

Phytochemical Screening, Antimicrobial Activities and Isolation of Bioactive Constituents from the Stem of *Schisandra sphenanthera* Rehder E.H.Wilson (Say-ni-myt)

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World Health Organization estimated that, 80% of population in developing countries depends on traditional medicines, mostly natural plant products, for their primary health care needs. In this research work, one of Myanmar medicinal plants, *Schisandra sphenanthera* Rehder. E.H. Wilson (Say-ni-myt) was selected for chemical analysis and antimicrobial activities. Phytochemical compounds present in test plant were carried out according to Harbone J.B (1984). The antimicrobial activities of six solvent extract of say-ni-myt were determined on six selected organisms (*Bacillus subtilis*, *Staphylococcus aureus*, *Pseudomonas aeruginosa*, *Bacillus pumilus*, *Candida albicans* and *Escherichia Coli*), by applying agar-well diffusion technique, according to modified Kirby and Bauer method. In addition, pure compounds were separated by Thin Layer and Column Chromatographic separation techniques. Moreover, FTIR spectrum of isolated compound was measured. The phytochemical screening of stem of Say-ni-myt consists of alkaloid, flavonoid, glycoside, phenol, polyphenol, protein, reducing sugar, saponin, steroid, tannin and terpene respectively. According to antimicrobial activities, zone inhibition of pet- ether extract (18-20 mm) and n-hexane extract (13-17mm) showed higher activity than other extracts. The remaining extracts showed medium and lower activities. However, aqueous extract showed lowest activities on all organisms. The pure organic compound, LLW -1 (pale pink colour crystal, 90.6 mg, $R_f = 0.688$, 4.53 %) was isolated from ethyl acetate crude extract. FT-IR spectral data of isolated pure organic compound (LLW-1) observed hydroxyls group, sp^2 hydrocarbon, sp^3 hydrocarbons, carbonyl group, aromatic ring skeletal, allylic hydrocarbon, ether group, trans or *E* and cis or *Z* alkenic groups respectively.

Words: *Schisandra sphenanthera*, Chemical Compositions, Antimicrobial Activities