
INTERNATIONAL STANDARD



3074

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**Wool — Determination of dichloromethane-soluble matter
in combed sliver**

Laine — Détermination de l'extrait dichlorométhanique dans un ruban de peigné

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FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO Member Bodies). The work of developing International Standards is carried out through ISO Technical Committees. Every Member Body interested in a subject for which a Technical Committee has been set up has the right to be represented on that Committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work.

Draft International Standards adopted by the Technical Committees are circulated to the Member Bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 3074 was drawn up by Technical Committee ISO/TC 38, *Textiles*, and circulated to the Member Bodies in October 1974.

It has been approved by the Member Bodies of the following countries :

Australia	Germany	Poland
Belgium	Hungary	Romania
Bulgaria	India	South Africa, Rep. of
Canada	Iran	Spain
Chile	Ireland	Sweden
Czechoslovakia	Israel	Turkey
Denmark	Japan	U.S.A.
Finland	Netherlands	U.S.S.R.
France	New Zealand	Yugoslavia

No Member Body expressed disapproval of the document.

This International Standard is based on Test Method IWTO-10-66, drawn up by the International Wool Textile Organization (IWTO).

Wool – Determination of dichloromethane-soluble matter in combed sliver

0 INTRODUCTION

Wool textiles may contain solvent-extractable oils and fats. These are derived mainly from

- a) the wool grease occurring naturally in raw wool;
- b) oils added to assist textile processing;
- c) detergents picked up during washing and scouring processes;
- d) special finishing agents.

The amount of these substances present depends on the stage of manufacture and its estimation is important for determining the clean wool content of a sample.

These different materials cannot be estimated individually by solvent extraction methods, since there are no known solvents that are specific for each component. Hence, it is only possible to determine the amount of these substances extracted by a given solvent under specified conditions, any additional information being obtained by detailed analysis of the extracted material. Dichloromethane is recognized as a suitable solvent for extracting oils and fats.

The method described in this International Standard is based on the results of inter-laboratory trials organized by the Technical Committee of the International Wool Textile Organization.

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies a method for determining the dichloromethane-soluble matter in combed wool sliver. Its use may be extended to wool in other forms.

It should be recognized that extraction with dichloromethane under the prescribed conditions does not completely remove all the fatty material present in a sample of wool. A further amount, possibly material of similar character, will usually be extracted by the use of solvents that cause greater swelling of the wool fibres.

The method is applicable only to 100 % wool products. It may give misleading results if applied to products in which fibres other than wool are present.

2 REFERENCES

ISO 139, *Textiles – Standard atmospheres for conditioning and testing.*

ISO 1130, *Textile fibres – Some methods of sampling for testing.*

3 DEFINITION

dichloromethane-soluble extract: The material extracted from wool by dichloromethane under prescribed conditions.

4 PRINCIPLE

Extraction of a known amount of wool in a Soxhlet apparatus with dichloromethane. Filtration of the dichloromethane solution, evaporation of the solvent and determination of the mass of the residue.

5 REAGENTS

5.1 Dichloromethane (methylene chloride), boiling range 39 to 41 °C.

When 100 ml of the solvent is evaporated, the residue shall not exceed 1 mg.

WARNING. Dichloromethane is toxic: the room in which extractions are made shall be adequately ventilated.

5.2 Acetone, analytical reagent quality.

6 APPARATUS

6.1 Soxhlet extraction apparatus assembled with ground glass joints and protected against the entry of moisture. The extractor (barrel) of the Soxhlet shall conveniently have a capacity of about 200 to 300 ml and the flask 250 ml. (Note of the volume of the extractor shall be made in the test report.)

6.2 Water-bath or other suitable means of low temperature heating.