SUMMIT NANOTECH
DLE DONE RIGHT

Advancing the world's most efficient, scalable direct lithium extraction technology

Summit has developed an advanced direct lithium extraction (DLE) technology, denaLi™, engineered for high efficiency, industrial reliability, and the lowest levelized cost of lithium.

denaLi™ DLE enables lower CapEx and OpEx with a smaller overall plant size, lower energy use, and 50% lower water consumption compared to commercial DLE benchmarks.

Scalable Performance Across All Systems

VALIDATED PERFORMANCE METRICS
(Mineria Positiva, 2025)

KPI	Unit	Result
Lithium yield	%	**96-99**
Overall impurity rejection	%	**96-99**
DLE specific water use	m^3/t LCE	**5-17**
Li:TDS Ratio	-	**0.10-0.12**

Pilot Plant Northern Chile 2022

Demo Plant Northern Chile 2025

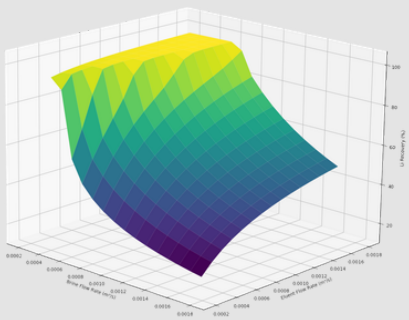
In-House Demo Santiago, Chile 2026

Predictive Modeling for Optimized System Design

Summit begins every project with advanced digital modeling that creates a high-fidelity simulation of system performance. The models integrate:

- Column hydraulics
- Sorbent adsorption/desorption behavior
- Brine chemistry variability
- Cycle timing and operating conditions

This enables rapid scenario testing, early optimization, and reliable scaling from bench → pilot → commercial.



Heat map shows performance parameters for optimal CapEx/OpEx balance.

Contact **sales@summitnanotech.com** to learn more.

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Rapid Validation Demonstration Environment

Summit's digital model parameters are then applied in a controlled demonstration environment, which replicates real-world brine conditions without field-site delays.

This system provides:

- Verification of recovery, impurity rejection, water use, and energy/mass balances
- Full datasets required for commercial engineering (5,000+ tpa LCE)
- Early confidence in system behavior and economics

Proven Field Performance

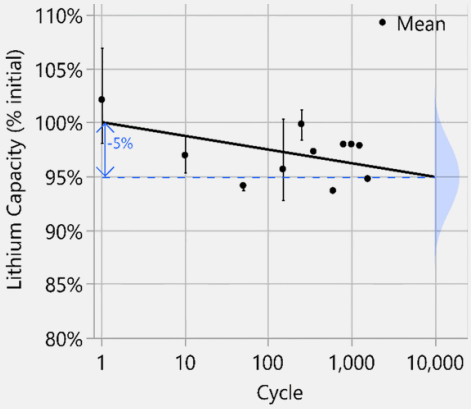
Summit's demonstration plant at Albemarle's site in Northern Chile confirmed system robustness under real operating conditions.

Over a 20-week program, the system achieved:

- High lithium recovery from live brine
- Stable, 24/7 operation with high uptime
- High-concentration lithium chloride eluate without thermal evaporation

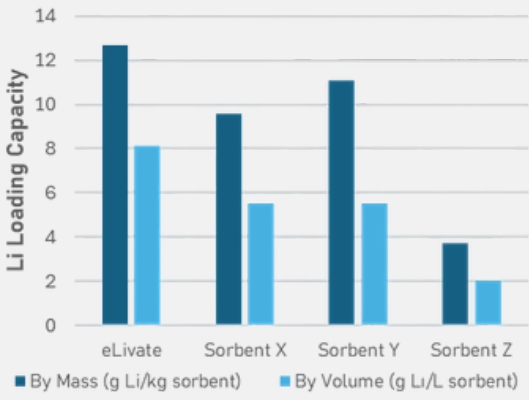
Robust Sorbent, Designed and Manufactured in North America

eLivate™ sorbent is engineered for industrial durability with **minimal attrition**, reducing downtime and replacement frequency, and improving overall plant reliability.



Lithium loading capacity tested to 2,000 cycles and extrapolated to 10,000 cycles

eLivate™ sorbent has a high packing density, ensuring **higher sorbent utilization** and resulting in higher lithium throughput at a given plant size compared to competitors.



Lithium loading capacity compared to competing DLE sorbents

Summit's patented formula is designed in-house, and toll produced by a blue-chip chemical manufacturing company in North America.

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