

Black Mass Recovery Technology

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Black Mass Recovery Technology Latest News

The Technology Development Board (TDB), Department of Science & Technology (DST), Government of India, has extended financial support for commercialisation of Indigenous Battery Recycling Technology.

About Black Mass Recovery Technology

- It is designed to **extract battery-grade lithium, cobalt, nickel**, and manganese from end-of-life lithium-ion batteries.
- Its **dual-mode (wet and dry) black mass recovery technology** ensures high separation efficiency and **recovery rates of up to 97-99%**.
- The end-to-end process, including collection, shredding, metal leaching, and downstream purification, is indigenously developed and patented, significantly reducing reliance on imported recycling equipment.
- **Significance:** It seeks to minimize import of critical minerals by recycling already available one within the country.

- The recovered battery-grade compounds—such as lithium carbonate and cobalt sulphate—meet global specifications and will cater to both domestic consumption and exports.

What is Black Mass?

- It is the term used to describe the **dark, granular material** that remains after lithium-ion batteries are shredded during recycling.
- It contains a valuable mix of metals, including: **Lithium, Cobalt, Nickel, Manganese and Graphite**
- These materials are essential to the production of new batteries, especially for electric vehicles, energy storage systems, and electronics.

Source: PIB

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