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WOOL—REQUIREMENTS FOR THE ISSUE OF A TEST CERTIFICATE FOR RAW WOOL



STANDARDS ASSOCIATION OF AUSTRALIA
Incorporated by Royal Charter



This Australian standard was prepared by Committee TX/12, Testing of Wool. It was approved on behalf of the Council of the Standards Association of Australia on 6 September 1985 and published on 3 March 1986.

The following interests are represented on Committee TX/12:

Australian Council of Wool Buyers
Australian Wool Corporation
Australian Wool Testing Authority Ltd
CSIRO, Division of Textile Physics
Department of Defence
Department of Primary Industry
National Council of Wool Selling Brokers of Australia
University of New South Wales
Wool Council of Australia
Wool Scourers and Carbonizers Association of Australia
Wool Textile Manufacturers of Australia

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This standard was issued in draft form for comment as DR 82186.

STANDARDS ASSOCIATION OF AUSTRALIA
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AMENDMENT No 1

to

AS 2274—1986

WOOL—REQUIREMENTS FOR THE ISSUE OF A TEST CERTIFICATE FOR RAW WOOL

REVISED TEXT

SUMMARY: This amendment applies to Tables A1, A2, A3, B1, B2 and B3.

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Page 10. Tables A1 and A2.

Delete existing tables and substitute:

TABLE A1

**COMMERCIAL TOLERANCE BETWEEN CERTIFIED RESULT AND
CHECK TEST RESULT FOR WOOL BASE (WB)**

WB of check test %	Commercial tolerance WB %
Up to 40.00	1.50
40.01 to 45.00	1.30
45.01 to 50.00	1.20
50.01 to 55.00	1.00
55.01 to 60.00	0.80
60.01 to 65.00	0.80
65.01 and over	0.60

TABLE A2

**COMMERCIAL TOLERANCE BETWEEN CERTIFIED RESULT AND
CHECK TEST RESULT FOR VEGETABLE MATTER BASE (VMB)**

VMB of check test %	Commercial tolerance VMB %
0.0 to 0.5	0.1
0.6 to 1.0	0.2
1.1 to 1.5	0.2
1.6 to 2.0	0.3
2.1 to 3.0	0.4
3.1 to 5.0	0.8
5.1 and over	1.4

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Page 12. Table A3.

Delete existing table and substitute:

TABLE A3

**COMMERCIAL TOLERANCE BETWEEN CERTIFIED RESULT AND
CHECK TEST RESULT FOR MEAN FIBRE DIAMETER**

Mean fibre diameter of check test μm	Commercial tolerance μm
Less than 18.0	0.2
18.0 to 19.9	0.2
20.0 to 21.9	0.2
22.0 to 23.9	0.3
24.0 to 25.9	0.3
26.0 and over	0.4



Page 15. Tables B1 and B2.

Delete existing tables and substitute :

TABLE B1
STATISTICAL TOLERANCE BETWEEN TEST AND RETEST RESULTS
FOR WOOL BASE* (WB)

WB of retest %	Statistical tolerance WB %
Up to 40.00	3.10
40.01 to 45.00	2.80
45.01 to 50.00	2.50
50.01 to 55.00	2.10
55.01 to 60.00	1.90
60.01 to 65.00	1.80
65.01 and over	1.60

* These values are also used to compare additional data with original data during check testing in accordance with Flowchart 3. The additional data is used in place of the retest data.

TABLE B2
STATISTICAL TOLERANCE BETWEEN TEST AND RETEST RESULTS
FOR VEGETABLE MATTER BASE* (VMB)

VMB of retest %	Statistical tolerance VMB %
0.0 to 0.5	0.3
0.6 to 1.0	0.5
1.1 to 1.5	0.6
1.6 to 2.0	0.8
2.1 to 3.0	1.0
3.1 to 5.0	2.0
5.1 and over	3.2

* These values are also used to compare additional data with original data during check testing in accordance with Flowchart 3. The additional data is used in place of the retest data.

Page 16. Table B3.

Delete existing table and substitute :

TABLE B3
STATISTICAL TOLERANCE BETWEEN TEST AND RETEST RESULTS
FOR MEAN FIBRE DIAMETER*

Mean fibre diameter of retest μm	Statistical tolerance μm
Less than 26.0	0.7
26.0 or greater	0.9

* These values are also used to compare additional data with original data during check testing in accordance with Flowchart 3. The additional data is used in place of the retest data.

NOTES TO TABLES B1, B2 and B3:

1. The tables are based on data obtained from interlaboratory round trials. The tolerances do not indicate the expected differences between a test result and a retest result. They are provided solely as criteria for deciding whether or not an error has occurred. In the absence of error, differences found in practice will be small and, on average, zero. However, as the difference increases, so too does the likelihood of error.
2. Where a retest for wool base or vegetable matter base is conducted, a correction for any declared or observed change in net greasy mass will be needed before the retest results can be compared with the original values.

For example, if the original test certificate wool base was 52.2% on a net greasy mass of 4800 kg, while the retest wool base was 48.1% on a net greasy mass of 5000 kg, then the correct comparison is between 52.2% and 50.1%, where—

$$48.1 \times \frac{5000}{4800} = 50.1\%$$

AUSTRALIAN STANDARD

WOOL—REQUIREMENTS FOR THE ISSUE OF A TEST CERTIFICATE FOR RAW WOOL

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PREFACE

This edition of this standard was prepared by the Association's Committee on Testing of Wool, under the direction of the Textile Standards Board, to supersede AS 2274—1981. It defines the essential requirements to be met for the issue of a test certificate covering wool base, vegetable matter base and mean fibre diameter for raw wool in bales. It states the action to be taken when checking and reissuing test certificates in amended form.

In this edition, new procedures are given to determine whether a new test certificate should be issued based on—

- (a) retesting using the same sample; or
- (b) retesting using a new sample.

To assist in following these procedures, a series of flow charts is included.

Also in this edition, it is required that measurements of wool base and mean fibre diameter must be consistent within a range of subsample measurements. In the event that such measurements are inconsistent, a test for divergency is provided when all material has been tested.

When it is proposed to omit a measurement either because it is in error, or because it satisfies stated criteria to indicate divergency, more specific requirements have to be complied with.

In this edition, flowcharts are used more extensively to assist in following correct procedures from an initial test to final acceptance of the test certificate as firm and binding. If a query is raised, the subsequent procedures shown in the flowchart are followed.

Guidelines for handling queries regarding certified staple length and staple strength data, obtained in accordance with AS 2810, are given in Appendix D. It is considered that their use will allow procedures to develop on a sound basis.

Other standards in this series are as follows:

AS 1133	Wool—Determination of the Mean Fibre Diameter of Raw Wool
AS 1134	Method for the Determination of Wool Base and Vegetable Matter Base in Raw Wool
AS 1362	Wool—Method for the Calculation of Combined Test Certificates for Yield and Fineness of Raw Wool in Consignments
AS 1363	Wool—Grab Sampling of Greasy Wool
AS 1809	The Preservation of the Integrity of Raw Wool Samples for Display
AS 1980	Wool—Core Sampling of Raw Wool in Bales
AS 2104	Method for Matching and Building Sale Lots of Greasy Wool in Bales by Objective Measurement
AS 2720	Wool—Measurement of Mean Staple Length—Method Using the CSIRO Staple Length Meter
AS 2721	Wool—Method for Subsampling of Staples from Grab Samples
AS 2810	Wool—Determination of Mean Staple Length and Mean Staple Strength
AS XXXX	Wool—Method for the Measurement of Clean Colour*

* In course of preparation.

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FOREWORD

Test certificates for raw wool at present show the test results for wool base, vegetable matter base and mean fibre diameter. From wool base and vegetable matter base, estimates of expected commercial processing yield can be made using internationally accepted conversion factors.

The accuracy of a test certificate may be queried. As with all measurements, random variations occur and a second test will rarely give exactly the same result as the first. However, if no error has occurred, the difference between the two results is expected to lie within certain statistically defined limits on either side of zero. Consequently, when the difference is larger than expected, the first result is assumed to be wrong although the source of error may not be evident. Criteria, in the form of statistical tolerances, or maximum probable differences, are given to enable this decision to be made. In this standard these tolerances do not indicate the expected differences between two test measurements. They are intended to be used solely as criteria for deciding whether or not an error has occurred. The values used for statistical tolerances are based upon the relevant variances of the test methods and are frequently reviewed.

Even when test and retest measurements are demonstrated to be compatible from a statistical viewpoint, the difference may be of sufficient magnitude to affect commercial transactions. For this reason, the standard also defines commercial tolerances, which are narrower than the statistical tolerances, and states the procedures to be adopted when they are exceeded.

STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard

for

WOOL—REQUIREMENTS FOR THE ISSUE OF A TEST CERTIFICATE FOR RAW WOOL

SPECIFICATION

1 SCOPE. This standard sets out the requirements for the issue of a test certificate for raw wool, and, when required, the checking and reissue of certificates in amended form, from data obtained in full compliance with one or more of the standard test methods AS 1133, AS 1134, IWTO-19* and IWTO-28*.

Requirements for the issue of a test certificate are set out in Clauses 5 and 6. Requirements for the checking and reissue of certificates in amended form are set out in Clauses 7, 8, 9 and 10.

2 APPLICATION. This standard is applicable to testing operations for wool base, vegetable matter base and fibre diameter of raw wool in circumstances where a certified test result is required.

It is applicable to queries raised in regard to a certified test result in instances where an error is suspected or a dispute has arisen. In the case of a combined certificate, it is applicable only to the individual test results.

NOTE: A schematic diagram showing the application of this standard in wool trading is given as Flowchart 1. The sections marked A and B are the check testing and retesting sequences respectively. Check testing, used when any error is suspected, has its major application in pre-sale testing. Retesting, used to protect the interests of two parties to a dispute, has its major application in post-sale testing.

3 REFERENCED DOCUMENTS. The following standards are referred to in this standard:

AS 1133	Wool—Determination of the Mean Fibre Diameter of Raw Wool
AS 1134	Method for the Determination of Wool Base and Vegetable Matter Base in Raw Wool
AS 1980	Wool—Core Sampling of Raw Wool in Bales
AS 2810	Wool—Determination of Mean Staple Length and Mean Staple Strength.
IWTO-19	Method for the Determination of Wool Base and Vegetable Matter Base of Core Samples of Raw Wool
IWTO-28	Determination by the Air-flow Method of the Mean Fibre Diameter of Core Samples of Raw Wool

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

4.1 Check test—verification, by the testing house which made the original test, of a certified test result by examination of the documentation and additional testing if required.

4.2 Check test result—the result obtained by following the procedure given in Flowchart 3. It may include all or part of the original data or may be entirely independent data. It represents the result which will be certified if the original result is withdrawn.

4.3 Commercial tolerance—the difference between original test and check test results where, if exceeded, the certificate is reissued.

4.4 Cross-over error—an error generated when the results of two tests, either completely or in part, are transposed. A cross-over is distinct from a testing error and does not indicate any error caused by laboratory testing procedures. In most cases the correct data can be obtained from the documentation.

4.5 Documentation error—an error in documentation procedures such as in recording data, in calculation, typography or data transmission.

4.6 Keeper sample—that portion of raw wool retained by the testing house after a test has been conducted.

4.7 Recore test—a set of measurements made in accordance with the same standard test method as was adopted for the original test, on a further sample of raw wool drawn from a consignment for which the certified test result is in doubt. Such sample material must be obtained by resampling all bales in accordance with the current sampling standards or regulations. (See AS 1980 or the IWTO Core Test Regulations).

NOTE: When necessary, the recore test result must be corrected for any declared or observed change in net greasy mass of the consignment.

4.8 Retest—verification of the documentation, calculations and testing which form the basis of a certified test result, by duplicate recore tests conducted by separate testing houses. One of the testing houses must be the original testing house.

4.9 Statistical tolerance—the difference between original test and retest results where, if exceeded, an error is deemed probable.

NOTES:

1. This definition is equivalent to the IWTO Core Test Regulation definition of Maximum Probable Difference.
2. In the check testing procedure given in Flowchart 3, the statistical tolerance is also used to compare original test data with additional data in order to decide whether all the data combined or the additional data alone are to be used to calculate the check test result.

4.10 Test—a set of measurements made on a sample of raw wool, in full accord with a standard test method.

4.11 Test certificate—a document issued by a testing house showing—

- (a) the result(s) of a standard test method for one or more characteristics on a sample of raw wool; or
- (b) the combination by a standard method of a number of results of a standard test method for one or more characteristics on samples of raw wool. This is referred to as a combined certificate.

* IWTO—International Wool Textile Organization.