

INTERNATIONAL
STANDARD

ISO
105-Z05

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Textiles — Tests for colour fastness —

Part Z05:

Determination of the dusting behaviour of
dyes

Textiles — Essais de solidité des teintures —

Partie Z05: Détermination du comportement des colorants au saupoudrage



Reference number
ISO 105-Z05:1996(E)

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established 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. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 105-Z05 was prepared by Technical Committee ISO/TC 38, *Textiles*, Subcommittee SC 1, *Tests for coloured textiles and colorants*.

ISO 105 was previously published in thirteen "parts", each designated by a letter (e.g. "Part A"), with publication dates between 1978 and 1985. Each part contained a series of "sections", each designated by the respective part letter and by a two-digit serial number (e.g. "Section A01"). These sections are now being republished as separate documents, themselves designated "parts" but retaining their earlier alphanumeric designations. A complete list of these parts is given in ISO 105-A01.

Annexes A and B of this part of ISO 105 is for information only.

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Introduction

The dustiness of dyestuffs is an important feature when considering aspects of hygiene, health and safety in the dyestuff-consuming industry. It is important therefore that a reliable and reproducible method exists to measure this property.

Although other methods for dust measurement exist, the method given in this part of ISO 105 is both more representative of and comparable with actual practice when handling dyestuffs. In respect of a comparison of dyestuffs or the reliability of limits, it should be understood that the resulting value is not a specific value like density.

Details of reproducibility data are given in annex A.

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Textiles — Tests for colour fastness —

Part Z05:

Determination of the dusting behaviour of dyes

1 Scope

This part of ISO 105 specifies a method for determination of the dusting behaviour of dyes.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 105. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO 105 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 105-A01:1994, *Textiles — Tests for colour fastness — Part A01: General principles of testing.*

ISO 105-A03:1993, *Textiles — Tests for colour fastness — Part A03: Grey scale for assessing staining.*

3 Definition

For the purposes of this part of ISO 105, the following definition applies.

3.1 dust: Particles of solid material dispersed in a gas.

NOTES

1 Dyestuff dust is formed during handling operations such as dispensing, transferring, sprinkling, etc.

2 Solid dyes are sold in different physical forms (powdered, granulated, etc.). The particle-size distribution of commercial products varies considerably. The mean particle diameter may be less than 50 µm or as much as several millimetres. The range of the particle-size distribution of a solid dye may also be narrow or wide.

3 The particle-size distribution of dyestuff dust is largely independent of the physical form of the dyestuff. Two typical particle-size distributions for dyestuff dust are shown in figure 1.

4 Principle

Dust is generated from a dye sample by means of a dust-generating device, extracted from the dust-bearing air by vacuum and conveyed to a detection point, where the amount of dust generated is estimated visually or determined quantitatively by a gravimetric or photometric method.

5 Apparatus

5.1 Balance, accurate to $\pm 0,1$ g, for weighing out the dye.

5.2 Dust-generating device, with filter holder and connecting joints, and incorporating the following additional components (see figures 2 and 3).

NOTES

1 Instead of a filter and filter holder, other dust-detection devices may be fitted to the apparatus, such as an impactor or an optical particle counter.

2 For information on sources of supply of the dust-generating device and the filter, apply to the organizations listed in clause 8 of ISO 105-A01:1994.