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ABSTRACT

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Antimicrobial study of different methods of purified Sulphur

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Most of the Siddha medicinal preparations contain minerals along with herbs. Among minerals sulphur is commonly used in compound medicines and alone. Sulphur contains a number of medicinal properties and mostly used in skin diseases. Even though several methods of sulphur purification are used in Siddha medicine, three different methods are commonly used by the physicians in Jaffna district such as by using moethan plantain tuber juice with milk (method 1), henna paste with curd (method 2) and ghee with milk (method 3). The present study is to evaluate the antimicrobial activity of the above mentioned three methods and determine their efficiency. Antibacterial activity of different purified sulphur was studied by measuring mean inhibition zone against *E.coli*, *Staphylococcus aureus*, *Bacillus subtilis* and *Pseudomonas aeruginosa* by agar well diffusion method. Antifungal activity was also determined by agar disc method against *Aspergillus* spp, *Ficarium* spp, *Trichoderma* spp and *Rhizopus* spp. Controls were also maintained and the results were analyzed statistically. The antibacterial study demonstrated that method 2 had significantly ($p < 0.05$) high inhibition than the other two methods in all tested bacteria. But the growth of *E.coli* and *Bacillus subtilis* were not inhibited by method 3. Antifungal activity of the method 3 showed significantly higher inhibition than the other two methods in almost all fungi tested. But growth of *Rhizopus* spp was highly inhibited by method 2. Growth of *Aspergillus* spp was significantly less when compared to other fungi by all three methods. The present study concluded that method 2 and method 3 showed prominent antibacterial and antifungal activities respectively.

Key words: Sulphur, Purification, Antibacterial activity, Antifungal activity

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