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_2SO_4 and 5.5 mL H_3PO_4 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_3.

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_3)
- 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_3.

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.

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