

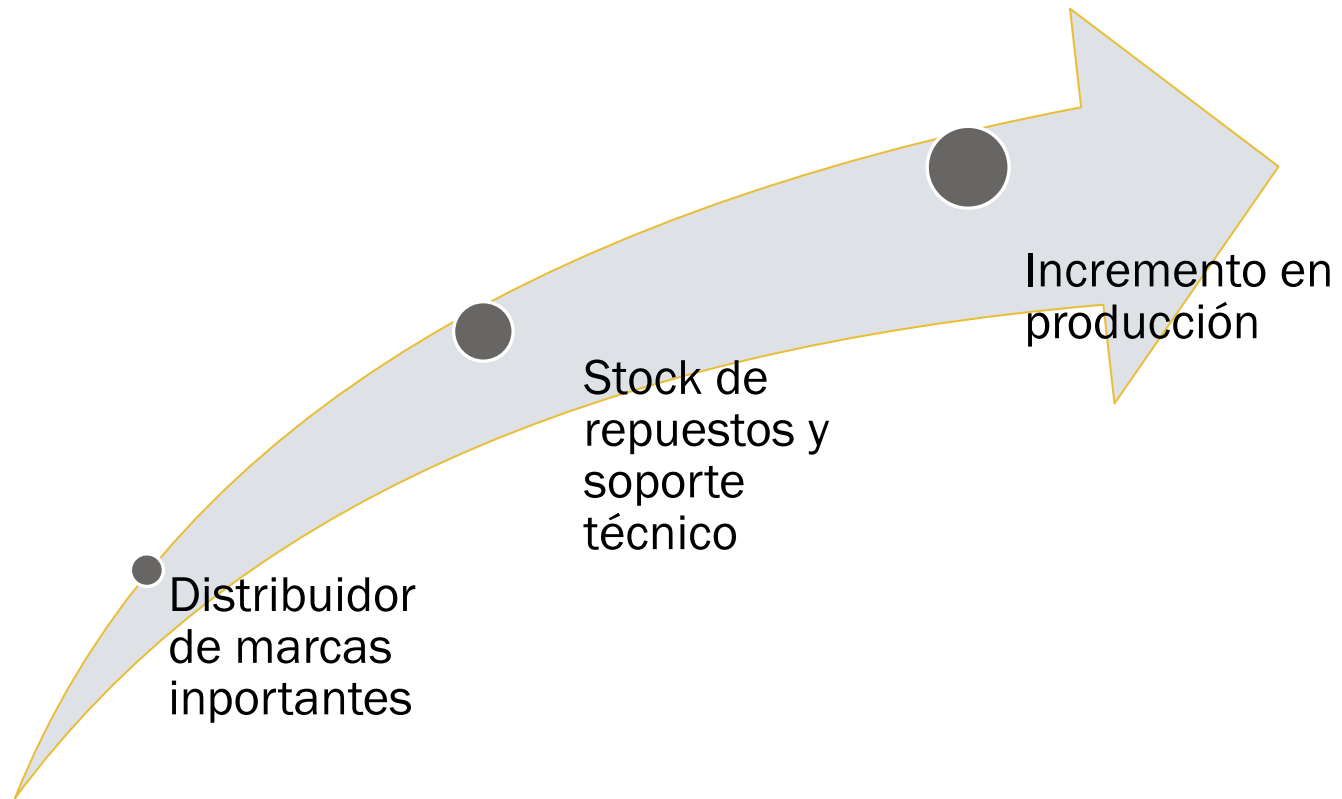
Bienvenidos



Estamos aquí para
Servirles!

STG  **mining**

Nuestra Propuesta



¿Cómo lo lograremos?

Nuestra Gente

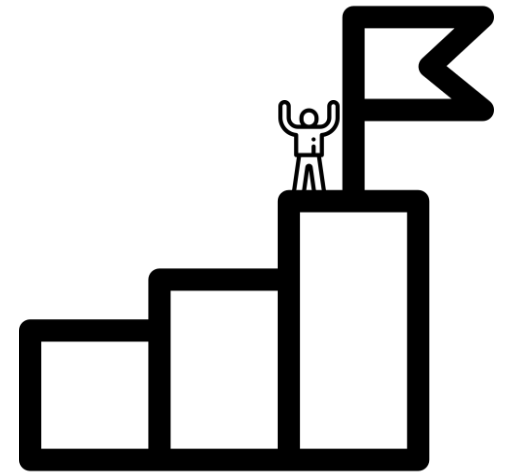
- Conocimiento dentro de la Industria Minera

Nuestro Compromiso

- Dar al cliente una Respuesta Oportuna

Nuestra Meta

- Obtener la Satisfacción del Cliente



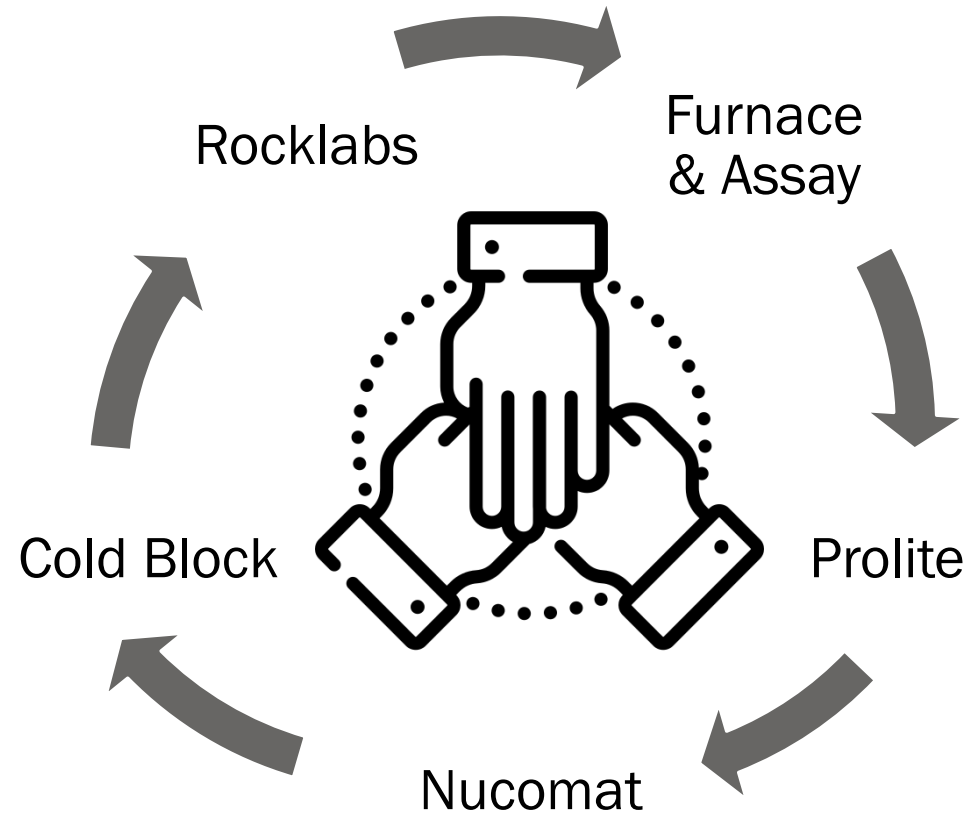
Somos una red de oficinas



Estamos Cerca de Ustedes!

- Canadá (Norte de Vancouver)
- México (Durango)
- Perú (Lima)
- Chile (Santiago)
- Bolivia (La Paz)
- Brasil (Belo Horizonte)

Nuestros Principales Colaboradores



Rocklabs



Trituradora Rocklabs Mid BOYD



- Mayor tamaño de entrada.
- Bajo mantenimiento.
- Mayor garantía.
- Mejoras en salud y seguridad.

Molino por Lotes ABM3000 de Rocklabs

- Panel de pantalla táctil LCD.
- Control PLC.
- Lavado de arena automático.
- Purga completa con aire comprimido.



Trituradora Líneal de Rocklabs



- Versatilidad de muestra.
- Seguridad.
- Mejor tiempo de proceso.

Furnace & Assay



FURNACE & ASSAY
— S U P P L I E S —

Prolite Systems Inc.



Nucomat



nucomat

your partner in lab automation

Sistema automatizado de análisis bioquímico de Nucomat.

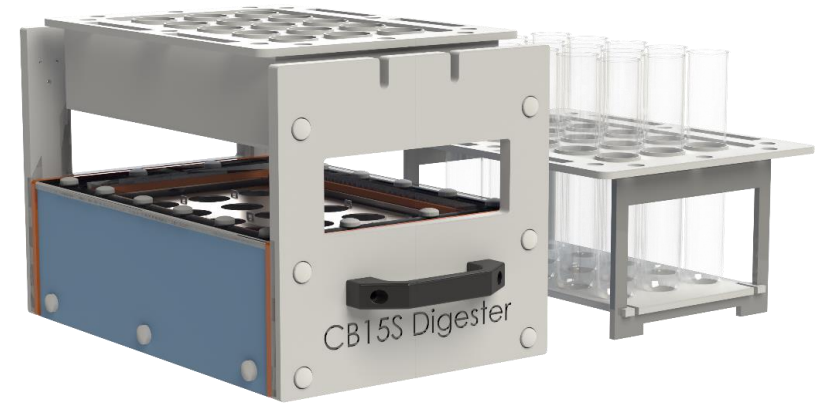
- Soluciones de automatización de laboratorio para la preparación de muestras.
- Seguridad.
- Eficiencia de laboratorio.



Cold Block Technologies



Cold BlockTM
Technologies Inc.



CDN Resource Laboratories



CDN Resource Laboratories Ltd.

#2, 20148 - 102nd Ave, Langley, B.C., Canada, V1M 4B4, 604-882-8422, Fax: 604-882-8466 (www.cdnlabs.com)

REFERENCE MATERIAL: CDN-ME-9

Recommended values and the "Between Lab" Two Standard Deviations

<i>Gold</i>	<i>0.154 g/t</i>	\pm	<i>0.042 g/t</i>	<i>(Au: provisional value only, RSD = 13.9%)</i>
<i>Platinum</i>	<i>0.664 g/t</i>	\pm	<i>0.058 g/t</i>	
<i>Palladium</i>	<i>1.286 g/t</i>	\pm	<i>0.102 g/t</i>	
<i>Copper</i>	<i>0.654 %</i>	\pm	<i>0.036%</i>	
<i>Cobalt</i>	<i>0.017 %</i>	\pm	<i>0.002%</i>	
<i>Nickel</i>	<i>0.912%</i>	\pm	<i>0.062%</i>	



Muchas Gracias.

Estamos a la orden.





stgmining.com



info@stgmining.com







Inóculos



Enzimas



I-E

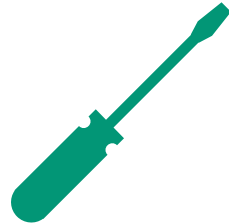




Diagnóstico



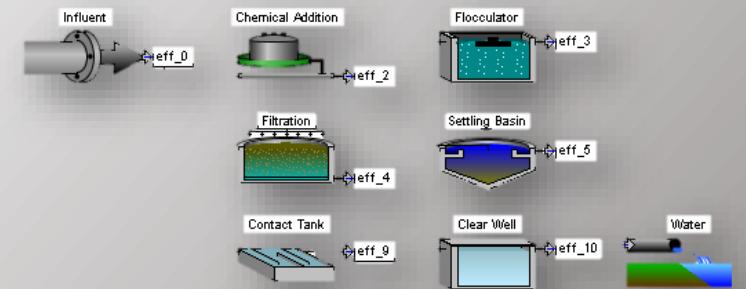
Optimización



Mantenimiento



Asesoría



Contacto:



- Dra. Ana Maria Bailón Salas

a.bailon@stgmining.com

<https://www.stgmining.com/services>



STG MINING PRESENTATION – DURANGO, MEXICO

Kirill Pereverzev, CTO

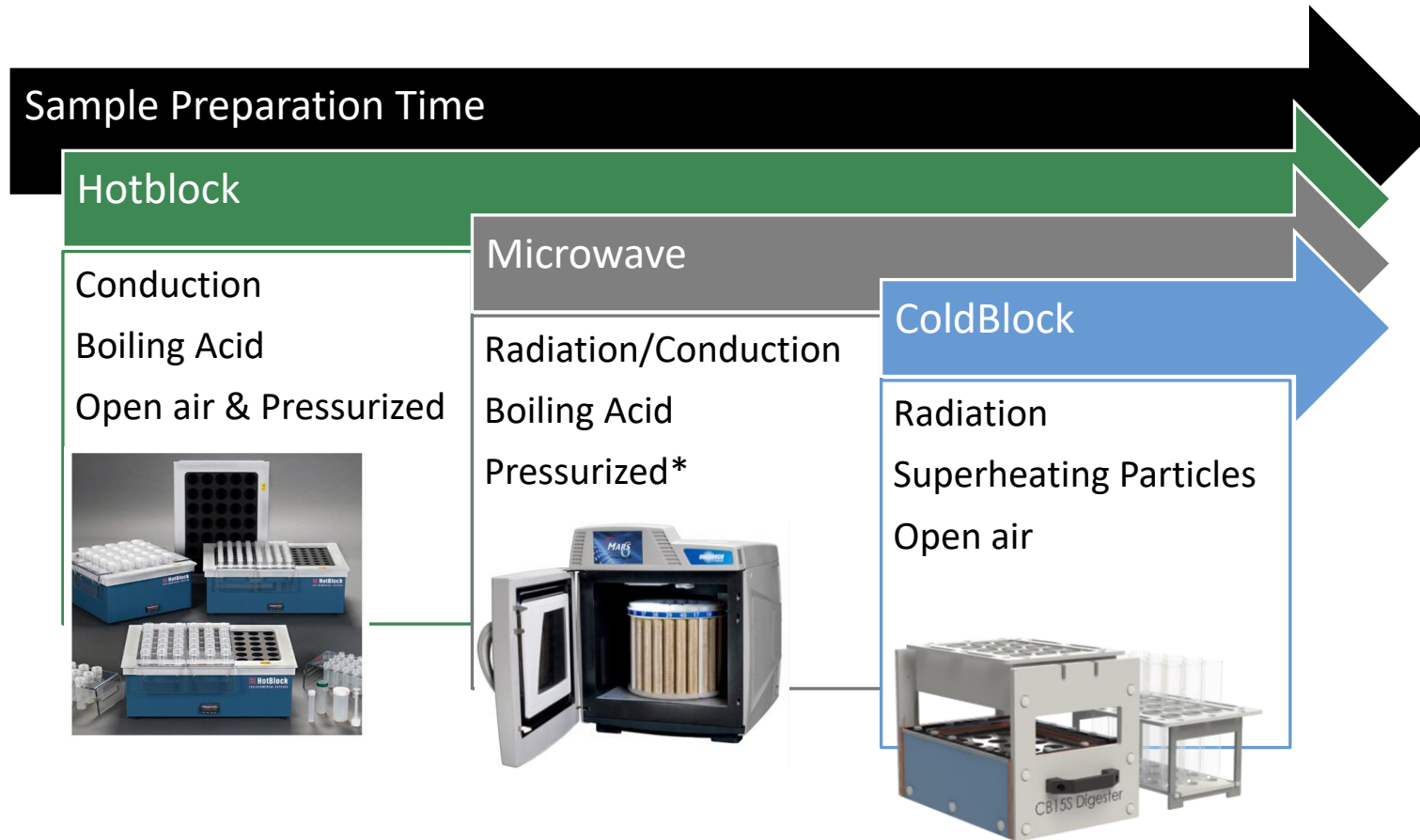
kap@coldblock.ca

What Is Sample Digestion?



ColdBlock™ Digestion dissolves solid matter into solution for multi-element analysis, applicable to multiple industries such as - mining, environmental.

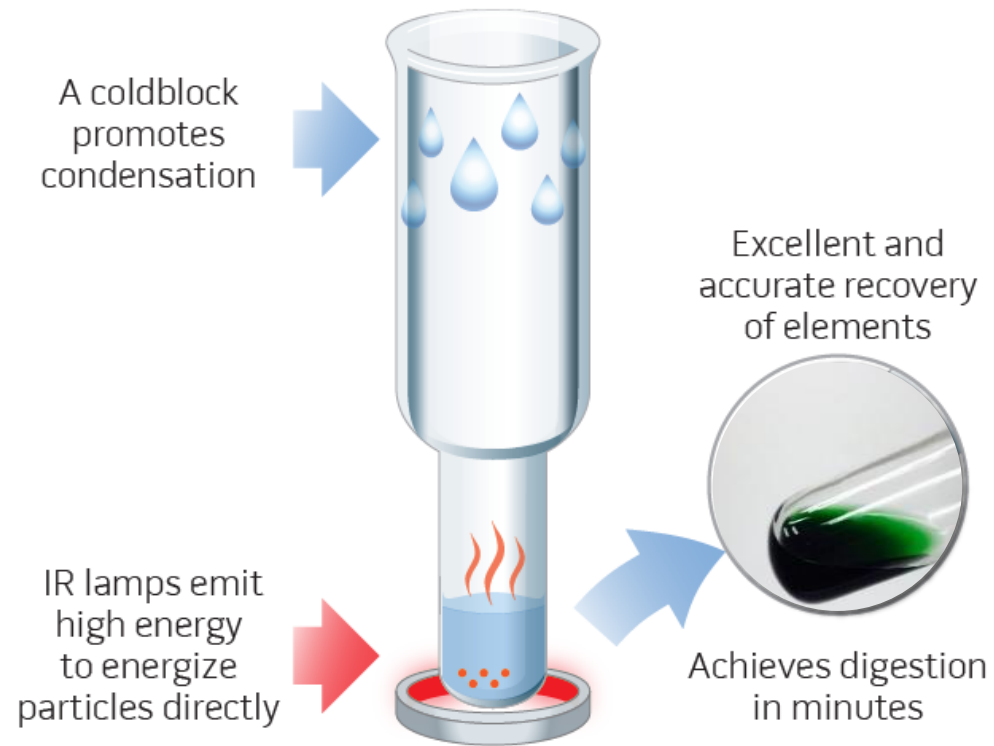
Types Of Digestion Technology



* Open air sequential systems exist

What Is ColdBlock Digestion?

ColdBlock is the **first and only** sample digestion technology using short wave infrared radiation and a cooling zone to dissolve solid sample matter into solution for multi element analysis.





Why is ColdBlock Better?

Speed
Simplicity
Safety
Cost

CB12L Digester

Evidence Package for Mining/Environmental Applications



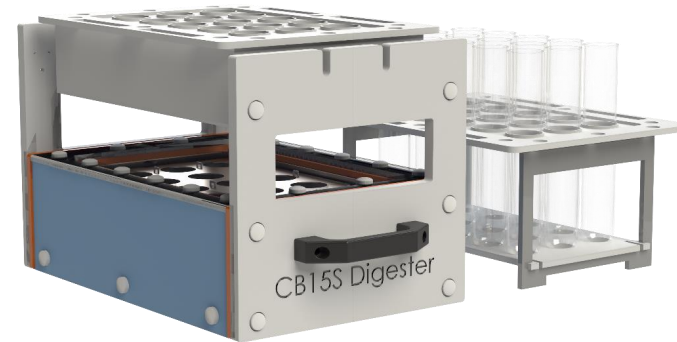
Publications	2014 Environmental Applications Soils and Sludges – Wang, Y. et al.	2015 Gold & Silver – Wang, Y. et al.	2016 Base Metals – Wang, Y. et al.	2016 Rare Earths – Helmeczi, E. et al.
	2014 Small Sample Gold Application – Wang, Y. et al.	2018 Large Sample Gold – Helmeczi, W. et el.	2016 Rare Earths – Helmeczi, E.	2016 Uranium – Pereverzev, K.
Presentations	2016/2017 Large Sample Size Gold – Pereverzev, K.	2019 P1 AMiRA P1196 – Dr. Leybourne, M.	2019 P1+2 AMiRA P1196 – Dr. Leybourne, M.	2019 Environmental Applications – Pelchat, P.



CB12L

12 channel system
24 channel workstation

Up to 30 g



CB15S

15 channel system
30 channel workstation

Up to 5 g

Demonstrated Performance - AMIRA project 1196



Outcomes		
Ave. Accuracy	Ave. Precision	Ave. Costs
103%	99%	46%↓



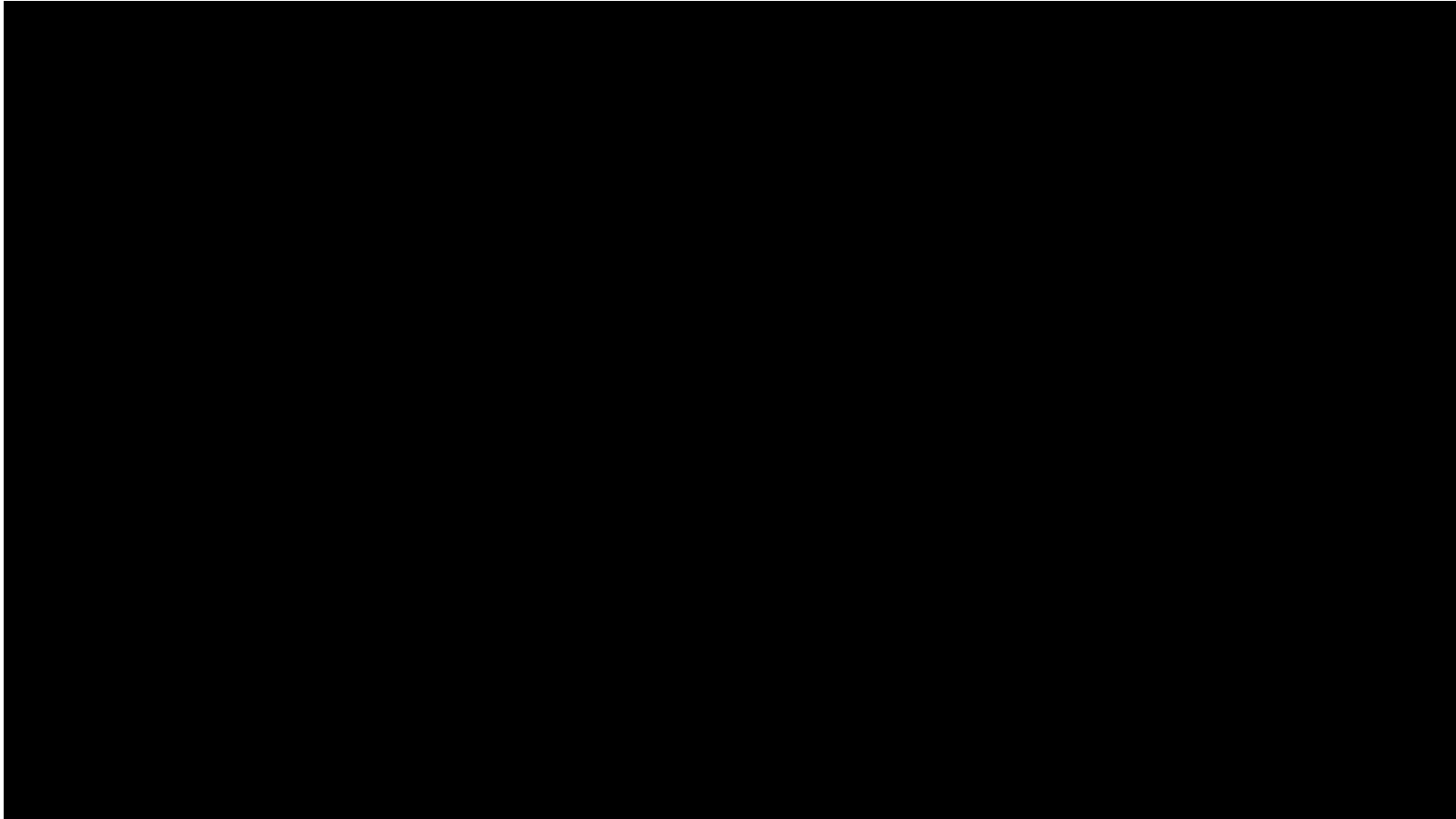
ColdBlock – Technology Advancements

PLASTIC TUBE LINERS



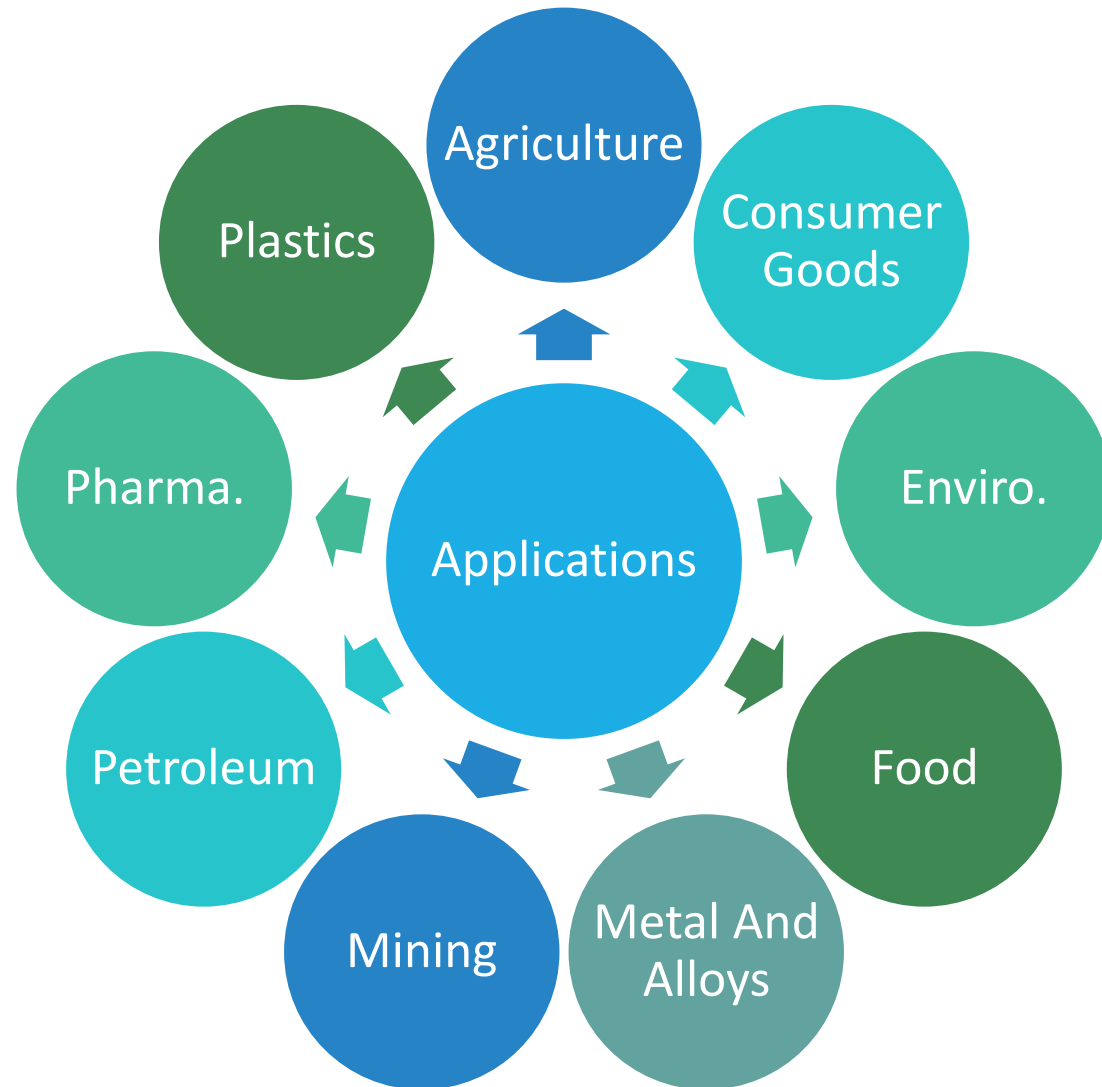
AUTOMATION SYSTEMS

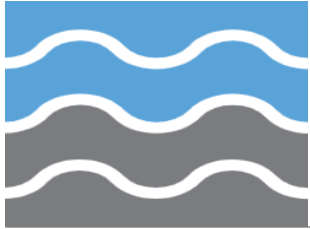






- *Continue to **experience a ~50% cost/sample reduction***
- ***Elimination of lead exposure***
- ***Assay turnaround time has reduced meaningfully***
- ***Improved ergonomics for lab employees***
- ***Excellent accuracy from ColdBlock digestion – in line with results from global lab checking results***





Thank you!

Kirill Pereverzev, CTO

kap@coldblock.ca

www.coldblock.ca

Base Metals (% Recoveries)



CRM Sample	Ni	Cu	Zn	Pb	Co	Mn	Fe	Ti	W	Cr	Mo
GBM 398-1	99	104	102	99							
GBM 909-15	94	102	96	95							
GBM 309-16		101	98	96							
OREAS 78	99				97						
CCU-1d		103	100	103			100				
OREAS 171						101					
<hr/>											
OREAS 189	101					99	97				
OREAS 701		100					100		99		
GIOP 117							101				
GIOP 33							96	97			
GCR-06							100			101	
NIST 333A											100

Conventional Acid Treatment

- Regular and Modified *aqua regia*

High-boiling Acid Treatment

- Phosphoric, sulfuric and nitric acids

Suppliers of CRMs: GBM, GCR & GIOP - Geostats; OREAS – Ore Research & Exploration; CCU – CANMET; NIST - NIST



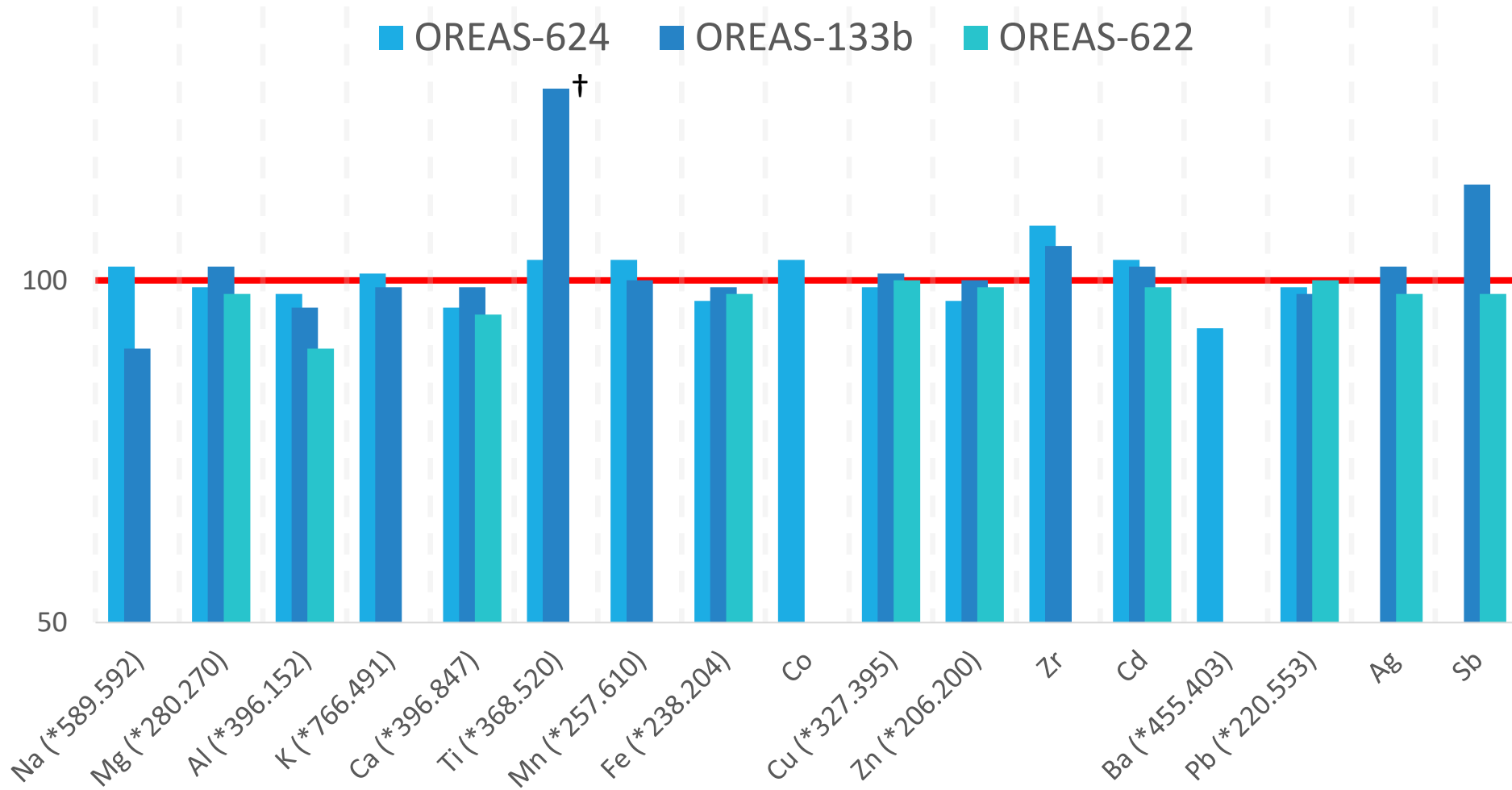
OREAS 622, OREAS 624, OREAS 603 ColdBlock Recoveries

OREAS 622, OREAS 624, OREAS 603 from ORE
Research & Exploration

- 0.25 g sample sizes
- 8 mL H₂SO₄ + 5.5 mL H₃PO₄ Acids
- 85% power for 20 minutes
- -5° Celsius Chiller temperature
- Samples were topped up to 50mL using 1% HNO₃

	Oreas 622	Oreas 624	Oreas 603
Na	99	102	99
Mg	102	102	103
Al	96	90	93
Ca	99	96	97
Ti	128**	127**	104
Mn	100	103	
Fe	99	98	101
Cu	101	99	105
Zn	100	97	101

** Recovery of Titanium is high when compared to 4-acid digestion, however when compared to OREAS' peroxide fusion method Ti recovery is 100%.



ColdBlock % Recoveries Of Elements From OREAS-624, -133b, -622

*OES Wavelengths - Co, Zr & Cd analyzed by ICP-MS

† Titanium value is 0.147% via 4-acid and 0.187% via Borate Fusion, respective recoveries are 128% and 100% vs ColdBlock method



OREAS-184 & 187 Nickel Laterite Ores

