

Australian Standard™

Refrigerated display cabinets

Part 5: Temperature test



Standards Australia

This Australian Standard was prepared by Committee ME/8, Refrigerated Display Cabinets. It was approved on behalf of the Council of Standards Australia on 28 April 2000 and published on 10 August 2000.

The following interests are represented on Committee ME/8:

Australian Food and Grocery Council
Australian Retailers Association
Commercial Refrigeration Manufacturers Association of Australia
Food Science Australia
New South Wales Health Department

Keeping Standards up-to-date

Standards are living documents which reflect progress in science, technology and systems. To maintain their currency, all Standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued. Standards may also be withdrawn. It is important that readers assure themselves they are using a current Standard, which should include any amendments which may have been published since the Standard was purchased.

Detailed information about Standards can be found by visiting the Standards Australia web site at www.standards.com.au and looking up the relevant Standard in the on-line catalogue.

Alternatively, the printed Catalogue provides information current at 1 January each year, and the monthly magazine, *The Australian Standard*, has a full listing of revisions and amendments published each month.

We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Contact us via email at mail@standards.com.au, or write to the Chief Executive, Standards Australia International Ltd, GPO Box 5420, Sydney, NSW 2001.

Australian Standard™

Refrigerated display cabinets

Part 5: Temperature test

Originated as AS B220—1966.
Previous edition AS 1731—1983.
Revised and redesignated in part as AS 1731.5—2000.

COPYRIGHT

© Standards Australia International

All rights are reserved. No part of this work may be reproduced or copied in any form or by any means, electronic or mechanical, including photocopying, without the written permission of the publisher.

Published by Standards Australia International Ltd
GPO Box 5420, Sydney, NSW 2001, Australia

ISBN 0 7337 3411 1

PREFACE

This Standard was prepared by Standards Australia Committee ME/8, Refrigerated Display Cabinets, to supersede (in part) AS 1731—1983, *Frozen food retail cabinets*.

The Scope of the original Standard has been extended to include requirements for retail chiller cabinets as well as retail freezer cabinets.

This Standard is based on British Standard BS EN 441:1996, *Refrigerated display cabinets* (Part 5).

The Standard forms Part 5 of a series of Standards for refrigerated display cabinets, as follows:

AS

1731	Refrigerated display cabinets
1731.1	Part 1: Terms and definitions
1731.2	Part 2: General mechanical and physical requirements
1731.3	Part 3: Linear dimensions, areas and volumes
1731.4	Part 4: General test conditions
1731.5	Part 5: Temperature test
1731.6	Part 6: Classification according to temperatures
1731.7	Part 7: Defrosting test
1731.8	Part 8: Water vapour condensation test
1731.9	Part 9: Electrical energy consumption test
1731.10	Part 10: Test for absence of odour and taste
1731.11	Part 11: Installation, maintenance and user guide
1731.12	Part 12: Measurement of the heat extraction rate of the cabinets when the condensing unit is remote from the cabinet

The objective of this series of Standards is to provide standardized construction requirements and performance assessment procedures for refrigerated display cabinets for use by manufacturers, suppliers, purchasers, operators and regulators of these systems.

CONTENTS

	<i>Page</i>
1 SCOPE	3
2 REFERENCED DOCUMENTS	3
3 TEST PROCEDURE	3
4 EXPRESSION OF RESULTS	18
5 TEST REPORT	19

STANDARDS AUSTRALIA

Australian Standard

Refrigerated display cabinets

Part 5: Temperature test

1 SCOPE

1.1 Scope of the Standard

This Standard specifies terminology, general mechanical and physical requirements, test conditions as well as installation and maintenance including a user's guide, for refrigerated display cabinets for the sale or display, or both, of food products.

This Standard does not cover refrigerated vending machines, cabinets intended for use in catering and similar non-retail applications or food service cabinets.

1.2 Scope of Part 5

This Part of AS 1731 specifies methods for the determination of test package temperatures in refrigerated display cabinets.

2 REFERENCED DOCUMENTS

The following document is referred to in this Standard:

AS
1731 Refrigerated display cabinets
1731.4 Part 4: General test conditions

3 TEST PROCEDURE

3.1 Preparation of test cabinet

The cabinet is installed in the test room and the test is prepared according to AS 1731.4

3.2 Loading the cabinet—General

The cabinet shall be loaded with test packages and M-packages (see AS 1731.4) up to the load limit, as illustrated in Figures 1 to 12. These packages shall have previously been brought to a temperature equal to that expected during the test. Packages of 1000 g and 500 g should preferably be used.

To complete the loading, the following sizes of test packages should be used:

- (a) 25 mm × 100 mm × 200 mm.
- (b) 37.5 mm × 100 mm × 200 mm.
- (c) 25 mm × 50 mm × 100 mm.

In addition, pieces of the above packages shall be used as fillers.

The test packages shall be arranged so as to form an even level.

Each refrigerated shelf area shall be loaded with test packages arranged in such a way that they form rows with a length of 200 mm, by the depth of the cabinet, in the direction of the airflow in the cabinet.