

Australian Standard®

AS 4823.2—2006

Feather and down—Methods of test

Method 2: Determination of the oxygen index number

PREFACE

This Standard was prepared by the Australian members of the Joint Standards Australia/Standards New Zealand Committee CS-035, Continental Quilts to supersede part of AS 2479—1987, *Down and/or feather filling materials and filled products*. After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this Standard as an Australian Standard rather than an Australian/New Zealand Standard.

The Committee referred to EN 1162:1997, *Feather and down—Test methods—Determination of the oxygen index number* when developing this Standard.

METHOD

1 SCOPE

This Standard specifies a method for determining the oxygen index number of feathers and down by means of a titration method.

2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS

- 2001 Methods of test for textiles
- 2001.1 Part 1: Conditioning procedures
- 2165 Laboratory glassware—Burettes
- 2166 Laboratory glassware—One-mark pipettes
- 2234 Laboratory glassware—Beakers

AS/NZS

- 1301 Methods of test for pulp and paper
- 1301.414 Method 414: Conditioning of paper for testing
- 1301.415 Method 415: Standard atmosphere for testing paper and board and procedures for monitoring the atmosphere

ISO

- 3696 Water for analytical laboratory use—Specification and test methods
- 4793 Laboratory sintered (fritted) filters—Porosity grading, classification and designation

3 DEFINITION

For the purpose of this Standard the following definition applies.

3.1 Oxygen index number (of feather and down)

Quantity of oxidization and soluble material present in the filtrate of the aqueous extract of the material. It provides an index of the cleanliness of the material being tested, and is expressed as milligrams oxygen per 100 g of the individual sample.

4 PRINCIPLE

The aqueous extract obtained at room temperature is titrated with a 0.02 mol/L solution of potassium permanganate.

5 REAGENTS

5.1 Water Grade 3

In accordance with ISO 3696.

5.2 3 mol/L sulfuric acid

5.3 0.02 mol/L potassium permagnate.

6 APPARATUS

6.1 Analytical balance

With sensitivity of 0.1 mg.

6.2 Tumbler jar

Capacity 2000 mL.

6.3 Beaker

Capacity 2000 mL (in accordance with AS 2234).

6.4 Beaker

Capacity 400 mL (in accordance with AS 2234)

6.5 Shaking machine

With 150 shakes per minute and shaking swing of 40 mm or tumbling machine with 150 min^{-1} .

6.6 Sintered (fritted) filter

Pore size index P 160 (equal to G-1) 10 cm diameter (in accordance with ISO 4793).

6.7 One-mark pipette

Class A capacity 100 mL (in accordance with ISO 4793),

6.8 Graduated pipette

Capacity 5 mL (in accordance with AS 2165).

6.9 Microburette

Graduated in 0.02 mL (in accordance with AS 2165).

6.10 Stopwatch