

# Copper Ores and Concentrate

## DIGESTION OF COPPER ORES AND COPPER CONCENTRATE USING COLDBLOCK™ DIGESTION TECHNOLOGY

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### Introduction

This application note will focus on the digestion of Copper ores and copper concentrate using ColdBlock™ Digestion CB12L Technology.

### Method

Three CRMs (Certified Reference Materials), OREAS 622, OREAS 624, OREAS 603 from ORE Research & Exploration were digested using the following method:

- 0.25g of each sample was weighed and placed in ColdBlock™ Digestion vessels.
- 8 mL H<sub>2</sub>SO<sub>4</sub> and 5.5 mL H<sub>3</sub>PO<sub>4</sub> was added.
- The samples were digested at 85% power for 20 minutes.
- Chiller temperature was set to -5°C.
- Samples was allowed to cool.
- Samples were normalized to 50mL using 1% HNO<sub>3</sub>.

A sample of CRM (Certified Reference Material), OREAS 991 from ORE Research & Exploration was digested using the following method:

- 0.25g of sample was weighed and placed into a ColdBlock™ Digestion vessel.
- 12mL of inverse Aqua Regia (1:3 HCl:HNO<sub>3</sub>)
- Sample was digested at 65% power for 15 minutes.
- Chiller temperature was set to -5°C.
- Sample was allowed to cool.
- Sample were normalized to 50mL using 1% HNO<sub>3</sub>.

### Instrument

ColdBlock™ Digestion CB12L Technology.

### General

This procedure is specific for the sample digested and may need modification for different samples to achieve the desired result.