

First Battery Grade Lithium Hydroxide Delivered

HIGHLIGHTS

- Battery-grade lithium hydroxide monohydrate and lithium carbonate produced at bench-scale from San José.
- Successful progression of pilot-scale test work continues.
- Expanded discussions with existing and potential offtake partners ongoing against backdrop of evolving market requirements.
- San José poised to supply lithium chemical products to the European battery industry and related industries in Spain.
- Successful advancement of alternative for the processing of lithium-bearing minerals and mineral concentrates with patent applications pending.

Infinity Lithium Corporation Limited ('Infinity', or 'the Company') is pleased to announce metallurgical test work has now produced battery grade lithium chemicals from the San José Lithium Project ('San José', or 'the Project').

Ongoing discussions with OEMs and strategic partners in Europe have highlighted the strategic benefits of optionality for battery grade lithium chemicals in response to evolving cathode technologies and market segment applications for both battery grade lithium hydroxide and carbonate.

Prior test work at San José has already delivered battery grade lithium carbonate and the delivery of battery grade lithium hydroxide. A parallel line of Feasibility Study test work already underway shows the optionality of San José.

The ongoing Feasibility Study flow sheet development test work program update is based on sulphation roasting of mineral concentrates being conducted by Dorfner Anzoplan. The test work program has seen:

- Bench-scale production of battery-grade lithium hydroxide monohydrate;
- Bench-scale production of battery-grade lithium carbonate;
- Completion of pilot-scale (circa 400 kilograms) ore beneficiation program; and
- Commencement of pilot-scale sulphation roasting.

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ASX: INF
FRA: 3PM

Project highlights

2nd Largest JORC hard rock lithium deposit in the EU

Strategically located in Spain, Europe to be the 2nd largest market for battery grade lithium after China

1st lithium project to secure EIT InnoEnergy Funding

Uniquely **fully integrated project** with mine and adjacent conversion plant

Low carbon footprint and sustainable operation

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Battery Grade Lithium Hydroxide

The test work program under the Project Agreement with EIT InnoEnergy has progressed on time and on schedule with the successful production of battery-grade lithium hydroxide monohydrate in open circuit with only a single stage of crystallisation as part of its on-going process flowsheet development test work. This is regarded as a significant milestone in the program. Locked-cycle test work will be undertaken in due course to evaluate the effect of various recycle streams on product specifications

Bench Scale



Figure 1: Summary of process flow sheet stages and current feasibility test work progress.

The product specifications are now available to facilitate the advancement of offtake discussions with automakers and lithium-ion battery producers including offtake partner LG Energy Solutions ('LGES') of South Korea (refer to ASX announcement 28 June 2021: Offtake MoU).

Battery Grade Lithium Carbonate

The Company's Technical Advisory Committee ('TAC'), led by CTO Jon Starink and Dr David Maree have advised and managed the progression of the parallel test work program to produce battery grade lithium carbonate at Dorfner Anzaplans facilities in Germany. The successful production of battery-grade lithium carbonate in open circuit complements the on-going process flowsheet development test work. The capability to produce either battery-grade lithium hydroxide monohydrate or battery-grade lithium carbonate or both is regarded as a significant feature of the process, preserving optionality and providing the opportunity to respond to market demand for these respective products.

The production of both battery grade lithium hydroxide and lithium carbonate follows the prior test work updates (ASX release 15 July 2021).

Pilot Scale Program

The pilot-scale program is designed to confirm the scalability of the process emerging from bench-scale test work, confirm key process design criteria and produce sufficient quantities of final products for preliminary market acceptability evaluation. This program is conducted in parallel with the bench-scale program.

The pilot-scale production of mineral concentrate has been successfully completed with no material deviation of performance from bench-scale test work and has provided a total of circa 400 kilograms of flotation concentrate for subsequent process test work, the first stage of which is sulphation roasting.

Pilot Scale

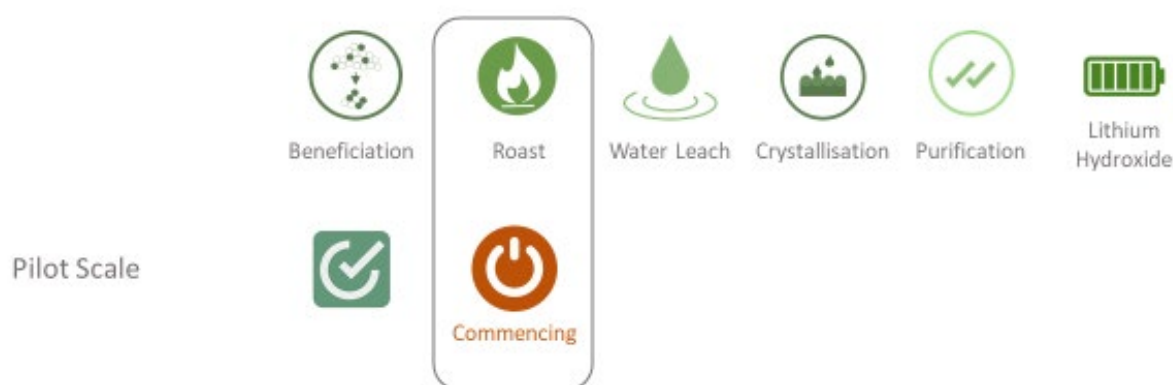


Figure 2: Summary of process flow sheet stages and current pilot scale progress

Pilot-scale roasting has commenced and is scheduled for completion in early October. The Pilot Scale test work is an integral part in the Feasibility Study for San José.

Alternative Process Flowsheet Development

The Company's TAC has undertaken a comprehensive review of all technically feasible alternative extractive technologies, including inter alia evaluation of comparative operating costs and process complexity, with a view to ensuring that the optimum process flowsheet is ultimately adopted for commercial development. This review confirmed that typical alternative technologies including traditional conversion process components such as the sulphuric acid leach and carbonate roast were highly unlikely to match the adopted process in terms of process performance, operating cost, environmental and social requirements and complexity and thus capital cost.

The review did however identify two novel and potentially technically feasible processes which could provide opportunities for significant improvement in all of these parameters. These processes represent a radical departure from the presently preferred sulphation roast process (and traditional spodumene concentrate roast and sulphuric acid leach process) and therefore there is the potential for application for the conversion of hard rock lithium resources.

In view of the findings of the review, the Company commenced a preliminary laboratory-scale test work program to test the technical feasibility of these processes but confirms this work will not be at the expense of the timing of delivery of the Feasibility Study or the delivery of larger quantities of lithium chemicals which are being requested by offtake parties through our PFS flow sheet. The initial results were encouraging and test work is ongoing.

These processes may represent an attractive alternative for the processing of lithium-bearing minerals and mineral concentrates generally and the Company is presently preparing provisional patent applications seeking to secure intellectual property rights over these processes.

Intellectual Property

The Company has engaged intellectual property consultants with a view to confirm freedom-to-operate all of the steps in the sulphate roast processes flow sheet and the novel processes currently undergoing preliminary laboratory-scale evaluation. A comprehensive review of patent literature and preparation of appropriate provisional patent applications is underway in relation to novel, potentially patentable elements of these processes.

The announcement was authorised by the Board. For further inquiries please contact:

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About Infinity Lithium

Infinity Lithium is an Australian listed minerals company who is seeking to develop its 75% owned San José Lithium Project in Spain. The proposed fully integrated industrial Project is focused on the production of battery grade lithium chemicals from a mica feedstock that represents the EU's 2nd largest JORC compliant hard rock lithium deposit.

The Company is contesting the cancellation of Investigation Permit Valdeflorez ('PIV') and has lodged a contentious-administrative appeal. The Company strongly disputes the basis of the decision of the cancellation of PIV and retains all legal rights against the Junta of Extremadura. Infinity retains subsequent rights of applications over and including the PIV area through other applications. These are summarised in the ASX announcement 19 July 2021.

The Project would provide an essential component in the EU's development of a vertically integrated lithium-ion battery supply chain. The availability of critical raw materials and the production of battery grade lithium hydroxide in the EU is essential to ensure the long-term production of lithium-ion batteries for electric mobility and the transition of the EU's automotive industry towards electric vehicles.