

TS4.3

Biochar as a Potential Filtration and Separation Media

Shristi Shefali Saraugi, Winny Routray*

Department of Food Process Engineering, National Institute of Technology, Rourkela, Odisha, India

* Corresponding Author's Email ID: routrayw@yahoo.com, routrayw@nitrrkl.ac.in

ABSTRACT

Waste generation from the agricultural and food processing sector impacts macro- and micro-ecosystems. Utilization of waste for the generation of new products leads to sustainable waste management. Biomass is being transformed into bio-chars, bio-oils, bio-fuels, and other value-added products through thermochemical processes. Biochar is a carbon-rich, and porous structure product, that is inexpensive to produce and can be utilized as a potential filter media for pre-treatment of water, removal of pollutants from water, removal of heavy metals, separation of oil/water, purification of alcoholic beverages, and elimination of mycotoxins present in juices. This summarizes an overview of the application of biochar in separation, filtration, and purification techniques and addresses the future scope and challenges.

Keywords: biochar, filtration, separation, purification

