

Australian Standard[®]

Copper alloys

Part 2: Determination of manganese content—Flame atomic absorption spectrometric method

This Australian Standard was prepared by Committee CH/10, Analysis of Metals. It was approved on behalf of the Council of Standards Australia on 9 May 1994 and published on 19 September 1994.

The following interests are represented on Committee CH/10:

Aluminium Development Council, Australia
Australasian Institute of Mining and Metallurgy
Australian Lead Development Association
Bureau of Steel Manufacturers, Australia
Copper Technical Data Centre, Australia
National Association of Testing Authorities, Australia
Railways of Australia Committee

Additional interests participating in preparation of Standard:

Analytical laboratories
Department of Defence, Materials Research Laboratory
Steel manufacturers

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STANDARDS AUSTRALIA

RECONFIRMATION

OF

AS 1515.2—1994

Copper alloys

**Part 2: Determination of manganese content—Flame atomic absorption
spectrometric method**

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International Copper Association Australia
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| <p>First published as AS K209.2 — 1971. Revised and redesignated AS 1515.2 — 1994.</p> |
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PREFACE

This Standard for the determination of manganese in copper base alloys was prepared by the Standards Australia Committee CH/10 on the Analysis of Metals to supersede AS K209.2—1971, *Methods for the analysis of copper alloys, Part 2: Manganese in copper alloys (atomic absorption spectrometric method)*.

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STANDARDS AUSTRALIA

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Copper alloys

Part 2: Determination of manganese content— Flame atomic absorption spectrometric method

1 SCOPE This Standard specifies a flame atomic absorption spectrometric method for the analysis of manganese in copper base alloys. The method is applicable to copper alloys containing manganese in the range 0.002% to 2.1%. The method has been found satisfactory in the presence of the following elements up to the percentage concentrations indicated:

| | |
|-----------|-----|
| Aluminium | 10% |
| Copper | 80% |
| Iron | 5% |
| Nickel | 30% |
| Silicon | 3% |
| Tin | 10% |
| Zinc | 40% |

2 REFERENCED DOCUMENTS The following documents are referred to in this Standard:

AS

- 2134 Recommended practice for chemical analysis by atomic absorption spectrometry
- 2134.1 Part 1: Flame atomic absorption spectrometry
- 2162 Code of practice for the use of volumetric glassware
- 2164 One-mark volumetric flasks
- 2166 One-mark pipettes
- 2167 Straight pipettes
- 2614 Copper and copper alloys—Sampling for chemical analysis and electrical resistivity
- 2850 Chemical analysis—Interlaboratory test programs—For determining precision of analytical method(s)—Guide to the planning and conduct

BS

- 4237 Report on reproducibility of methods of chemical analysis used in the iron and steel industry

3 PRINCIPLE The sample is dissolved in nitric and hydrofluoric acids; after the addition of boric acid, the manganese content of the solution is determined by atomic absorption spectroscopy.

4 REAGENTS

4.1 General requirements All reagents shall be of the highest purity obtainable and distilled water shall be used throughout. Solutions shall be freshly prepared and, where necessary, filtered.