

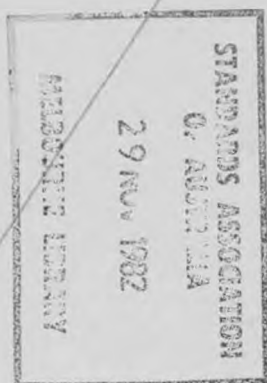
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GENERAL PURPOSE DETERGENTS FOR USE IN THE DAIRYING INDUSTRY



STANDARDS ASSOCIATION OF AUSTRALIA
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This Australian standard was prepared by Committee DS/1, Detergents and Sanitizers for Use in the Dairying Industry. It was approved on behalf of the Council of the Standards Association of Australia on 26 February 1982 and published on 7 June 1982.

The following interests were represented on the committee responsible for the preparation of this standard:

Australian Chemical Specialties Manufacturers Association
Australian Dairy Farmers Federation
Australian Dairy Institute Incorporated
Australian Society of Dairy Technology Incorporated
Commonwealth Advisory Laboratory on Dairy Detergents and Sanitizers
Confederation of Australian Industry
Council of Australian Food Technology Associations Incorporated
Dairy Industry Marketing Authority
Department of Agriculture, N.S.W.
Department of Agriculture, S.A.
Department of Agriculture, Tasmania
Department of Agriculture, Victoria
Department of Agriculture, W.A.
Department of Primary Industries, Qld
Department of Primary Industry
Food Industry Suppliers Association of Australia
Royal Australian Chemical Institute

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AUSTRALIAN STANDARD

**GENERAL PURPOSE
DETERGENTS
FOR USE IN THE
DAIRYING INDUSTRY**

AS 1803—1982

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PREFACE

This edition of this standard was prepared by the Association's committee on Detergents and Sanitizers for Use in the Dairying Industry, under the direction of the Dairying Standards Board, to supersede AS 1803—1975. It is one of a series on dairy detergents and sanitizers; other standards in the series cater for the cleaning and sanitizing of dairy farm and factory equipment and post-milking hygiene in dairy cows, and provide a code of principles of cleaning-in-place.

In this edition, the products are now defined by their application, and the use of pH limits has been discontinued. Marking and labelling requirements have been updated. The cleaning performance test has now been improved to allow valid assessment of acidic general purpose detergents. Furthermore, the statistical evaluation of results uses a transform technique to ensure normal distribution, before analysis. The foam class levels have been brought into line with those now in other standards.

A practical cleaning performance test is laid down by means of apparatus which is fully described and illustrated. This test enables qualitative and comparative cleaning performance to be assessed and takes cognizance of the range of water hardness which will be encountered in practice.

A special provision of the standard is the simplified statistical treatment given to assessment of test results, enabling significance to be quantified and chance variations to be eliminated.

Acknowledgement is made of the work performed by the Commonwealth Advisory Laboratory on Dairy Detergents and Sanitizers situated at Richmond, N.S.W., where the methods of test for this standard were developed.

This standard makes reference to the following Australian and British standards:

AS 1162	Code of Practice for Cleaning and Sanitizing Dairy Factory Equipment
AS 1449	Stainless and Heat-resisting Steel Plate, Sheet and Strip (Coils and Cut Lengths)
AS 1536	Code of Practice for Cleaning and Sanitizing Milking Equipment
AS 2163	Graduated Measuring Cylinders
AS 2164	One-mark Volumetric Flasks
BS 2648	Performance Requirements for Electrically-heated Laboratory Drying Ovens
BS 3978	Water for Laboratory Use

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STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard

for

GENERAL PURPOSE DETERGENTS FOR USE IN THE DAIRYING INDUSTRY

1 SCOPE. This standard specifies requirements for detergents which may be applied manually or by cleaning-in-place to dairy farm equipment, or manually to dairy factory equipment.

These detergents have their major applications where—

- (a) the soil is not very difficult to remove, e.g. cold milk soil; or
- (b) most of the cleaning effort is supplied by the operator, e.g. manual cleaning of more tenacious soils.

2 DEFINITIONS. For the purpose of this standard, the following definitions apply:

Detergents—chemicals or blends of chemicals capable of assisting cleaning when added to water.

Use dilution—the minimum concentration of a detergent in water that the manufacturer has recommended for a specified application, or a solution at that concentration.

3 CLASSIFICATION OF DETERGENTS.

General purpose detergents are classified according to their ability to perform in waters of various hardnesses, as follows:

Soft water type—suitable for use when prepared in waters with hardness up to 300 mg/L total hardness.

Hard water type—suitable for use when prepared in hard water greater than 300 mg/L total hardness.

4 GENERAL PROPERTIES.

4.1 Description. The detergent, which may be either liquid or solid, shall be substantially free from foreign matter.

Powder detergents shall be homogeneously blended and free flowing. Any caking that occurs during normal storage in sealed containers shall be easily broken up so that the material again becomes free flowing.

When used in accordance with the manufacturer's instructions, the detergent shall not impart any flavour or taint to dairy products passing through the equipment after cleaning nor shall it result in residues harmful to humans or to the quality of the products.

The manufacturer may be required to provide information on any residues which result from the use of the product.

If dyes are used they shall be of food grade standard.

4.2 Solubility in Water. The solubility of the detergent in water shall be such that 5 g of the material will substantially dissolve in 100 mL of water initially at a temperature of 50°C to 70°C. Any residue shall be completely rinsable and free from grit.

5 DEGREE OF FOAMING. The degree of foaming of the detergent at the use dilution at the minimum recommended temperature of use shall be expressed as 'low' or 'medium' or 'high', in accordance with the method of determination set out in Appendix A.

6 CLEANING PERFORMANCE. When assessed in accordance with Appendix B, the cleaning performance of the detergent at the use dilution shall be not inferior to that of the prescribed test reference detergent solution. The hardness of the water used to prepare the detergent and rinse solutions shall be altered according to the class of the detergent, viz:

- (a) *Soft water type*—water of 300 mg/L total hardness.
- (b) *Hard water type*—water of 800 mg/L total hardness.

The reference detergent and its rinse solutions shall be prepared in water of 300 mg/L total hardness.

7 CORROSION TEST. When tested in accordance with Appendix C, the detergent shall be free from corrosive effect on stainless steel to the extent that test panels show no visible evidence of corrosion nor any discoloration.

8 INFORMATION TO BE SUPPLIED BY THE MANUFACTURER. The manufacturer shall supply adequate and accurate directions for the application, storage and use of the product. Such directions shall be in accordance with the relevant provisions of AS 1162, and AS 1536.

9 MARKING. Each package of detergent shall, in addition to bearing the markings required by the relevant statutory regulations, be legibly and indelibly marked with the following information:

- (a) Manufacturer's name or registered mark.
- (b) General description of the product.
- (c) Degree of foaming, i.e. 'Low Foaming', or 'Medium Foaming' or 'High Foaming'.
- (d) Batch identification.
- (e) A warning concerning possible harmful effects of the detergent on the eyes and skin.
- (f) Either 'soft water type' or 'hard water type'.
- (g) Recommendations on the methods by which the product should be applied, i.e.:
 - (i) A brief description of all steps of the cleaning system for which the product was designed to be used.
 - (ii) The minimum concentration of the solution which should be prepared.
 - (iii) The desired temperature at which the solution should be applied.

NOTE: Manufacturers who place the number of this Australian standard on packages of detergent or literature related thereto should ensure that the detergent has been manufactured to comply with the standard.