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Australian Standard®

CHEMICAL TESTING—SAMPLING—GLOSSARY OF TERMS

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Australian Government Analytical Laboratories

Australian Institute of Food Science and Technology

Australian Mineral Development Laboratories

Bureau of Steel Manufacturers of Australia

Commonwealth Scientific and Industrial Research Organization

Confederation of Australian Industry

National Association of Testing Authorities, Australia

National Health and Medical Research Council

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PREFACE

This standard was prepared by the Association's Committee on General Methods of Chemical Analysis.

As far as possible the terms included in the glossary have been defined in accordance with relevant ISO standards. In addition, the terms selected for definition are those commonly used in ISO standards.

The standard is based on a variety of sources including the following standards:

AS 1057	Terms Used in Quality Control
AS 1199	Sampling Procedures and Tables for Inspection by Attributes
ISO 3081	Iron Ores — Increment Sampling — Manual Method
ISO 3534	Statistics — Vocabulary and Symbols
BS 4778	Glossary of Terms Used in Quality Assurance (Including Reliability and Maintainability Terms)

Reference may need to be made to these standards for terms and definition details not covered by this standard. This standard should be regarded as of a general nature which does not contain terms for sampling in specialist fields (e.g. sampling molten steel).

For ease of application the standard has been subdivided into four sections specific to certain aspects of sampling and an alphabetical index at the end of the standard facilitates the location of each term.

Where more than one term applies to a particular definition the preferred term is the one given in **boldface heavier print.**

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STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard
for
CHEMICAL TESTING—SAMPLING—GLOSSARY OF TERMS

SECTION 1. GENERAL TERMS

No	Term	Definition
1.001	**characteristic**	A physical, chemical or any other measurable property of an item or material. It normally allows differentiation to be made either qualitatively (by attributes) or quantitatively (by variables).
1.002	**defect**	Any single non-conformance of the item with respect to the specified characteristics.
1.003	**defective item** defective unit	An item or unit with sufficient defective characteristics to have it deemed 'defective'.
1.004	**headspace** ullage	The space in a container between the surface of the material contained therein and some fixed reference point inside and at the top of the container.
1.005	**heterogeneous material**	Material is said to be heterogeneous in relation to a given characteristic if the difference between the mean values of that characteristic for the portions that make up the material are outside the limits of error for the measurement made to determine that characteristic. NOTE: A distinction should be made between— (a) the constitution heterogeneity, which is due to the difference in composition between the different portions (for example, the particles) constituting the material; and (b) the repartition heterogeneity, which is due to differences in the localization of the different portions constituting the material. This heterogeneity disappears if the portions are mixed. (It may then be transformed into constitution heterogeneity.)
1.006	**homogeneous material**	Material which is not heterogeneous.
1.007	**item** unit	(a) An actual or conventional object on which a set of observations may be made: or (b) a defined quantity of material on which a set of observations may be made; or (c) an observed value, either qualitative (attributes) or quantitative (measures). This is also known as **data**.
1.008	**minimum sampling unit size**	The minimum size of a representative sample. It is a relevant parameter of heterogeneity.
1.009	**particle size reduction**	(a) The extent to which particles have been reduced in size. (b) The process by which the particle size of the material constituting the sample is reduced, for example, by fragmenting, grinding or pulverizing.
1.010	**sample**	One or more items taken from a lot and intended to provide information about the lot and, possibly, to serve as a basis for a decision on the lot or on the process which has produced it. NOTES: 1. A sample may be obtained from an increment or from a sampling unit, or by combining increments or sampling units. 2. The word 'specimen' is used in certain cases instead of 'sample', especially in connection with the sampling of discrete materials.
1.011	**sampling plan** **sampling scheme**	The planned procedure of selection, withdrawal and preparation of a sample or samples from a lot to yield the required knowledge of the characteristic(s) from the final sample.
1.012	**sample size reduction** sample division	The process by which the quantity of a sample is reduced.
1.013	**sampling unit**	For the purpose of sampling an item or, in a multistage sampling, a group of items taken from the population.
1.014	**test** observation	An operation carried out in order to measure or classify a characteristic.