry, P. M. B. 0248 Abubakar Tafawa Balewa University, Bauchi, Nigeria

(Received: 16-06-2019; Accepted 30-06-2019; Published Online 08-07-2019)

*Corresponding author: E-mail: andrewkwaji@yahoo.com; Tel: +2348036433710

Abstract

Investigation of the bioactive constituents of *Entada africana* crude extract afforded the isolation of alkylferulate. The hexane soluble portion of acetone/methanol (1:1v/v) crude stem bark extract of *Entada africana* was subjected to column chromatography on silica gel 60 (60-200) mesh size. Gradient column elution yielded an isolate coded AC4 with Rf value of 0.65 in hexane/diethyl ether (3:2). The isolate was characterized using IR, NMR and in comparison with literature data. The analysis of spectroscopic data and literature comparison strongly suggests that AC4 is an alkylferulate; a known hypolipidemic agent in addition to other biological uses. The isolation of alkylferulate partly lays credence to the use of *Entada africana* in traditional medicine practice.

Keywords: *Entada africana*, Isolation, Alkylferulate, bioactive, Characterization

(I) Proton NMR Spectrum of AC4

H-NMR (CDCl3) 0.88 (3H, t, J=6.72 Hz), 1.27 (78H, s), 1.66 (2H, m, J=7.03 Hz), 3.49 (1H, s), 3.65 (1H, t, J=6.62 Hz), 3.93 (1H, s), 4.19 (2H, t, J=6.70 Hz), 5.87 (1H, s), 6.30 (1H, d), 6.92 (1H, d, J=8.12 Hz), 7.08 (1H, m, J=4.18 Hz), 7.61 (1H, d, J=15.89 Hz).

(II) 13C NMR of AC4