

Lithium Brine Processing

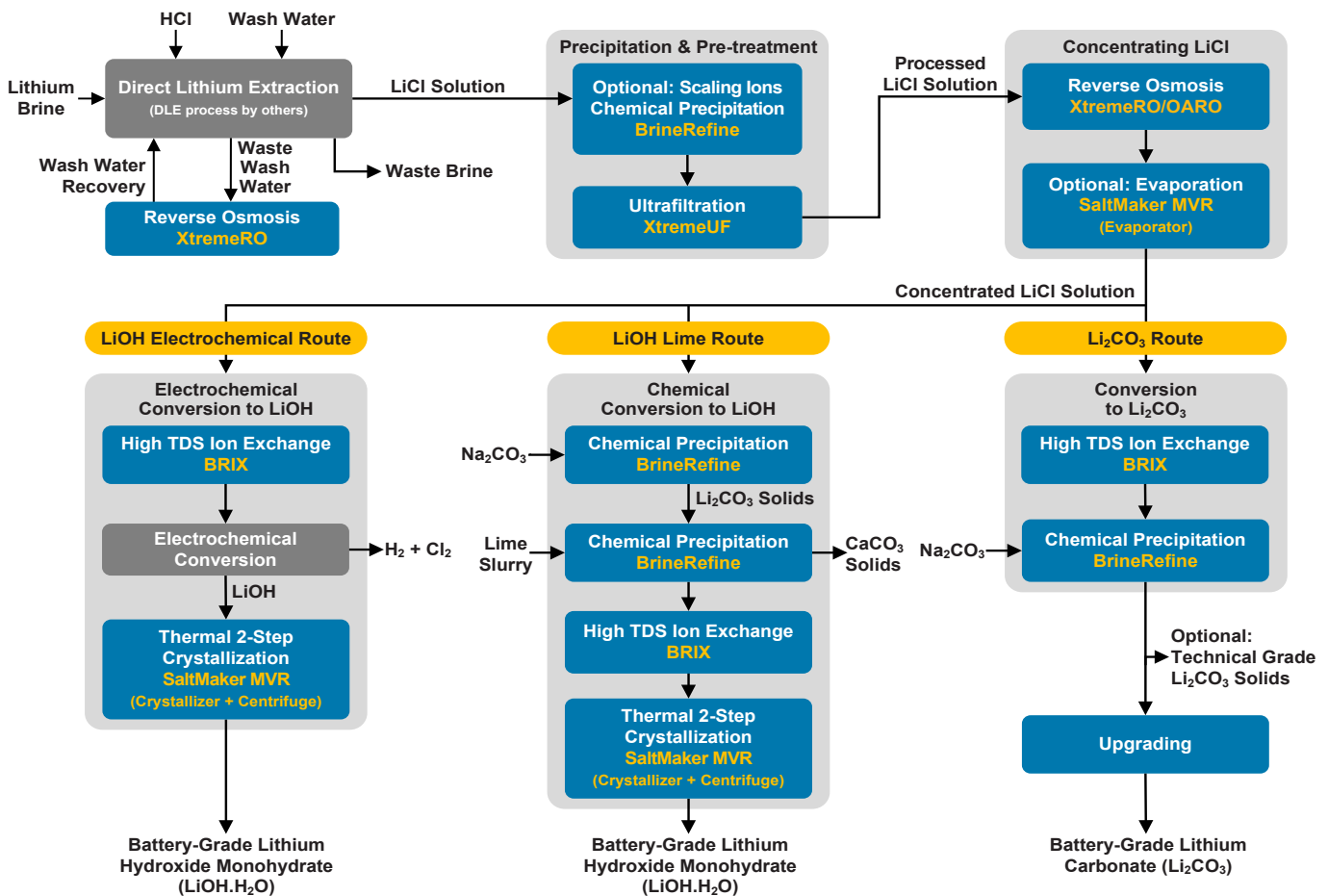
Expertise, Lithium Test Center, Full-Scale Plants

Step 1: Direct Lithium Extraction (DLE)* by Others

*or other lithium brine-producing process

Step 2: Concentrate, Refine, Convert by Saltworks

- Saltworks' Process
- Process by Others



Concentrate, Refine, Convert

DLE systems are increasingly being deployed in brine extraction projects. Saltworks' focus is downstream of DLE. We concentrate, refine, and convert lithium chloride solutions to technical or battery-grade lithium carbonate or lithium hydroxide monohydrate solids. We offer optimized robust, modular, and intelligently automated plants.

Process, Technologies, and Economics

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

Saltworks and Your Lithium Project

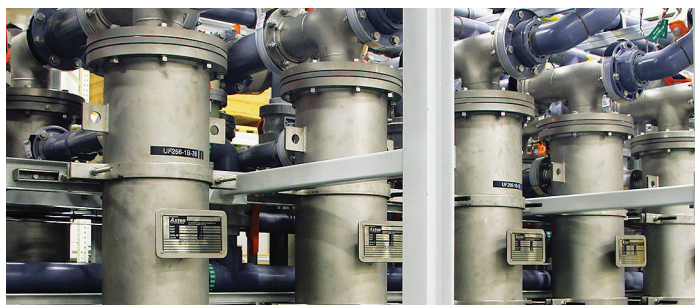
Client confidentiality, deep technical focus, and responsiveness are critical at Saltworks. **Contact us to start today.**



- 1**
Process Optimization
- 2**
Pilot: Lithium Test Center
- 3**
Full-Scale: Unit Ops, Complete Plants, Digitization
- 4**
Operational Support & Optimization

- Process flow optimization to put your project on the best path
- Lab- and bench-scale pilots to de-risk and prove performance
- Front-end engineering design (FEED) evaluation to refine costs
- Modular unit operations integrate with others processes
- Full-scale complete lithium systems from start to finish

Lithium Concentration & Processing Technologies: Modular & Digitized



BrineRefine, XtremeUF & BRIX: Refine & Convert

Ensure the highest lithium quality and yield by precisely targeting impurities at the beginning of the refining process. Our smart chemical conversion processes (BrineRefine) and robust ceramic ultrafiltration (XtremeUF) consistently produce high-purity outputs.

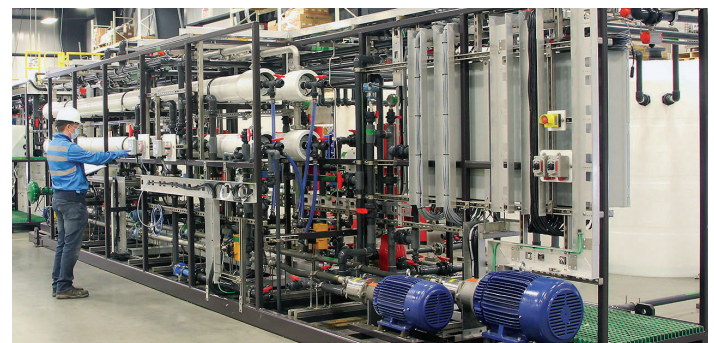
Our BRIX (high-TDS ion exchange) polishes for hardness and boron. Downstream, a BrineRefine carbonate reactor can produce technical- or battery-grade lithium carbonate.

XtremeRO: Concentrate

Concentrate lithium chloride up to 50% higher than conventional RO with our next-generation, ultra-high-pressure reverse osmosis system, XtremeRO-1800.

XtremeRO increases water recovery, and reduces the size and cost of downstream evaporators or negates them entirely.

Push innovation and higher concentrations with osmotically assisted reverse osmosis (OARO).



SaltMaker MVR: Concentrate and/or Crystallize

Maximize downstream yield by concentrating lithium chloride to optimal levels with a SaltMaker MVR evaporator, or produce battery-grade lithium hydroxide monohydrate crystals with a SaltMaker MVR crystallizer 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.