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Abstract : B - 08

Identification of ion contents and antimicrobial activity of *Panineer* (Dew water)

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In Siddha system of medicine the Panineer (dew water) is commonly used as an internal medicine in the treatment of Skin diseases, Moolarogam, nasihapeedam, vathagunmam, karapan, mathumegam (Diabetes mellitus),Vathanoi andKarapan. It is alsoused to wash and treat the wounds. Dew water is the water droplets that appear on thin exposed objects in the morning or evening due to condensation of atmospheric water, when the temperature comes below its dew point. The aim of this study was to identify the ion content and pH of dew water and evaluate the antibacterial activity against *Staphylococcus aureus*ATCC 25923, *Pseudomonas aeruginosa*ATCC 27853 and *Esterichia coli* ATCC 25922 and *Enterococcus faecalis*ATCC 29212. The pH was qualitatively tested by using the litmus papers and using pH probe. The ion contents (anions and cations) were separately analyzed using the standard qualitative procedure. The antibacterial activity was determined by using the standard cut well diffusion method. The pH values ranged between 7.93 and 8.17. Concentration of -OH ion in the Panineer were 0.0125, 0.0275 and 0.0375 mol/L. Dew water showed antibacterial activity against the gram positive and gram negative organisms tested and Zone of Inhibition (ZOI) was found to lie between 12 (± 0) and 18 (±0)mm. The pH of dew water was alkaline. Dew water could be drunk as internal medicine for Gunma rogam, which is caused by the excess acid(HCl) secretion. The dew water samples exhibit antimicrobial activity against the selected organisms, such as S. aureusATCC 25923, P. aeruginosa ATCC 27853, E. coli ATCC 25922, and E.faecalis ATCC 29212. This study shows the Dew water could be used in the treatment of chronic wounds as khara and useful in the treatment of Gunmaroga and other skin diseases as internal medicine.

Keywords: Antimicrobial activity, Dew water, Ion contents, Panineer, pH value