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PENDING

(IN202311083945)

A process for producing a biosorbent for the removal of heavy metal contamination from water and a biosorbent produced therefrom

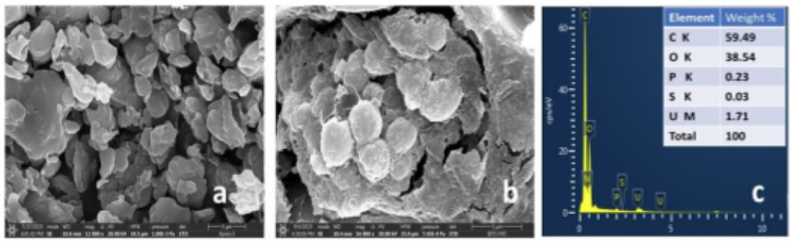

Figure 3. SEM images (A) before adsorption (B) after adsorption and (C) EDAX spectrum of biosorbent.

NEED

Water contamination by heavy metals, like uranium, poses significant environmental and health risks. A novel biosorbent using PMMA microplastic and Saccharomyces cerevisiae offers an effective solution for heavy metal removal from contaminated water.

MARKET ANALYSIS

The global water treatment market is projected to grow at a CAGR of 8.7% from 2023 to 2033, driven by increasing water contamination and regulatory pressure for environmental protection. (Source: Grand View Research, 2023)

TECHNOLOGY OVERVIEW

This patent presents a biosorbent made from PMMA microplastic and Saccharomyces cerevisiae for the removal of heavy metals like uranium from water. The process ensures enhanced removal efficiency, with up to 96% of uranium removed, and offers a scalable, cost-effective solution for water purification.

Target Industries

1) Water treatment companies specializing in heavy metal removal; 2) Environmental remediation service providers; 3) Research and development in water filtration technologies; 4) Government agencies and NGOs focusing on clean water initiatives.

TECHNOLOGY KEY FEATURES

PMMA microplastic and Saccharomyces cerevisiae combination; removes uranium and other heavy metals; 96% uranium removal; optimized conditions; environmentally friendly biosorbent; low-cost water remediation solution.

AT A GLANCE

- SDG 6 (Clean Water and Sanitation), SDG 12 (Responsible Consumption and Production), SDG 13 (Climate Action)

Read more here

Technology is available for licensing/ co-development.

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