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NATIONAL STANDARD OF THE

PEOPLE'S REPUBLIC OF CHINA

GB/T 24692-2023

Replacing GB/T 24692-2009

Surface active agents - Detergents for domestic machine dishwashing - Guide for comparative testing of performance

表面活性剂 家庭机洗餐具用洗涤剂 性能比较试验导则

(English Translation)

Issued on: November 27, 2023 **Implemented on: June 1, 2024**

Issued by: State Administration for Market Regulation, China National Standardization Administration

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents" Drafting:

This document replaces GB/T 24692-2009 "Guidelines for comparative testing of surfactant performance of household machine dishwashing detergents" and is consistent with Compared with GB/T 24692-2009, in addition to structural adjustments and editorial changes, the main technical changes are as follows:

---Added weighing evaluation method (see 9.3);

---Added colorimetric evaluation method (see 9.4):

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This document has been modified to adopt ISO 7535:1984 "Guidelines for comparative testing of surfactant performance of household machine dishwashing detergents":

Compared with ISO 7535:1984, this document has many structural adjustments: Comparison list of structure number changes between the two files See Appendix A:

Compared with ISO 7535:1984, this document has many technical differences: Vertical single words are used in the outer margins of the clauses involved:

The line (|) is marked: A list of these technical differences and their reasons is shown in Appendix B:

The following editorial changes have been made to this document:

---Deleted the footnotes corresponding to the terms;

---Added Appendix C (informative) "Preparation of egg yolk stains";

---Added Appendix D (informative) "Preparation of mixed starch stains";

---Added Appendix E (informative) "Preparation of tea stains";

---Added Appendix F (Informative) "Preparation of Accompanying Washing Stains";

---Added Appendix G (informative) "Household Machine Dishwashing Detergent Washing Performance Test Plan":

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Introduction

In order to conduct a comparative test of the performance of various household machine dishwashing detergents and rinse aids, some relevant or irrelevant variables can be considered, the specific variables and their importance, which vary across countries and regions, depend on:

---Diversity of dirt due to different eating habits;

---Materials for making kitchen utensils, cutlery and cutlery;

---Restrictions on water quality and available machine washable dishes;

---Dishwasher programs:

Taking into account the rapid growth of my country's dishwasher and machine-washing tableware detergent market, in order to ensure that this type of detergent products are benign and useful in my country, Therefore, it is necessary to add appropriate standards based on the original performance comparison test guidelines of household machine dishwashing detergents and rinsing agents:

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Relevant performance testing methods and stain preparation methods that are suitable for my country's national conditions:

Recognizing the importance and value to the user of information obtained from similar-based design experiments, this document provides and the criteria to be considered when assessing the results: Among them, the primary criterion is to minimize damage to tableware and washing equipment:

Below, the product's decontamination effect on different stains on various types of tableware: Another important criterion is the appearance of the tableware after washing: For example, there are no stains on the surface of the utensils:

Water spots and water films appear: Although toxicological and ecological properties are also extremely important for products widely used in households, due to their exceeds the scope of this document and is not specified:

This document describes how to design a satisfactory comparative test method for a selection of different dishwashers:

Surfactant household machine dishwashing detergent Performance Comparison Test Guidelines

1 Scope

This document describes guidelines for establishing comparative performance tests of detergents for household machine dishwashing and guidelines for evaluating them:

This document is applicable to the performance evaluation of detergents and rinse aids/rinse agents for machine dishwashing:

2 Normative reference documents

The contents of the following documents constitute essential provisions of this document through normative references in the text: Among them, the dated quotations for undated referenced documents, only the version corresponding to that date applies to this document; for undated referenced documents, the latest version (including all amendments) applies to this document:

GB/T 13173-2021 Test methods for surfactant detergents (ISO 607:1980, ISO 697, ISO 4313:1976, ISO 4321:1977,ISO 4325:1990,ISO 21264:2019,MOD) Note: The cited content of GB/T 13173-2021 is consistent with ISO 607:1980, ISO 697, ISO 4313:1976, ISO 4321:1977, ISO 4325:

There are no technical differences in the cited content of:1990, ISO 21264:2019:

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3 Terms and definitions

The following terms and definitions apply to this document:

Detergent specially formulated for use in household dishwashers:

Rinseaid/shineagent

It does not have a washing function, but is a product specially formulated to improve the appearance and drying effect of dishwasher appliances:

Note: It needs to be used together with detergent, also known as drier: Add to the final rinse water as required during use, especially when the water quality is hard:

4 General principles for performance comparison test design

Preference should be given to using commercially available products for testing: The dishwasher program, appliances, and other test variables selected for testing should be based on the Make adjustments based on consumer usage habits in the trial area:

Powder and liquid samples should be sampled according to the sampling method in Chapter 4 of GB/T 13173-2021: Quantity for a single delivery Type detergents should be tested on undamaged samples:

This document summarizes the following matters or variables that should be considered when evaluating the performance of household dishwasher detergent products:

---Performance characteristics to be evaluated (see Chapter 5);

--- Contaminated utensils used to evaluate these characteristics (see Chapter 6);

---The dishwasher and washing program used during the test (see Chapter 7);

---Physical properties of detergents (see Chapter 8);

---Methods, test results, reports and explanations for evaluating performance characteristics (see Chapters 9 and 10):

Among them, Table 1 in 6:1 summarizes the variables that should be controlled when preparing and using contaminated utensils, and Table 2 in 7:3 summarizes the variables during the washing process:

The variables that need to be considered are summarized in a table:

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