



## Bacteriology of a most popular Indian Street Food (Panipuri) and its Antibiogram profile on Bacterial Growth

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**Abstract:** Standard methods of microbial analyses revealed that different samples of panipuri showed differential bacteriological count on NA and EMB (selective) media. The presence of bacterial species like *Enterobacter*, *Salmonella*, *Staphylococcus* and *Streptococcus* were confirmed through isolation and characterization of bacteria from the panipuri samples. Antibiogram studies of the isolates revealed the presence of multiple antibiotic resistant (*Staphylococcus* and *Streptococcus*) and moderately sensitive (*Salmonella spp.*, *E.coli*) microbes in the Pani and Puri samples. Among the essential oils used, Cinnamon oil showed maximum antibacterial activity followed by clove and kalonji. It is important

for the vendors to prepare and serve food in hygienic conditions. Overall, this is a preliminary study for understanding the significance of pathogenic microorganisms in street foods like Panipuri and the application of essential oils like Cinnamon, as a food preservative as well as an antibacterial agent.

**Keywords:** Bacteriology, Spoilage, Antibiotics, Essential Oils.

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### Introduction:

Street food today has become one of the major concerns of public health and a focus for governments and scientists to raise public awareness about food spoilage and poisoning. (Sharma and Mazumdar, 2014). The potential of the contamination of street food with pathogenic microorganism which are very harmful and often disease causing, has been well documented and several disease outbreaks have been traced to consumption of street foods, which has presence of pathogens. Although they are very popular, easily available and cheap, it is frequently associated with various food borne diseases. Diseases caused by foods are often associated with the consumption of street foods has been observed in several places in India and elsewhere (FAO 1988; Chumber et al., 2007; Ghosh et al., 2007). Only recently, the World