

# LI-PRO™

## Lithium Selective Sorption (LSS) Technology

**Koch Technology Solutions (KTS)** is a global leader in developing and commercializing advanced process technologies. With a proven track record in innovation and collaboration, KTS has revolutionized lithium extraction with our Li-Pro™ Lithium Selective Sorption (LSS) technology, which is designed to maximize efficiency, sustainability, and scalability. Li-Pro™ has been deployed in groundbreaking projects through various regions including the vast Smackover region. Backed by Koch's extensive resources and decades of expertise, KTS is uniquely positioned to meet the growing demand for sustainable lithium production.

### Licensing Structure

- ▶ **Non-exclusive license and rights to use Li-Pro™ IP** to engineer, procure, construct, operate and maintain a lithium extraction facility
- ▶ **A Process Design Package (PDP) enabling Front End Engineering Design**
- ▶ **Technology Transfer Services:**
  - Engineering design, critical equipment procurement support, training, construction inspections, pre-commissioning and commissioning support through to plant acceptance
- ▶ **Supply of specialist equipment and services (including LSTK execution)**
- ▶ **Post Acceptance Support (Ongoing optimization, troubleshooting, inspection services during overhauls, safety and operations refresher training, etc.)**

### Key Benefits

- ▶ **Li Extraction efficiency >95%**
- ▶ **Separation efficiency >98%**
  - Primary Rejection of Ca, Mg, Na
- ▶ **Low water over volume**
- ▶ **Enables optimized downstream CAPEX & OPEX**
- ▶ **LSS Design**
  - Fixed bed design
  - Water used for primary LSS elution agent
  - Security of media supply with QA/QC by KTS
  - Vessel size flexibility to achieve optimal LSS capex for project needs
- ▶ **Modular design to reduce construction times on site.**

### Partner of Choice

#### Global Scale

KES is an affiliate of Koch Industries that has \$125+ bn in revenues, global presence and investment-grade credit.

#### Decisive Action

Unrivaled ability to marshal resources to move decisively and with certainty when the right opportunities present themselves.

#### Private

Private company and management philosophy allows partners to focus on capturing long-term opportunities.

#### Mutual Benefit

True partnership mentality. Expectation that KES will work to make partnerships as successful as possible.

### Koch Labs

**Experts:** Engage KES' internal subject matter experts to help better understand market and customer opportunities, as well as solve technical challenges

**Develop:** Use KES and Koch-affiliate facilities and businesses as a test bed for product development and proof of concept, allowing for quicker time to market and product design cycles

**Engage:** Opportunity to engage KES and Koch affiliates as a partner, customer and supplier

# Li-Pro™ Lithium Selective Sorption (LSS) Technology

## Li-Pro™ LSS Commercial Column at Standard Lithium

Largest demonstration of Lithium Selective Sorption (LSS) in North America

### Li-Pro™ LSS Demonstrated Findings

- ▶ KTS has signed the 1st commercial license to enable the production of 22.5 tons/yr of Lithium Carbonate at the Smackover, Arkansas site.
- ▶ A commercial scale demonstration unit was installed and has been operational since December of 2023.
- ▶ This demonstration has achieved up to 95.9% average lithium recovery from the continuous incoming brine flow and rejected over 99.3% of key contaminants (sodium, calcium, magnesium, and potassium) and rejected over 94.2% of boron



## Lithium Extraction Process



### Treatability

- 1,000 liters of brine tested in Wilton, UK or Pickering, Ontario
- Determine viability of Li-Pro™ lithium selective sorbent process, including lithium recovery and selectivity results
- +/-40% CAPEX and OPEX estimate
- One-time fee

### LSS Field Pilot + Feasibility Engineering

- 1gpm continuous brine LSS field pilot
- Summary report of performance of pilot
- License agreement post trials:
  - *Li-Pro™ license agreement including process guarantee based on findings from pilot*
- +/-30% CAPEX and OPEX estimate
- One-time fee

### LSS License

- Technology Transfer Services: Engineering Support, Critical Equipment Procurement Support, Training, Construction Inspections, Pre-Commissioning & Commissioning Support through to Plant Acceptance
- Flexible commercial engagement