AS/NZS 1301.460s:2007
Reconfirmed 2017

AS/NZS 1301.460s:2007

Australian/New Zealand Standard™

Methods of test for pulp and paper

Method 460s: Statistical concepts used in pulp and paper testing

Appita

STANDARDS Australia

STANDARDS NEW ZEALAND PAEREWA AOTEAROA

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee PK-019, Methods of Test for Pulp and Paper. It was approved on behalf of the Council of Standards Australia on 22 December 2006 and on behalf of the Council of Standards New Zealand on 29 June 2007.
This Standard was published on 6 August 2007.

The following are represented on Committee PK-019:

Australian Plantation Products and Paper Industry Council (A3P)
Appita
CSIRO Forestry and Forest Products
Ensis Papro, SCION
National Association of Forest Industries

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We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Please address your comments to the Chief Executive of either Standards Australia or Standards New Zealand at the address shown on the back cover.

This Standard was issued in draft form for comment as DR 07134.

STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

RECONFIRMATION

OF
AS/NZS 1301.460s:2007
Methods of test for pulp and paper
Method 460s: Statistical concepts used in pulp and paper testing

RECONFIRMATION NOTICE

Technical Committee PK-019 has reviewed the content of this publication and in accordance with Standards Australia procedures for reconfirmation, it has been determined that the publication is still valid and does not require change.

Certain documents referenced in the publication may have been amended since the original date of publication. Users are advised to ensure that they are using the latest versions of such documents as appropriate, unless advised otherwise in this Reconfirmation Notice.

Approved for reconfirmation in accordance with Standards Australia procedures for reconfirmation on 4 April 2017.

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The following are represented on Technical Committee PK-019:

Appita
New Zealand Paper Forum
Monash University
Scion

NOTES

Australian/New Zealand Standard™

Methods of test for pulp and paper

Method 460s: Statistical concepts used in pulp and paper testing

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Contents

Foreword

This standard was prepared by Joint Technical Committee PK-019, Methods of Test for Pulp and Paper, as part of AS/NZS 1301, *Methods of test for pulp and paper*.

This edition cancels and replaces AS/NZS 1301.460s—1998.

The terms ‘normative’ and ‘informative’ have been used in this Standard to define the application of the annex to which they apply. A ‘normative’ annex is an integral part of a Standard, whereas an ‘informative’ annex is only for information and guidance.

Introduction

The objective of this standard is to assist users of other parts of AS/NZS 1301. It is consistent with those statistical procedures contained in ISO standards 2602, 2854, 3534 and 5725 which are appropriate for use in pulp and paper testing.

Other similar standards are:

TAPPI T1200sp

T1205sp

T1206sp

SCAN G2

CPPA Z.2P

Statistical concepts used in pulp and paper testing

1 Scope

The procedures and concepts of this standard are those to be used in the calculation and interpretation of test results obtained by methods described in other parts of AS/NZS 1301.

2 Normative references

The following documents are referred to in this Standard.

AS
1301.417s Sampling paper, board and pulp for testing

AS/NZS
1301.402rp Statistical monitoring of test systems

3 Definitions

The definitions given below are relevant in the application of this standard to paper testing and may be more specific than similar definitions used in general statistical applications.

3.1 accuracy: closeness of agreement between the test result obtained by a particular test system (combination of one operator, one apparatus and one laboratory) and the true value of the sample.

3.2 confidence interval: the interval which is believed, with a stated level of confidence, to include the true value of the parameter being estimated. It is usually expressed as the estimated value plus/minus half the interval length.

3.3 confidence limits: the limits of the confidence interval.

3.4 constancy: the degree to which the test result on a particular sample by a particular test system will remain constant over time.

3.5 median: the value of that result in a set of results, where the number of results higher than it is equal to the number of results lower than it. In a set comprising an even number of results, in which there may be two such results, the median is the mean of those two results.

3.6 population: the total lot or batch of which the sample is representative.

3.7 probability: the likelihood, on a scale of 0 to 1, of a particular outcome. Probability is denoted by *P*.

3.8 random error: a component of the error which, during the conduct of a number of tests for the same characteristic, varies in an unpredictable way.

3.9 repeatability: the maximum difference, at a confidence level of 95%, likely to occur between two test results obtained on a particular sample by a particular test system at a particular time. Repeatability is usually denoted by *r*.

3.10 replicate test: a single performance of the procedure of the test on a single test piece.

3.11 reproducibility: the maximum difference, at a confidence level of 95%, likely to occur between test results obtained by two different test systems on the same sample. Reproducibility is usually denoted by *R*.

3.12 sample: a portion of a specific lot or batch of pulp, paper, board or other material so selected as to be representative of the whole lot or batch.

NOTE 1 — In the case of a lot of paper or board, the sample has to be taken in accordance with AS 1301.417s.