

Spodumene Lithium Processing: Concentration, Refining, and Conversion (CRC) of Dissolved Lithium

Process impure lithium sulfate solutions into battery-grade lithium carbonate or lithium hydroxide.



Concentrate, Refine, Convert

Saltworks' spodumene processing technology applies to dissolved lithium processing. Saltworks concentrates, refines, and converts the lithium in the solution to battery-grade lithium chemicals. We also recover lithium from wastewaters and treat hypersaline wastewaters emerging from the plant, including evaporator blowdown streams.

Process, Technologies, and Economics

Progress de-risked optimized processes, pilots, and full-scale plants. We provide flexible options, from engineering services, single-unit operations, or a complete lithium processing system.



Saltworks and Your Lithium Project

Start today by contacting us. Client confidentiality, deep technical focus, and responsiveness are critical at Saltworks.



- Process flow optimization and costing
- Lab- and bench-scale analysis to de-risk and optimize
- Front-end engineering design
- Pilot projects at our site or yours to prove performance
- Full-scale modular unit operations to integrate with others
- Full-scale complete lithium systems from start to finish

Lithium Concentration & Processing Technologies: Modular & Digitized



SaltMaker ChilledCrys

For specific chemistries, chilled crystallization offers exceptionally lower costs than evaporative crystallizers producing solids with a fraction of the energy required.

We package our closed loop chilled crystallization technology with intelligent controls for continuous separation of water and salt. SaltMaker ChilledCrys recovers and recycles valuable salts generated in mineral processing, including anhydrous sodium sulfate (Na₂SO₄).





BrineRefine & XtremeUF: Refine & Convert

technical- or battery-grade lithium carbonate.

Ensure the highest lithium quality and yield by precisely targeting impurities at the beginning of the refining process. We pair smart chemical conversion processes (BrineRefine) with robust ceramic ultrafiltration (XtremeUF) to consistently produce high-purity outputs. A carbonate reactor (BrineRefine in a different configuration) is used downstream to produce

Maximize downstream yield by concentrating lithium sulfate to optimal levels with a SaltMaker MVR evaporator, or produce battery-grade lithium hydroxide crystals with a SaltMaker MVR crystallizer, then wash and centrifuge.

Configured as evaporators or crystallizers, SaltMaker MVR forced-circulation systems are fully automated, with built-in self-cleaning. As a crystallizer, integrated solids management systems ensure reliability at optimal capacity.

