INTERNATIONAL STANDARD

**ISO 3074**

Second edition
2014-09-01

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

*Laine — Méthode de détermination de l'extrait dichlorométhanique dans un ruban de laine peignée*



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# Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 38, *Textiles*, Subcommittee SC 23, *Fibres and yarns*.

This second edition cancels and replaces the first edition (ISO 3074:1975), which has been technically revised.

This second edition to ISO 3074 is based on the test method IWTO-10-03, drawn up by the International Wool Textile Organization (IWTO).



 

# Introduction

Wool textiles can 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 (IWTO).

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



## 1 Scope

This International Standard specifies a method for determining the dichloromethane-soluble matter in combed wool sliver. Its use can 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 can give misleading results if applied to products in which fibres other than wool are present.

## 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 139, *Textiles — Standard atmospheres for conditioning and testing*

## 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

**3.1**
**dichloromethane-soluble extract**
material extracted from wool by dichloromethane under prescribed conditions

## 4 Principle

Once the appropriate specimen has been selected, it is then extracted in a Soxhlet extraction apparatus, using dichloromethane as the extraction solvent. The solvent is evaporated and both the residue and the extracted wool sample are oven-dried and weighed after cooling. The extractable matter is calculated by expressing the oven-dry mass of the residue as a percentage of the oven-dry mass of the extracted test specimen.

## 5 Reagents

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