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Antibacterial activity of *Mangifera indica* kernel extracts

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Mango (*Mangifera indica*) is a fruit belonging to the genus *Mangifera* and family *Anacardiaceae*. Mango peels and seed kernels are the major by-products of mango juice industry, they are rich sources of natural bioactive compounds which play an important role in prevention of diseases. This study emphasized specifically on the potential of the mango *Mangifera Indica* seed kernel by discovering the prospective usage of mango seed kernels as a source of antibacterial compounds against Gram-positive (*Staphylococcus aureus*)and Gram-negative (*Pseudomonas aeruginosa*)bacterial strains. The significant increase in mango consumption in domestic activity leads to the accumulation of waste, especially its kernel. This study attempts to screen two varieties of mango kernels: Bannapalli and Senthura extracted using one extraction solvent i.e. distilled water to examine the potential of mango kernel as natural antibacterial against two bacterial strains: *Staphylococcus aureus* and *Pseudomonas aeruginosa*. Spread plate technique was employed to determine the antibacterial activity. Optimization of process conditions for extraction of antibacterial activity (having low number of colonies in plates) was conducted in Triplicates observation methods based on the experimental design by manipulating growth rate using kinetics and graphs. It was found that Bannapalli had the best antibacterial activity, utilizing distilled water as the extraction solvent. The maximum antibacterial activity at 37°C for 24h shows minimum number of colonies in plates. This finding would probably become an alternative source of new and natural antibacterial agents. A mango kernel extract has a bacteriostatic and antibacterial activity, and thus can be used in food products or cosmetics as a bacteriostatic and antibacterial agent. Furthermore, agents for preventing and treating acne or agents for preventing dental caries can be provided by adding said extract as an effective component.

Biography

Alok prakash is pursuing his Bachelors in Biotechnology at the age of 20, from VIT University, Tamilnadu, India. Currently he has completed his second year of four years course. He is doing his summer internship from Britannia in Quality control department at Bangalore.

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Drying of apples

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Heat and Mass Transfer play a vital role in the drying process of apples. The process of drying involves application of heat to vaporize internal moisture present on the surface of apple. The vaporization of internal moisture involves migration of moisture from within the solid to the surface by one (or) more of the processes namely diffusion, capillary action and internal pressures set up by shrinkage during drying. This process takes place as a result of temperature gradient that develops within the solid.Surface evaporation is controlled by the diffusion of vapor from the surface of the solid to the surrounding atmosphere through a thin film of air in contact with the surface. The process of drying is carried out in a specially designed "Drying Tunnel" to facilitate the drying process and maintain different parameters governing the process such as Temperature, Humidity, Velocity of air, Area of exposed surface and Pressure. It is found that drying improves the nutritional value, Palatability, Shelf life and the dried product is less susceptible to spoilage. The review of drying of apples is presented in the poster. A discussion of the important parameters on the drying rates and total drying time will be presented.

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