

## Evaluation of antibacterial and antifungal potential of different varieties of potatoes

Jagdeep Singh Pannu, Shweta Sen Thalwal and Amita Pannu

Department of Biotechnology, Ambala College of Engineering and Applied Research, India

The aim of the study was to investigate the phyto chemical compounds and antimicrobial activity of potato extracts including Kufri Badshah, Kufri Bahar, Kufri Pukhraj and Kufri Puskar provided by Haryana Agriculture University (HAU), Hisar, Haryana. Phytochemical screening of these plants was performed for constituents: alkaloids, flavonoids, tannins, reducing sugars, saponins and carbohydrates. The potato peel extracts were used to screen the bioactive compounds and antimicrobial activity against selected human clinical pathogens i.e. *Bacillus amyloliquefaciens*, *Bacillus subtilis*, *Escherichia coli*, *Staphylococcus epidermidis* by agar diffusion method and Disk diffusion method. The Zone of inhibition obtained by both of these methods, are then compared.

Antifungal activity of extracts was also analyzed against *Aspergillus fumigates*, *Aspergillus niger* and *C. albicans*. The results of both the methods were compared and extracts showing best antimicrobial activity were selected for Minimum Inhibitory Concentration (MIC), Minimum Bactericidal Concentration (MBC) and Minimum fungal Concentration (MFC). The present study reveals potential use of these extracts for developing new antimicrobial compounds against pathogenic micro-organisms.

**Keywords:** Antimicrobial, Antifungal, MIC, MBC, MFC, Extract.

jagdeepsinghpannu@yahoo.co.in

## Management and treatment of wastewater: Towards clean environment and healthy society

Javed Ahmad and Touseef A. Ansari

Department of Biochemical Engineering and Food Technology, Harcourt Butler Technological Institute, India

Every day huge quantity of waste water is generated all over our country and disposed off into the surroundings without proper treatment. This practice not only exerts heavy pollution load on surroundings but poses serious threat to human and animal life. The major obstacle in treatment of industrial effluents is their varying characteristics and casual approach of agencies responsible to curb this practice and ensure safe disposal of wastewater therefore sincere efforts are needed to find techno economic and socioeconomic solution to protect our environment by developing efficient treatment technologies and bringing awareness in public.

In this context PPP (public private partnership) model can play vital role in achieving desired goals. This paper gives an account of methods for waste water treatment with reuse and recycling possibilities.

**Keywords:** wastewater, management, treatment.

javedkkhaan@gmail.com

## Aeromycometric Investigation on the atmosphere of Vellore corporation

J. Kotteshwari<sup>1</sup>, N. C. Saraswathi<sup>1</sup>, S. Aishwariya<sup>1</sup>, P. Priya Tharshini<sup>1</sup> and N. K. Udaya Prakash<sup>2</sup>

Dr. RR & Dr. SR Engineering College, India

This Study focus on the presence of Aeromycoflora present in the atmosphere over Vellore Corporation, TN. Microbes are omnipresent. They are most emphasized in causing respiratory and allergic diseases. Our study includes Identification of Aeromycoflora in Vellore Corporation. Over 19 Samples were taken using Anderson single stage sampler in petridish containing Potato Dextrose Agar (PDA) medium. The Samples were collected by exposing the petridish in the atmosphere using Anderson single stage sampler. The Sampler was operated at the sucking rate of 20 LPM of Air for 5 minutes. The exposed petridish were incubated at room temperature and identified. The results on Aeromycoflora will be discussed in detail.