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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 42303-2023

Surface active agents - Detergents for washing fabrics - Guide for comparative testing of performance

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foreword

This document is in accordance with the provisions of GB/T 1:1-2020 "Guidelines for Standardization Work Part 1: Structure and Drafting Rules for Standardization Documents"

drafting:

This document is modified to adopt ISO 4319:1977 "Guidelines for Comparative Tests of Detergent Performance of Surface Active Agents for Washing Fabrics":

Compared with ISO 4319:1977, this document has made the following structural adjustments:

--- Chapter 1 corresponds to Chapter 1 and Chapter 2 in ISO 4319:1977;

--- Added Chapter 3;

--- Change part of 6:2 to 6:2:1, change the original 6:2:1 to 6:2:2, and change the original 6:2:2 to 6:2:3:

Compared with ISO 4319:1977, there are more technical differences in this document, and vertical single

Lines (|) are marked: See Appendix A for a list of these technical differences and their causes:

The following editorial changes have been made to this document:

--- Deleted the note in Table 5:

Please note that some contents of this document may refer to patents: The issuing agency of this document assumes no responsibility for identifying patents:

Introduction

The method of evaluating the performance of a detergent for washing fabrics depends on many variables that are linked in a complex manner: Therefore it is necessary to establish

A guide for the development and application of comparative test methods:

A single test or series of tests carried out in the laboratory cannot satisfactorily determine the performance boundaries of the many different cleaning products currently on the market:

limit, for which this document has been drafted: The situation is further complicated when different washing habits and soils, as well as the diversity of textiles, are taken into account:

Dirt is made up of various substances such as fats, proteins, pigments and other colored particles that exhibit completely different adhesion on fabrics

Composition, the chemical composition of fibers, and the structure of textiles can also greatly affect the adhesion of dirt to fabrics: Therefore, in comparative experiments, it is important to

It is important to know whether the soiled material is unfinished or resin-finished cotton, preshrunk wool, or nylon, polyester, or polyacrylate washed fabric:

fabrics, and whether the fabric is loose or tightly knitted or woven, light or heavy, smooth or rough, these

Will affect decontamination:

In addition to being directly related to cleaning, a good detergent has other properties that ensure good product acceptance and do not pose a hazard:

In particular it has no adverse effect on the fabric being washed (materials, dyes) or the washing machine and maintains its properties in long-term storage:

Although toxicological and ecological properties are also important for products widely used in the household, their evaluation is beyond

scope of this document:

Despite these complex factors, a satisfactory comparative test method can be designed according to the national conditions of our country:

Detergents for fabric washing

Guidelines for Performance Comparison Tests

1 Scope

This document specifies the method for comparative testing of detergents for washing fabrics, so that it can more truly reflect the consumption of detergents under laboratory conditions:

performance of the product used:

This document gives details of the variables to be considered, indicates their significance and importance, and provides guidance for developing appropriate comparative tests:

method provides the basis: This document provides insight into the performance of detergents for fabric washing when comparing two or more washing products in the same series of tests:

can give a correct evaluation:

This document applies to commercial washing products used in household washing machines:

This document does not apply to industrial washing products or other special products:

2 Normative references

The contents of the following documents constitute the essential provisions of this document through normative references in the text: Among them, dated references

For documents, only the version corresponding to the date is applicable to this document; for undated reference documents, the latest version (including all amendments) is applicable to

this document:

GB/T 13173-2021 Surfactant detergent test method (ISO 607:1980, ISO 697:1981, ISO 4313:

1976, ISO 4321:1977, ISO 4325:1990, ISO 21264:2019, MOD)

Note: There is no technical difference between the referenced content of GB/T 13173-2021 and the referenced content of ISO 607:1980:

GB/T 13174 Detergency and Cycle Washing Performance of Detergents for Clothing

3 Terms and Definitions

The following terms and definitions apply to this document:

3:1

bundle bundle

A group of clothes consisting of items commonly used in general households, used as a washing load in a washing test:

Note: Typical common items are sheets, pillowcases, shirts, undershirts (or underwear), napkins, towels, etc:

4 General

When several washing conditions are recommended for comparison of products, in order to make an objective evaluation of them, the product should be tested under the conditions specified by the manufacturer:

products and should not be tested under conditions not recommended: Product selection and specific testing of product characteristics, including laundering process, fabric load and

The experimental design, including the choice of other variables, has a strong influence: Performance testing should be performed on those laundry products that are readily available in a particular region

test: In general, product performance cannot be predicted on the basis of formulation alone, so knowledge of the product formulation is not required:

Product sampling shall be in accordance with Chapter 4 of GB/T 13173-2021:

This document mainly considers four factors in the evaluation of fabric washing products, namely: the characteristics of the fabric to be evaluated, the fabric characteristics required for the evaluation

load, the laundering method used, and the main physical characteristics of the product:

In the terms of fabric load, washing process and physical characteristics, many variables and secondary variables have been listed: To compare two or more