

# MILLENNIAL LITHIUM

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## Millennial Produces Battery Grade Lithium Carbonate from Pastos Grandes Brine

**Millennial Lithium Corp. (ML: TSX.V) (A3N2:GR: Frankfurt) (MLNLF: OTCQB) ("Millennial" or the "Company" - [http://www.commodity-tv.net/c/search\\_adv/?v=298600](http://www.commodity-tv.net/c/search_adv/?v=298600))** is pleased to report that bench scale process test work completed by SGS Canada Inc. (SGS) in their facilities in Lakefield, ON on brine from the Company's Pastos Grandes project in Salta, Argentina, has yielded battery grade (> 99.5%  $\text{Li}_2\text{CO}_3$ ) lithium carbonate. Final purification testwork results yielded a lithium carbonate product that is 99.92%  $\text{Li}_2\text{CO}_3$  with low levels of magnesium (Mg), calcium (Ca), boron (B), sulphate ( $\text{SO}_4$ ) and iron (Fe), with no other detectable metals.

Millennial President and CEO, Farhad Abasov, commented: "We are excited that the bench scale process test work recently completed by SGS has yielded very positive results with a lithium carbonate product purity of 99.92%. Typical lithium carbonate battery grade for EV batteries is approximately 99.5%  $\text{Li}_2\text{CO}_3$ , so we are very encouraged by these results that suggest the Pastos Grandes brine is amenable to industry standard processing and capable of producing a battery grade product. The bench scale testing has also provided an excellent framework for our pilot plant, which is currently in the final design phase, and provides a basis for the potential commercial plant design for the Company's Definitive Feasibility Study."

SGS has completed bench scale process trials on lithium-bearing brine from pumping well PGPW17-4 at Pastos Grandes. Approximately 600 litres of brine were shipped to SGS in Lakefield, Ontario for testing to investigate the amenability of the brine to producing battery grade lithium carbonate. The initial main element chemistry of the raw brine is outlined in Table 1.

<b>Li</b>	<b>Ca</b>	<b>Mg</b>	<b>K</b>	<b>Na</b>	<b>B</b>	<b>SO<sub>4</sub></b>
(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)
480	758	2490	5180	115000	700	8200

Table 1 Main element chemistry of raw brine.

SGS subjected the brine to liming followed by mechanical evaporation over several weeks and further removal of Ca and Mg via selective precipitation through the introduction of

soda ash and caustic soda. Further evaporation reduced the volume to approximately 10 litres grading about 1.9 % Li. Standard and industry-tested purification procedures were employed on the concentrated brine including solvent extraction to reduce the boron content, followed by ion exchange to remove any remaining B. Ion exchange was followed by the main stage of carbonation with soda ash to produce a preliminary lithium carbonate product. The lithium carbonate product was then directed to further purification via bicarbonation with CO<sub>2</sub>. The final lithium carbonate product after the bicarbonation/decomposition process has a purity of 99.92% Li<sub>2</sub>CO<sub>3</sub>; additional chemical data for the final product is provided below in Table 2:

<b>Li<sub>2</sub>CO<sub>3</sub></b>	<b>B</b>	<b>Mg</b>	<b>Ca</b>	<b>K</b>	<b>Na</b>	<b>SO<sub>4</sub></b>	<b>Fe</b>
(%)	(g/t)	(g/t)	(g/t)	(g/t)	(g/t)	(g/t)	(g/t)
99.92	<4	10.3	93	<10	46	<300	<4

Table 2 Final lithium carbonate product chemistry

Recovery of lithium through the primary lithium carbonate process was approximately 75% from the B-free solution and recovery through the bicarbonation/decomposition stage was approximately 74% of the lithium carbonate treated, however lithium losses are generally minimal in the process overall, as the lithium remaining in the mother liquor solution is typically recycled.

In addition to the promising purity of the lithium carbonate produced, it is also encouraging that metals and other impurities, some of which can affect the quality and effectiveness of the lithium carbonate for battery performance, are very low to not detectable. Testing will continue at SGS to optimize the process, reduce impurities and improve recoveries and any positive achievements will be incorporated into the pilot plant design and tested on site at Pastos Grandes.

Sampling was conducted in accordance with CIM guidelines for brine resource evaluation, with an appropriate chain of custody and QA/QC program in place for ensuring veracity, accuracy and precision of the analytical results.

This news release has been reviewed by Iain Scarr, AIPG CPG., Chief Operating Officer of the Company and a Qualified Person as that term is defined in National Instrument 43-101.

To find out more about Millennial Lithium Corp. please contact Investor Relations at (604) 662-8184 or email [info@millenniallithium.com](mailto:info@millenniallithium.com).

MILLENNIAL LITHIUM CORP.

*"Farhad Abasov"*

President and CEO, Director

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