

STANDARDS ASSOCIATION OF AUSTRALIA

**Australian Standard
METHODS OF TEST FOR TEXTILES**

PART 7—QUANTITATIVE ANALYSIS OF FIBRE MIXTURES

**AS 2001.7.12
BINARY MIXTURES OF CERTAIN CHLOROFIBRES
AND CERTAIN OTHER FIBRES (METHOD USING
CARBON DISULPHIDE/ACETONE 55.5/44.5)**

PREFACE

This standard is one of a series of methods for the quantitative analysis of binary and ternary fibre mixtures.

It is derived from BS 4407, Methods of Test: Quantitative Analysis of Fibre Mixtures, and is technically identical with the analogous method contained therein in Section 4.

METHOD

1 SCOPE. This standard sets out a method for the quantitative analysis of binary mixtures of certain chlorofibres and certain other fibres using carbon disulphide/acetone 55.5/44.5 as a solvent for the chlorofibre.

2 APPLICATION. This method is applicable, after removal of non-fibrous matter, to binary mixtures of chlorofibres namely certain polyvinyl chloride fibres, whether after-chlorinated or not, with wool, animal hair, silk, cotton, nylon, polyester, acrylic, glass fibre, cupro, polynosic (modal) or viscose. When the wool, animal hair or silk content of a mixture exceeds 25 percent, the method described in AS 2001.7.5 shall be used. When the nylon 6 or nylon 6.6 content of a mixture exceeds 25 percent, the method described in AS 2001.7.7 shall be used.

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

AS 2001 Methods of Test for Textiles
2001.7.2 Part 7—Quantitative
Analysis of Fibre Mixtures—General
Requirements.

AS K121 Ethanol

BS 509 Acetone

4 PRINCIPLE. The chlorofibre is dissolved from a known dry mass of the mixture using an azeotropic mixture of carbon disulphide and acetone. The residue is collected, washed, dried and weighed. Its mass is expressed as a percentage of the dry mass of the mixture. The percentage of chlorofibre is found by difference.

5 REAGENTS. The following reagents, together with those specified in AS 2001.7.2, Clause 4, are required:

- (a) *Azeotropic mixture* of carbon disulphide and acetone (complying with BS 509). Mix 555 mL of carbon disulphide with 445 mL acetone.

NOTE: The toxic effects and flammability of carbon disulphide should be borne in mind and full precautions taken in its use.

- (b) *Ethanol*, complying with AS K121.

6 APPARATUS. The following items of apparatus, together with those items specified in AS 2001.7.2, Clause 5, are required.

- (a) *Conical flask*, 250 mL, glass-stoppered.
(b) *Mechanical shaker*.
(c) *Small watch glass*.

7 PROCEDURE. Follow the procedure described in AS 2001.7.2, Clause 8.3, and proceed as follows:

- (a) To the specimen contained in the glass-stoppered conical flask, add 100 mL of carbon disulphide/acetone per gram of specimen.
(b) Insert the stopper and shake the flask on a mechanical shaker for 20 min, loosening the stopper once or twice at the beginning of the process to release any excess pressure.
(c) Decant the supernatant liquid through the weighed filter crucible, retaining the fibres in the flask.
(d) Repeat steps (a), (b) and (c) with a further 100 mL of fresh reagent.