

Bioassay Guided Isolation of Antimicrobial and Cytotoxic Components from Ethyl Acetate Extracts of *Cassia Sieberiana* D.C. (Fabaceae)

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Abstract : The leaves extracts of *Cassia sieberiana* D.C. were screened for cytotoxicity using Brine Shrimp Test (BST) and antimicrobial bioassay against *Staphylococcus aureus*, *Salmonella typhi* and *Escherichia coli* using crude ethanol extract, Chloroform soluble fraction, aqueous soluble fraction, ethyl acetate soluble fraction, methanol soluble fraction and n-hexane soluble fraction. The Ethyl acetate fraction obtained proved to be most active in inducing complete lethality at minimum doses in BST and also active on *Salmonella typhi*. The Bioactivity result was used to guide the column chromatography which led to the isolation of pure compound CSB-8 which was found active in the BST with LC₅₀ value of 34(722-182)µg/ml and showed remarkable activity on *Salmonella typhi* (zone of inhibition 25mm) at 10,000µg/ml. The ¹H-NMR, ¹³C NMR, FTIR and GC-MS spectra of compound suggested the proposed structure to be 2-pentadecanone.

Keywords : brine shrimp, *Cassia sieberiana* D. C, Column chromatography, antimicrobial bioassay

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