



Application of Plants Extracts against Bacterial Strains causing Food Poisoning for its Potential Application in Food Preservation

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Abstract : Prevention of food from spoilage and pathogens is usually controlled by the use of chemical preservatives which have various negative impacts on human health. The chemical residues go in the food and feed chain moreover it makes the microbes more resistant to the used chemicals. Thus, the necessity to find a potentially effective, healthy, safer and natural alternative preservative. In the present study, different ethanolic plants extracts have been used to analyze their antimicrobial activity against the food borne pathogens. *E.coli*, *Staphylococcus* and *Pseudomonas* are prevalent food

borne pathogens in many foods like meat, chicken and various raw foods. Various plants and herbs contain flavonoids and many other phytochemicals which are detrimental for the growth of microorganisms. In the present study ethanolic extracts of Pomegranate (*Punica grantum*), Thyme (*Thymus vulgaris*), Sweet Orange (*Citrus sinensis*), and Bay leaf (*Laurus nobilis*), Guava leaf (*Psidium guajava*) were checked for their antimicrobial activity against *E. coli*, *Pseudomonas aeruginosa* and *Staphylococcus aureus*.

Keywords: *E. coli*, *Staphylococcus*, *Pseudomonas*, food borne, flavonoids.

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Introduction :

Food poisoning is considered as one of the most common cause of illness and death in developing countries (Doughari et al., 2007; Pirbalouti et al., 2009; Sapkota et al., 2012). Most of food poisoning reports are associated with bacterial contamination especially members of Gram negative bacteria like *Salmonella typhi*, *Escherichia coli* and *Pseudomonas aeruginosa* (Solomakos et al., 2008; Pandey and Singh, 2011).