

Australian Standard[®]

**Copper, lead, zinc and nickel
concentrates—Sampling**

**Part 1: Sampling procedures for
determination of metal and moisture
content**

STANDARDS
Australia



This Australian Standard® was prepared by Committee MN-005, Copper, Lead, Zinc and Nickel Ores and Concentrates. It was approved on behalf of the Council of Standards Australia on 24 January 2008.
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- CSIRO Minerals
- Minerals Council of Australia

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- Minerals Industry Analytical Laboratories
-

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PREFACE

This Standard was prepared by the Standards Australia Committee MN-005, Copper, Lead, Zinc and Nickel Ores and Concentrates, to supersede AS 2862.1—1999, *Copper, lead and zinc sulfide concentrates—Sampling, Part 1: Sampling procedures for determination of metal and moisture content*. The objective of this Standard is to provide those involved in the sampling of sulfide concentrates with standardized sampling procedures for the determination of metal and moisture content.

The objective of this revision is to adopt the latest edition of the corresponding International Standard.

This Standard is identical with, and has been reproduced from ISO 12743:2006, *Copper, lead, zinc and nickel concentrates—Sampling procedures for determination of metal and moisture content*.

As this Standard is reproduced from an International Standard, the following applies:

- (a) Its number appears on the cover and title page while the International Standard number appears only on the cover.
- (b) In the source text ‘this International Standard’ should read ‘this Australian Standard’.
- (c) A full point substitutes for a comma when referring to a decimal marker.

References to International Standards should be replaced by references to Australian Standards, as follows:

<i>Reference to International Standard</i>		<i>Australian Standard</i>	
ISO		AS	
10251	Copper, lead, zinc and nickel concentrates—Determination of mass loss of bulk material on drying	2862.1	Copper, lead, zinc and nickel concentrates—Determination of mass loss of bulk material on drying
12744	Copper, lead and zinc sulfide concentrates—Experimental methods for checking the precision of sampling	2862 2862.2	Copper, lead, zinc and nickel concentrates—Sampling Part 2: Experimental methods for checking the precision of sampling
13292	Copper, lead, zinc and nickel concentrates—Experimental methods for checking the bias of sampling	2862.3	Part 3: Experimental methods for checking the bias of sampling

The terms ‘normative’ and ‘informative’ have been used in this Standard to define the application of the annex to which they apply. A ‘normative’ annex is an integral part of a Standard whereas an ‘informative’ annex is only for information and guidance.

CONTENTS

	<i>Page</i>
1	Scope 1
2	Normative references 1
3	Terms and definitions..... 2
4	Sampling theory..... 4
4.1	General..... 4
4.2	Total variance..... 5
4.3	Sampling-stage method of estimating sampling and total variance..... 6
4.4	Simplified method of estimating sampling and total variance 9
4.5	Interleaved sample method of measuring total variance 10
5	Establishing a sampling scheme 12
6	Mass of increment 17
6.1	General..... 17
6.2	Mass of increment for falling-stream samplers..... 17
6.3	Mass of increment for cross-belt samplers 17
6.4	Mass of increment for manual sampling from stationary lots 18
6.4.1	Primary increments 18
6.4.2	Mass of secondary and subsequent increments 18
6.5	Mass of increment for stopped-belt reference sampling..... 18
7	Methods of sampling from concentrate streams 18
7.1	General..... 18
7.2	Mass-basis systematic sampling 18
7.2.1	General..... 18
7.2.2	Sampling interval 19
7.2.3	Sample cutter 19
7.2.4	Taking of primary increments 19
7.2.5	Constitution of subsamples and lot samples 19
7.2.6	Types of division..... 20
7.2.7	Division of increments 20
7.2.8	Division of subsamples..... 20
7.2.9	Division of lot samples..... 20
7.3	Time-basis systematic sampling 21
7.3.1	General..... 21
7.3.2	Sampling interval 21
7.3.3	Sample cutter 21
7.3.4	Taking of primary increments 22
7.3.5	Constitution of subsamples and lot samples 22
7.3.6	Types of division..... 22
7.3.7	Division of increments and subsamples 22
7.3.8	Division of lot samples..... 22
7.4	Stratified random sampling 22
7.4.1	Fixed mass intervals..... 22
7.4.2	Fixed volume intervals 23
8	Mechanical sampling of concentrate streams..... 23
8.1	General..... 23
8.2	Design of the sampling system 23
8.2.1	Safety of operators 23
8.2.2	Location of sample cutters 23

	<i>Page</i>
8.2.3	Provision for interleaved sampling 23
8.2.4	Provision for stratified random sampling..... 24
8.2.5	Checking precision and bias 24
8.2.6	Avoiding bias 24
8.2.7	Minimizing bias 24
8.2.8	Configuration of the sampling system 24
8.3	Sample cutters..... 24
8.3.1	General 24
8.3.2	Design criteria 25
8.3.3	Cutter speed 25
8.4	Mass of increments..... 27
8.5	Number of increments 27
8.6	Sampling interval 27
8.7	Routine checking 27
9	Manual sampling of concentrate streams 28
9.1	General 28
9.2	Choosing the sampling location..... 28
9.3	Sampling implements 28
9.4	Mass of increments..... 28
9.5	Number of increments 28
9.6	Sampling interval 28
9.7	Sampling procedures 29
9.7.1	General 29
9.7.2	Full stream cut from a falling stream 29
9.7.3	Partial stream cuts from a falling stream 29
9.7.4	Sampling from moving conveyor belts..... 30
10	Stopped-belt reference sampling 30
11	Sampling from grabs 31
11.1	General 31
11.2	Mass of primary increments 31
11.3	Number of primary increments..... 31
11.4	Method of sampling 31
11.5	Constitution of subsamples and lot samples 31
12	Sampling from trucks, railway wagons and sampling hoppers..... 32
12.1	General..... 32
12.2	Mass of primary increments 32
12.3	Number of primary increments..... 32
12.4	Method of sampling 32
12.5	Constitution of subsamples and lot samples 32
13	Sampling of concentrate in bags or drums 35
13.1	General 35
13.2	Mass of primary increments 35
13.3	Number of primary increments..... 35
13.4	Method of sampling 36
13.4.1	General 36
13.4.2	Sampling during filling or emptying 36
13.4.3	Near sampling 36
13.5	Constitution of subsamples and lot samples 36
14	Sampling of stockpiles 37
15	Methods of comminution, mixing and division..... 37
15.1	General 37
15.2	Comminution 37
15.2.1	General 37
15.2.2	Mills 37
15.3	Mixing..... 38
15.3.1	General 38

	<i>Page</i>
15.3.2 Methods of mixing	38
15.4 Division	40
15.4.1 Chemical analysis samples	40
15.4.2 Moisture samples.....	40
15.4.3 Number of increments for division	40
15.4.4 Minimum mass of divided sample	40
15.4.5 Rotary sample division.....	41
15.4.6 Cutter-type division	42
15.4.7 Manual increment division.....	43
15.4.8 Spear division	43
15.4.9 Fractional shovelling	44
15.4.10 Ribbon division	45
15.4.11 Riffle division	47
16 Sample requirements	49
16.1 Moisture samples.....	49
16.1.1 Mass of test portion.....	49
16.1.2 Processing of samples.....	49
16.2 Chemical analysis samples	49
16.3 Physical test samples.....	50
17 Packing and marking of samples.....	50
Annex A (normative) Sampling stage method of estimating sampling and total variance	51
Annex B (informative) Estimation of total variance — Barge unloading using a grab	58
Annex C (informative) Mechanical sample cutters	62
Annex D (informative) Checklist for mechanical sampling systems	67
Annex E (normative) Manual sampling devices.....	71
Annex F (informative) Apparatus for manual sampling of concentrates from stopped belts.....	73
Annex G (informative) Sampling of stockpiles	74
Annex H (normative) Increment division scoops for conducting manual increment division	76
Bibliography	77

AUSTRALIAN STANDARD

Copper, lead, zinc and nickel concentrates—Sampling

Part 1:

Sampling procedures for determination of metal and moisture content

WARNING — This International Standard may involve hazardous materials, operations and equipment. It is the responsibility of the user of this International Standard to establish appropriate health and safety practices and determine the applicability of regulatory limitations prior to use.

1 Scope

This International Standard sets out the basic methods for sampling copper, lead, zinc and nickel concentrates from moving streams and stationary lots, including stopped-belt sampling, to provide samples for chemical analysis, physical testing and determination of moisture content, in accordance with the relevant International Standards. Where the concentrates are susceptible to significant oxidation, or of composition, it is necessary to use a common sample for moisture determination and chemical analysis to eliminate bias (see ISO 10251). In such cases, the common sample must be sufficiently representative, i.e. unbiased and sufficiently precise, for chemical analysis and determination of moisture content. Any large agglomerates (> 10 mm) present in the primary sample should be crushed prior to further sample processing. Sampling of concentrates in slurry form is specifically excluded from this International Standard.

Stopped-belt sampling is the reference method for collecting concentrate samples against which mechanical and manual-sampling procedures may be compared. Sampling from moving streams is the preferred method. Both falling-stream and cross-belt samplers are described.

Sampling from stationary lots is used only where sampling from moving streams is not possible. The procedures described in this International Standard, for sampling from stationary lots, only minimize some of the systematic sampling errors.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 10251, *Copper, lead, zinc and nickel concentrates — Determination of mass loss of bulk material on drying*

ISO 12744, *Copper, lead, zinc and nickel concentrates — Experimental methods for checking the precision of sampling*

ISO 13032, *Copper, lead, zinc and nickel concentrates — Experimental methods for checking the bias of sampling*