



JAPANESE  
INDUSTRIAL  
STANDARD

Translated and Published by  
Japanese Standards Association

---

---

JIS L 1925 : 2019

**Textiles — Evaluation method of  
ultraviolet ray-shielding**

---

ICS 59.080.01

Reference number : JIS L 1925 : 2019 (E)

PROTECTED BY COPYRIGHT

L 1925 : 2019

Date of Establishment: 2019-01-21

Date of Public Notice in Official Gazette: 2019-01-21

Investigated by: Japanese Industrial Standards Committee

Standards Board for ISO area

Technical Committee on Consumer Life Products

---

JIS L 1925 : 2019, First English edition published in 2019-06

Translated and published by: Japanese Standards Association  
Mita MT Building, 3-13-12, Mita, Minato-ku, Tokyo, 108-0073 JAPAN

---

In the event of any doubts arising as to the contents,  
the original JIS is to be the final authority.

© JSA 2019

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

Printed in Japan

HT/HN

PROTECTED BY COPYRIGHT

## Contents

	Page
Introduction .....	1
1 Scope .....	1
2 Normative references .....	1
3 Terms and definitions .....	2
4 Test environment .....	2
5 Specimens, sampling and preparation of test pieces .....	2
6 Measuring apparatus .....	2
7 Determination method .....	3
8 Evaluation of measurement results .....	3
9 Test report .....	4
Annex A (normative) Calculation method of UPF equivalent .....	5
Annex B (normative) Evaluation of measurement results .....	9
Annex C (informative) Examples of measurement results .....	10

## Foreword

This Japanese Industrial Standard has been established by the Minister of Economy, Trade and Industry, through deliberations at the Japanese Industrial Standards Committee in accordance with the Industrial Standardization Law.

This **JIS** document is protected by the Copyright Law.

Attention is drawn to the possibility that some parts of this Standard may conflict with patent rights, applications for a patent after opening to the public or utility model rights. The relevant Minister and the Japanese Industrial Standards Committee are not responsible for identifying any of such patent rights, applications for a patent after opening to the public or utility model rights.

# Textiles — Evaluation method of ultraviolet ray-shielding

## Introduction

Ultraviolet (UV) rays are classified into Wave A in the wavelength from 315 nm to 400 nm, Wave B from 280 nm to 315 nm, and Wave C shorter than 280 nm. UV rays falling onto the ground are said to be Wave A and Wave B which cover a wavelength range from 290 nm to 400 nm. These UV rays reaching the ground are known to cause e.g. accelerated ageing process of skin, spots, freckles and skin cancers.

For this reason, UV ray-shielding by means of textiles has been taking on greater importance, and therefore it is necessary to specify a method for the determination of the accurate UV ray-shielding rate and ultraviolet protection factor (UPF) and a evaluation method thereof.

For applying UV ray-shielding treatment to textiles, roughly two types of methods are available. One is to apply UV absorbing coating to the textile surface and the other is to shield UV rays with reflecting fine particle substances kneaded into the textile. The former treatment with UV absorbing coating is generally applied to cotton and other natural materials. The latter treatment is applied to synthetic fibres in such a way as kneading ceramics into polyester.

No corresponding International Standard has been established at this point.

## 1 Scope

This Standard specifies a determination method and a evaluation method of the UV ray-shielding rate and UPF of cloths used for textiles such as blouse, sportswear, leg wear, curtain, hat, cap and umbrella.

When a specimen has different coloured patterns or structures depending on the part, the part to be measured may be agreed upon between the interested parties

NOTE If the product is designed to be worn stretched, the elongation percentage is recommended to be agreed upon between the interested parties.

## 2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this Standard. The most recent editions of the standards (including amendments) indicated below shall be applied.

JIS K 0115 *General rules for molecular absorptiometric analysis*

JIS L 0105 *General principles of physical testing methods for textiles*

JIS L 0208 *Glossary of terms used in textile industry — Testing*

JIS Z 8703 *Standard atmospheric conditions for testing*