

PRESS RELEASE

TRACEGROW INTRODUCES REDO-M®: CIRCULAR BATTERY-GRADE MANGANESE FOR EUROPE'S ENERGY TRANSITION

Oulu, Finland — [6 November 2025] — As Europe's rapidly growing battery industry faces near-total dependence on imported manganese, Tracegrow Oy has introduced REDO-M®, a circular battery-grade manganese solution produced entirely from EU-sourced recycled feedstocks.

Using its proprietary RETRACER™ process, Tracegrow recovers and purifies manganese from recycled alkaline batteries and industrial by-products to achieve battery-grade purity. Independent validation by the University of Oulu confirmed that the process consistently delivers manganese sulphate monohydrate at purity levels required by battery manufacturers.

"Europe currently imports almost all of its battery-grade manganese. REDO-M® demonstrates that we can close this gap with high-purity recycled material sourced and refined within the EU," said Jaakko Nauha, CEO of Tracegrow. "Our approach combines resource security with verifiable sustainability."

Key features of the REDO-M® platform:

- Process performance validated by University of Oulu for battery-grade manganese sulphate
- Circular EU supply utilizing underutilized regional feedstocks
- Low-carbon process compared with mining and refining of virgin ores
- Protected by patent applications covering extraction and purification methods

Tracegrow is engaging cathode producers, battery recyclers, OEMs, and investors to validate REDO-M® in production environments and jointly develop commercial-scale operations. The company is advancing discussions to support scaling, exploring both direct collaborations and project finance structures.

"European battery manufacturers need domestic manganese sources that balance purity with sustainability," added Nauha. "REDO-M® offers both, and we're ready to validate that with production partners who share this vision."

About Tracegrow

Tracegrow Oy is a Finnish cleantech company, specialising in recovering critical raw materials such as manganese and zinc from industrial by-products and recyclable materials. The company's patented circular-economy technologies serve both the agricultural micronutrient and energy-storage sectors.

For more information:

www.tracegrow.com/battery-grade-manganese

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