## United Lithium Corp. Provides Update on Lithium Product Purification – Achieves Higher Than 99% Pure Lithium Carbonate with a Leach Recovery Exceeding 98%

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Calcination, Acid Roasting and Water Leaching of spodumene concentrate (reported October 12, 2021) to produce lithium carbonate

Higher than 99% pure lithium carbonate achieved

Approximately 99% Li<sub>2</sub>O recovered from impurity removal stages

Test work to commence shortly on a direct lithium hydroxide from spodumene concentrate process

VANCOUVER, Oct. 27, 2021 - <u>United Lithium Corp.</u> (CSE: ULTH; OTC: ULTHF; FWB: 0ULA) ("ULTH" or the "Company"), is pleased to announce results from proprietary lithium purification testwork to produce lithium carbonate (Li<sub>2</sub>CO<sub>3</sub>) from spodumene concentrate. Testing produced lithium carbonate with a purity of approximately 99.1% from the initial bench tests. This test program was conducted under the supervision of Dr. Abdul Halim at Process Research Ortech Inc. in Mississauga, Ontario, Canada.

The technical grade of Li<sub>2</sub>CO<sub>3</sub> product and recovery of Li<sub>2</sub>O from flotation concentrates are considered excellent.

A table accompanying this announcement is available at https://www.globenewswire.com/NewsRoom/AttachmentNg/7ca2450a-33bd-452c-9a91-81b77e41accd

Process Research Ortech Inc. (PRO) was contracted by <u>United Lithium Corp.</u> to develop a sustainable process flow-sheet for the recovery of lithium from a hard rock deposits. The primary lithium mineral to be concentrated is the alumina-silicate spodumene. Spodumene is considered the most important commercial lithium mineral due to its high Li content and favorable processing characteristics. For phase one of the program a lithium rich pegmatite was sourced from Canada for testing.

The success of this program has encouraged United Lithium to continue forward with expanded test work for direct lithium hydroxide production from spodumene concentrate. Test work to date will allow optimization of pilot plant testing, expected to commence early in 2022. The proposed pilot plant will test lithium rich feed materials from a variety of projects, with results expected to be suitable for an economic assessment of a flowsheet to recover Li<sub>2</sub>CO<sub>3</sub> and LiOH from spodumene and petalite feed.

A photo accompanying this announcement is available at https://www.globenewswire.com/NewsRoom/AttachmentNg/b16ff5a3-c69c-43ea-89f7-ae22a6da8334

Table 2 Analysis of the process solutions related with Li<sub>2</sub>CO<sub>3</sub> precipitation tests

Test Description Concentration (mg/L)
Li<sub>2</sub>O Al Ca Fe K Mg Mn S Zn

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Li₂CO₃T1	Feed	39309	<5	134	<5	466	<5	<5	6888	<5
	Filtrate	3620	<5	10	<5	406	<5	<5	62140	<5
	WW	3488	<5	6	<5	27	<5	<5	5192	<5
Li₂CO₃T2	Feed	35172	<5	6	<5	8	<5	<5	42060	<5
	Filtrate	3925	<5	16	<5	17	<5	<5	40320	<5
	WW	3989	<5	11	<5	<5	<5	<5	2874	<5

Work to date continues to demonstrate a "greener" process: lower temperatures, lower chemical needs, shorter processing times versus incumbent technologies point toward the environmental and CO<sub>2</sub> impacts of high grade lithium salts production to be substantially reduced. Reagents and water consumption can be minimized by recycling the process streams such as filtrates, washes, evaporated water and crude products to the Li<sub>2</sub>CO<sub>3</sub> precipitation, impurity removal, and water leaching stages.

When additional test work to convert spodumene concentrate into lithium carbonate is completed, a life cycle assessment for this innovative process is planned, and engineering data will be available to support decision making. A test program to optimize the calcination and roasting portions of the flowsheet to make them even more environmentally friendly is being designed by the company's President and CEO Michael Dehn and Dr. Abdul Halim, VP Technology of Process Research Ortech Inc.

"Test work to date has demonstrated that it is possible to modify traditional processes and shortcut lithium carbonate production using innovative out of the box thinking. United Lithium aims to commercialize a sustainable and robust process flow sheet for lithium concentrate production, high grade lithium carbonate and potentially high purity battery grade lithium hydroxide, with the ability to accommodate multiple feed materials with minimal modifications.", states Michael Dehn, President and CEO of United Lithium. "By making minor improvements in each step of the traditional flowsheet, we believe we can deliver a new lithium flowsheet with distinct economic and environmental benefits".

The detailed bench test work to develop a flowsheet was conceived and supervised by Dr. Abdul Halim, VP Technology of Process Research Ortech Inc. He has over 15 years of experience in developing and optimizing innovative and sustainable technologies for critical metals including lithium, cobalt, nickel and other base metals, PGMs, gold, germanium and rare earths (REEs) from mined natural resources and recycle materials through bench, pilot, and demonstration plant operations. He has authored more than 50 scientific and technical papers, holds 5 US patents, and has authored a number of book chapters in these areas. He worked at FLSmidth, Salt Lake City, USA, and SGS Lakefield, Canada prior to joining Process Research Ortech Inc. as a VP Technology.

Mark Saxon (FAusMM), Technical Advisor to the Company, is a qualified person as defined by National Instrument 43-101 (Standards of Disclosure or Mineral Projects) and has prepared or reviewed the scientific and technical information in this press release.

On Behalf of The Board of Directors, <u>United Lithium Corp.</u> Michael Dehn, President, CEO and Director

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About United Lithium Corp.

<u>United Lithium Corp.</u> (CSE: ULTH) is an exploration & development company energized by the global demand for lithium. The Company is targeting lithium projects in politically safe jurisdictions with advanced infrastructure that allows for rapid and cost-effective exploration, development and production opportunities.

Forward Looking Statements

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