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Australian Standard 1374—1981

IN-LINE MILK SAMPLING DEVICES
FOR USE IN BULK MILK COLLECTION

STANDARDS ASSOCIATION OF AUSTRALIA
Incorporated by Royal Charter

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THE FOLLOWING SCIENTIFIC, INDUSTRIAL AND GOVERNMENTAL ORGANIZATIONS and departments were officially represented on the committee entrusted with the preparation of this standard:

Australian Institute of Dairy Factory Managers and Secretaries

Australian Society of Dairy Technology Incorporated

Confederation of Australian Industry

Dairy Equipment Manufacturers Association

Dairy Industry Authority of N.S.W.

Departments of Agriculture

Department of Primary Industry

Food Equipment Manufacturers Association of Australia

Manufacturers of tubes

Market Milk Federation of Australia

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AUSTRALIAN STANDARD

IN-LINE MILK SAMPLING DEVICES
FOR USE IN BULK MILK COLLECTION

AS 1374—1981

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PREFACE

This edition of this standard was prepared by the Association's Committee on Dairy Factory Equipment under the direction of the Dairying Standards Board to supersede AS 1374—1976.

The preparation of this standard was initially undertaken to satisfy a requirement for a specification for in-line sampling devices to be installed on bulk milk collection tankers so that, during the process of transferring milk from farm tanks to the collection tankers, representative samples can be taken.

The design of the device is such as to facilitate, as far as economically practicable, its in-place cleaning, but this end is not completely realized.

The main change in this edition is the introduction of an illustration of an additional typical in-line milk sampling device which has found general acceptance.

This standard requires reference to the following Australian standards:

AS 1449	Wrought Alloy Steels—Stainless and Heat-resisting Steel Plate, Sheet and Strip
AS 1722	Pipe Threads of Whitworth Form Part 1—Sealing Pipe Threads
AS 1965	The Measurement of Surface Roughness with Direct-reading Stylus Electronic Instruments
AS 2070	Plastics Materials for Food Contact Use
AS N26	The Determination of Percentage of Fat in Milk by the Babcock Method

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STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard
for
IN-LINE MILK SAMPLING DEVICES FOR USE IN BULK MILK COLLECTION

1 SCOPE. This standard specifies requirements for in-line milk sampling devices intended for installation on bulk milk collection tankers to enable representative samples to be taken as milk is transferred from farm tanks to road tankers. It applies only to overhead filling where tankers are fitted with vented lids and prerequires the use of positive pumps operating at constant speed.

NOTES:

1. Where tankers are bottom filled, sampling is unreliable.
2. Requirements for the use of these drip or 'bleed' samplers are given in Appendix A.
3. The sampling device may possibly be used during the transfer from road tankers to factory tanks and between tanks within a factory but, unless constant pressures and flow conditions prevail during the whole of the sampling, inaccuracies will result.

2 MATERIALS OF CONSTRUCTION. Metallic parts shall be made from austenitic stainless steel complying with the compositional requirements specified for the relevant grade in AS 1449.

NOTE: Steel grades /304, /316 and /321 are suitable for general applications.

Non-metallic parts shall comply with the relevant requirements prescribed in AS 2070.

3 DESIGN FEATURES (Typical devices are illustrated in Figs 1 and 2).

3.1 Sampling Tube. The sampling tube shall be such that—

(a) it can readily be removed from the milkline with the removable cap in position;

(b) it can be cleaned properly by brushing through;

(c) a change in sampling orifice can be readily effected;

(d) it incorporates a self-locating device to maintain the orifice centrally in the milkline facing directly into the flow of milk;

3.2 Sealing. The construction of the device shall be such that it can be adequately and hygienically sealed under the conditions of sampling.

3.3 Boss. The boss shall be provided with a suitable external screw thread such as R¾/20*.

3.4 Drainability. The sampling device shall be free-draining.

4 SURFACE FINISH. The finish of surfaces likely to come into contact with milk shall be smooth and bright, and not less than R_a 0.8 μm assessed in accordance with AS 1965.

*See AS 1722, Part 1.