

Antimicrobial Studies on Piper betle Grown in Sri Lanka

Betel samples were collected from Kurunegala, Gampaha and Galle districts. Fresh leaves were water distilled and the volatile oil was collected. (Yield -0.81-1.53). Fresh leaves were extracted with EtOH (96%) filtered and concentrated under vacuum to obtain the ethanolic extract.

The antibacterial activities were determined by Kirby-Bauer disc diffusion technique using *Staphylococcus aureus* (NCTC 8532) *Staphylococcus epidermidis* (NCTC 4276) *Pseudomonas aeruginosa* (NCTC 10662) *Escherichia coli* (NCTC 10148) *Streptococcus pyogenes* Gentomycin discs (10/g) were used as the reference, Both betel essential oil and extracts were active against all four organisms. The MIC values were determined by serial dilution method.

In the antifungal assay 4 μ g of betel oil and extract were separately applied on each potato dextrose agar plate, circular fungi culture discs were kept in the center of each plate and the diameter of the fungal culture was measured after 5 days. *Aspergillus flavus*, *Clavosporium*, *Rhizoctonia solani* and *Fusarium oxysporium* were used for antifungal assay. The diameter of the fungal culture was used to detect the antifungal property. Betel oil showed activity against the first three fungi while the extract inhibited only the first two.