

## **United Lithium Corp Successful in Improving Lithium Recovery in Chemical Roasting and Microwave Tests**

***Up To 97.30% Li<sub>2</sub>O using conventional roasting for 30 minutes and water leaching***

***Up to 96.62% Li<sub>2</sub>O using microwave roasting for one minute and water leaching***

Vancouver, British Columbia

January 11, 2022 – United Lithium Corp. (CSE: [ULTH](#); OTC: [ULTHF](#); FWB: [OUL](#)) (“ULTH” or the “Company”)

is pleased to announce completion of a series of roasting tests utilizing spodumene feedstock to develop and optimise a more sustainable lithium extraction flowsheet. Sixteen tests to optimize chemical roasting and several tests using microwave energy were completed in the current round of testwork.

These tests have provided excellent results and led to Li<sub>2</sub>O recoveries ranging from 70.57% to 97.30%. Data will be used to develop a final flow sheet along with previously released results and ongoing test work. The final flow sheet will be implemented in pilot plant testing later this year.

Roasting tests were completed at Process Research Ortech on spodumene concentrate to produce a final lithium oxide product. The goals in these tests were to examine the feasibility of using microwave energy in the roasting stage to lower energy demand. All tests were completed at atmospheric pressure, but with varying temperatures, energy levels, and acid concentrations.

The spodumene concentrate was produced by flotation utilizing conditions as reported in Phase 1 test results press released October 27, 2021. Five calcination tests were completed on this flotation concentrate followed by 16 roasting and 16 water leaching test to evaluate the impact of calcination temperature and conventional versus microwave roasting on the recovery of Li<sub>2</sub>O. Results are reported in Table 1 below.

The tests to evaluate the effect of additives addition to the flotation concentrate at lower calcination and roasting temperatures are in progress.

Table 1 Calcination, Roasting/Microwave and Water Leach Test Results

Test #	Calcination			Roasting/Microwave and Water Leaching (WL) Temperature, Time, and Acid Concentration are Proprietary IP Conditions	Water Leach Pregnant Soln.				Wt. Loss %	Li2O %		Overall Li2O Recovery (%)
	Temp.	Time	Additives		Li2O	Density	pH	ORP		Feed	Final Residue	
	°C	min			mg/L	g/mL		mV				
Test 2	1000	30	NO	Conventional Roasting and Water Leaching	7960	1.021	1.01	397	19.8	5.203	<b>0.266</b>	<b>95.89</b>
				Microwave Roasting and Water Leaching	5213	1.01	0.77	422	21.0	5.203	1.697	74.25
				Microwave Roasting and Water Leaching	7861	1.009	1.41	474	15.6	5.203	0.348	<b>94.35</b>
				Microwave Roasting and Water Leaching	7280	1.014	1.07	426	17.3	5.203	0.420	93.33
				Microwave Roasting and Water Leaching	6927	1.019	1.04	459	18.2	5.203	0.530	91.68
Test 3	1000	30	NO	Conventional Roasting and Water Leaching	20793	1.104	1.05	486	14.3	4.870	<b>0.237</b>	<b>95.84</b>
				Microwave Roasting and Water Leaching	18417	1.106	0.87	522	17.1	4.870	0.486	92.25
				Microwave Roasting and Water Leaching	19123	1.106	1.12	508	17.0	4.870	<b>0.212</b>	<b>96.62</b>
Test 4	1000	30	NO	Conventional Roasting and Water Leaching	20880	1.108	1.35	508	25.1	4.870	<b>0.175</b>	<b>97.30</b>
				Microwave Roasting and Water Leaching	19226	1.103	1.03	502	15.9	4.870	0.635	89.74
				Microwave Roasting and Water Leaching	19037	1.101	1.16	511	15.4	4.870	0.693	88.73
Test 5	950	30	NO	Conventional Roasting and Water Leaching	20161	1.09	1.11	497	15.5	5.018	0.516	91.31
				Microwave Roasting and Water Leaching	19653	1.092	0.75	492	15.1	5.018	0.588	90.06
Test 6	900	30	NO	Conventional Roasting and Water Leaching	13182	1.104	0.82	521	18.1	4.976	1.623	73.29
				Microwave Roasting and Water Leaching	13643	1.099	0.77	518	11.4	4.976	1.652	70.57
				Microwave Roasting and Water Leaching	14357	1.093	0.69	516	16.6	4.976	1.508	74.72

Michael Dehn, President and CEO of the Company stated: “We continue to strive to reduce the carbon footprint of the spodumene concentrate to lithium oxide process at the same time as improving recoveries. Dr. Abdul Halim has been successful in modifying the conventional method of spodumene production and still has a few additional optimizations to test. Having continued success with Dr. Halim’s optimizations we should be able to develop a robust, more environmentally friendly, and less expensive process to produce lithium oxide from petalite and spodumene feedstocks than the conventional process.”

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**

Michael Dehn  
Chief Executive Officer

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