

# Lilac Solutions Unveils Latest Generation Lithium Extraction Technology and Releases New White Paper

*Technical White Paper Reveals Breakthrough Data on High Lithium Recoveries, Impurity Rejection, and Long Cycle Life*

OAKLAND, CALIF., UNITED STATES, June 25, 2024 /EINPresswire.com/ -- Lilac Solutions, a leader in advanced lithium extraction technology, today announced the launch of its latest generation ion exchange (IX) technology for lithium extraction. This generation offers an unmatched combination of high lithium recoveries, impurity rejection, long cycle life, and high throughput, allowing lithium producers to dramatically increase lithium supply while meeting the highest environmental standards.



Lithium Extraction Demonstration Plant, Jujuy Province, Argentina, Exterior

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*Raef Sully*

Alongside this announcement, Lilac is releasing a [technical white paper](#) detailing the performance of this fourth-generation IX technology.

Lilac's Gen 4 IX technology redefines what constitutes a viable brine resource for lithium production by unlocking a wide range of brines with low lithium concentrations and high impurities. The Lilac technology opens many large-scale resources in the US and Europe for development for the first time. By expanding brine reserves in countries

investing heavily in localizing battery production, this innovation enables local lithium producers to meet the rising demand for electric vehicles.

“The industry has been waiting for direct lithium extraction technology that can really rise to the challenge, and we've solved it with ion exchange. It works exceptionally well, and I'm excited to

deploy it at commercial scale in partnership with our customers,” said Raef Sully, Chief Executive Officer of Lilac Solutions. “With this technology, we’re not just improving lithium extraction efficiency; we’re also enhancing the sustainability and economic viability of lithium production.”

Lilac’s Gen 4 IX delivers lithium recoveries ranging from 80% to 98% for brines ranging from 50 mg/L to over 2,000 mg/L, respectively. Even for ultra low-grade brines, such as the Great Salt Lake with a lithium concentration of only 70 mg/L, Lilac IX can achieve 84% recovery with a low cost of production. For typical South American salar brines, Lilac’s lithium recoveries exceed 95%. Typical impurity rejections range from 99.9% to 99.99%.



Lithium Extraction Demonstration Plant, Jujuy Province, Argentina, Interior

The Lilac ion exchange media (IXM or “beads”) exhibit exceptional durability, operating continuously for thousands of cycles and over a year before requiring replacement. High module flow rates enable fast lithium recoveries, creating a highly efficient and productive lithium extraction system.

Compared to conventional direct lithium extraction technologies based on alumina adsorbents, Lilac IX increases lithium recoveries, improves tolerance of impurities commonly found in US and European brines, and uses up to 10X less freshwater.

This latest generation of Lilac’s IX technology is the result of over eight years of development, testing, and field piloting aimed at optimizing performance, scalability, and cost. Advances to Lilac’s technology are rooted in materials engineering, process chemistry, and mechanical design.

Extensive piloting has proven the technology's performance in the field, including a demonstration plant at one-third the scale of a commercial plant. Lilac has completed four pilot and demonstration plants, is currently commissioning a demonstration plant in Jujuy, Argentina, and has broken ground on a pilot plant at the Great Salt Lake in Utah. Lilac is scaling its proprietary bead manufacturing plant in Fernley, Nevada, to produce beads for Lilac IX customers globally.

## About Lilac Solutions

Lilac Solutions delivers modern lithium extraction technology to scale lithium supply for the

electric era. Lilac's breakthrough ion exchange technology enables customers to extract more lithium faster from a wide variety of brine resources globally with high efficiency, minimal cost, and an ultralow environmental footprint. Lilac is based in Oakland, California. Learn more at [lilacsolutions.com](https://lilacsolutions.com).

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