

## APPLICATION NOTE

# OREAS 751 & 752 Pegmatite Lithium Ore

## SUMMARY

The application note summarizes the digestion of OREAS 751 & 752, Pegmatite Lithium Ore Certified Reference Material using ColdBlock™ Digestion CBM Technology.

**Instrument:** ColdBlock CBM sample digester, chiller, HF liners, ICP-OES

**Published:** November 2022

**Digestion Time:** 30 Minutes

**Acid Used:** Aqua Regia, HF & H<sub>3</sub>BO<sub>3</sub>

**Average ColdBlock Recovery vs. CRM:**

- 104% Lithium
- 102% Calcium
- 103% Magnesium

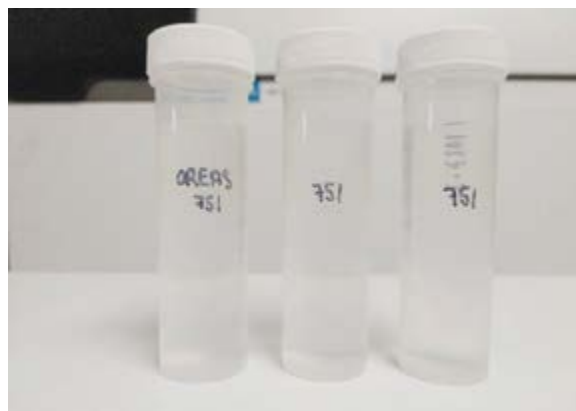
## METHODOLOGY

1. Chiller temperature was set to -5°C
2. 0.25g of each sample was weighed in triplicate and placed into ColdBlock™ Digestion HF compatible liners
3. 20 mL Aqua Regia + 3mL Hydrofluoric Acid was added
4. Sample was digested at 80% power for 20 minutes
5. 20 mL of 4% H<sub>3</sub>BO<sub>3</sub> was added, and sample was digested again at 80% power for 10 minutes
6. Sample was cooled and bulked to 50mL using 2% HNO<sub>3</sub><sub>vv</sub>

## DISCUSSION

- The addition of Boric Acid will help re-solubilize any Fluoride precipitates that form such as Ca, Mg & Al
- After 30 minutes the samples appear clear, and no visible material remains

OREAS 751 & 752 have been prepared from RC drill chip samples supplied from Core Lithium's Finnis Lithium Project located in the Northern Territory, Australia.



OREAS 751 after bulk-up



OREAS 752 after bulk-up

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### Results

OREAS 751								
Element	Certified 4-Acid (ppm)	ColdBlock Result A	ColdBlock Result B	ColdBlock Result C	Average (ppm)	Stdev	% RSD	% Recovery
Al	80100	80043	80607	81586	<b>80745</b>	637.48	0.8%	<b>101%</b>
Ca	7420	8088	7670	7826	<b>7861</b>	172.61	2.2%	<b>106%</b>
Fe	16200	16801	17085	17354	<b>17080</b>	225.75	1.3%	<b>105%</b>
K	24100	23867	23842	24781	<b>24163</b>	437.01	1.8%	<b>100%</b>
Mg	2870	2930	2936	2985	<b>2950</b>	24.67	0.8%	<b>103%</b>
Na	24700	24221	24312	25674	<b>24735</b>	664.55	2.7%	<b>100%</b>
Li	4630	4909	4771	4850	<b>4843</b>	56.23	1.2%	<b>105%</b>

OREAS 752								
Element	Certified 4-Acid (ppm)	ColdBlock Result A	ColdBlock Result B	ColdBlock Result C	Average (ppm)	Stdev	% RSD	% Recovery
Al	79400	84642	83030	82300	<b>83324</b>	978.69	1.2%	<b>105%</b>
Ca	1991	2019	1930	1854	<b>1934</b>	67.08	3.5%	<b>97%</b>
Fe	8350	9045	8945	8792	<b>8927</b>	104.06	1.2%	<b>107%</b>
K	20800	20460	20222	20276	<b>20319</b>	101.99	0.5%	<b>98%</b>
Mg	440	455	480	426	<b>454</b>	22.37	4.9%	<b>103%</b>
Na	27000	28336	28269	30184	<b>28930</b>	887	643.1%	<b>107%</b>
Li	6950	7301	7164	7038	<b>7168</b>	107.38	1.5%	<b>103%</b>