

JIS

JAPANESE
INDUSTRIAL
STANDARD

Translated and Published by
Japanese Standards Association

JIS L 1921 : 2015

(JTETC/JSA)

**Textiles—Determination of
antifungal activity and efficacy of
textile products**

ICS 59.080.01

Reference number : **JIS L 1921 : 2015 (E)**

L 1921 : 2015

Date of Establishment: 2015-07-21

Date of Public Notice in Official Gazette: 2015-07-21

Investigated by: Japanese Industrial Standards Committee

Standards Board for ISO area

Technical Committee on Consumer Life Products

JIS L 1921:2015, First English edition published in 2016-01

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 2016

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

NH/AT

PROTECTED BY COPYRIGHT

Contents

	Page
Introduction.....	1
1 Scope.....	1
2 Normative references	1
3 Terms and definitions	2
4 Principle	3
5 Safety precaution	3
6 Reference fungi	3
7 Apparatus	3
8 Reagents and culture media	4
9 Fungus preservation and use	7
9.1 Fungus preservation	7
9.2 Pre-culture of fungus	8
10 Spore suspension	8
10.1 Suspending spores in culture media.....	8
10.2 Collection and dispersion of spore suspension from a culture medium	9
10.3 Filtering to remove hyphae and spore threads.....	9
10.4 Removing contents of culture medium	9
10.5 Confirming the concentration of spore suspension.....	9
10.6 Adjusting spore suspension for absorption method.....	10
11 Preparing the ATP calibration curve	10
12 Testing method	11
12.1 Preparation of test specimens and inoculation.....	11
12.2 Incubation	13
13 Measurement of luminescence intensity	13
13.1 Absorption method	13
13.2 Transfer method	15
14 Test results.....	15
14.1 Judgement of test effectiveness.....	15
14.2 Calculation of antifungal activity value.....	16
15 Antifungal efficacy.....	16
16 Test report	16
Annex A (normative) The fungi for testing.....	18

Annex B (informative) Antifungal efficacy	20
Bibliography	21
Annex JA (informative) Comparison table between JIS and corresponding International Standard	23

Foreword

This translation has been made based on the original Japanese Industrial Standard established by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee according to the proposal for establishment of Japanese Industrial Standard submitted by Japan Textile Evaluation Technology Council (JTETC)/Japanese Standards Association (JSA) with the draft being attached, based on the provision of Article 12 Clause 1 of 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—Determination of antifungal activity and efficacy of textile products

Introduction

This Japanese Industrial Standard has been prepared based on the first edition of **ISO 13629-1** published in 2012 with some modifications of the technical contents to correspond to technical trend and actual situation in Japan.

The portions given sidelines or dotted underlines are the matters in which the contents of the corresponding International Standard have been modified. A list of modifications with the explanations is given in Annex JA.

1 Scope

This Standard specifies a test method for the quantitative determination of the antifungal activity by measuring the intensity of luminescence produced by an enzymatic reaction of adenosine triphosphate (hereafter referred to as “ATP”), and antifungal efficacy.

This Standard is applicable to various kinds of textile products, such as yarns, woven and nonwoven fabrics, clothing, bedclothes, home furnishings and other miscellaneous goods.

Based on the intended application and on the environment in which the textile product is to be used, the user can select the most suitable evaluation method from the following methods.

- a) **Absorption method** An evaluation method in which spore suspension is inoculated directly onto the specimens.
- b) **Transfer method** An evaluation method in which test fungi are placed on an agar plate and printed onto the specimens.

NOTE : The International Standard corresponding to this Standard and the symbol of degree of correspondence are as follows.

ISO 13629-1:2012 *Textiles—Determination of antifungal activity of textile products—Part 1: Luminescence method* (MOD)

In addition, symbols which denote the degree of correspondence in the contents between the relevant International Standards and **JIS** are IDT (identical), MOD (modified), and NEQ (not equivalent) according to **ISO/IEC Guide 21-1**.

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 8150 Sodium chloride (Reagent)