AS/NZS 1301.002s:2004
Reconfirmed 2017

Australian/New Zealand Standard™

Methods of test for pulp and paper

Method 002s: Preparation of wood samples for chemical analysis

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 5 December 2003 and on behalf of the Council of Standards New Zealand on 23 February 2004. It was published on 12 March 2004.

The following are represented on Committee PK-019:

Appita Inc.
Australian Paper Industry Council
CSIRO Forestry and Forest Products
Forest Research (New Zealand)
National Association of Forest Industries
New Zealand Pulp and Paper Industry Association

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This Standard was issued in draft form for comment as DR 03433.

STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

RECONFIRMATION

OF
AS/NZS 1301.002s:2004
Methods of test for pulp and paper
Method 002s: Preparation of wood samples for chemical analysis

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.

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The following are represented on Technical Committee PK-019:

Appita
Monash University
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Scion

NOTES

Australian/New Zealand Standard™

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Preface

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

This edition cancels and replaces AS 1301.002s—1991.

A similar method is TAPPI T 257 cm-02.

Contents

NOTES

Preparation of wood samples for chemical analysis

1 Scope

This Standard prescribes the procedure for reducing wood samples to a suitable state of sub-division for chemical analysis.

2 Referenced documents

AS
1152 Specification for test sieves

BS
410 Test sieves—Technical requirements and testing

3 Apparatus

3.1 A cutting-type of mill—which does not heat the sample appreciably during grinding. The laboratory model Wiley mill with 200 mm diameter, 4-blade rotor operating at 400 to 800 rev/min and equipped to take a 1 mm or 0.5 mm screen is suitable for most work. The cutting blades shall be kept sharp and a clearance of 0.127 mm between the blades shall be maintained.

NOTE 1 — If fine subdivision is required, test the efficiency of the mill at regular intervals by milling 100 g of a standard wood sample and weighing the amounts of material passing the 250 µm, 180 µm and 150 µm screens. When the knives need sharpening, the coarsest fraction shows a marked increase. A quantity of well mixed, small chips serves as the standard wood sample. Store the chips in a closed container in a cool, dry place.

The Wiley mill is not satisfactory for all types of 'green' wood and it is sometimes necessary to use a hammer-type mill, such as a Raymond mill, or prepare shavings of the wood using an instrument with a rotary-knife cutter. Green hardwoods can become contaminated if the mill is mild steel[1] and for these wood types a mill constructed of stainless steel is recommended.

3.2 Optional test sieves with receiver, and preferably with a mechanical shaker—The sieves are 250 µm, 180 µm and 150 µm nominal aperture, conforming with the specification of AS 1152—1993 or BS 410:2000. (The ASTM equivalents are designated Nos 60, 80 and 100 respectively).

4 Procedures

Reduce the sample to sawdust, shavings or small chips and, if moist, dry by a suitable low temperature method.

NOTE 2 — Any low temperature drying method which does not alter the properties of the wood sample for chemical analysis, would be appropriate. This would include freeze drying, air drying or any low temperature oven drying method if less than 35°C.

Clean out the mill, fit the 1 mm screen, and feed the wood slowly into the mill. Resinous woods, such as *P. radiata*, can require further subdivision. If further subdivision of the sample is required, sift the product on the 250 µm sieve and return all material remaining on the sieve to the mill after replacing the 1 mm screen with 0.5 mm screen. Continue to sift the product and return the oversize material to the mill until all the original sample passes through the sieve.

NOTE 3 — The mill always retains a small amount of the sample which is lodged in the mill cavities or is whirled around with the rotor.