

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.

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Aluminium Development Council, Australia
Australasian Institute of Mining and Metallurgy
Australian Lead Development Association
Bureau of Steel Manufacturers, Australia
Copper Technical Data Centre, Australia
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OF

AS 1515.2—1994

Copper alloys

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

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NOTES

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manganese content—Flame atomic
absorption spectrometric method**

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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

Australian Standard

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.