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QB/T 4348-2012

Cleaner for kitchen stains & grease

厨房油垢清洗剂

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Table of contents

Foreword.....	3
1 Scope.....	4
2 Normative references.....	4
3 Requirements.....	5
4 Test method.....	6
5 Inspection rules.....	7
6 Marking, packaging, transport, and storage.....	7
APPENDIX A (Normative) Detergency test.....	9
APPENDIX B (Informative) Grubbs method.....	16

Foreword

The standard was drafted in accordance with the rules given in GB/T 1.1-2009 Directives for standardization – Part 1: Structure and drafting of standards.

This standard was proposed by China Light Industry Association.

This standard shall be under the jurisdiction of National Centre for Standardization of Detergent Products.

The drafting organizations of this standard: Beijing Green Umbrella Chemical Co., Ltd., China Daily Chemical Industry Research Institute/National detergent quality supervision & inspection centre.

The main drafters of this standard: Zhang Hui, Zhao Xinyu, Yan Fang, Qi Muge.

Cleaner for kitchen stains & grease

1 Scope

This standard specifies the requirements, test methods, inspection rules, marking, packaging, transport and storage of kitchen grease stain detergent.

This standard is applicable to the liquid detergent products which are prepared by various surface active agent, auxiliary, and solvent AND used for the cleaning and decontamination of all kinds of hard surfaces in kitchen.

This standard does not apply to solid kitchen grease stain detergent products.

2 Normative references

The following documents are essential to the application of this document. For the dated documents, only the versions with the dates indicated are applicable to this document; for the undated documents, only the latest version (including all the amendments) are applicable to this standard.

GB/T 6368 Surface active agents – Determination of pH of aqueous solution – Potentiometric method

GB/T 6682 Water for analytical laboratory use – Specification and test methods

GB/T 7378 Surface active agents – Determination of alkalinity – Titrimetric method

GB/T 13173-2008 Surface active agents – Detergents – Testing methods

GB/T 26396-2011 Technical specification for safety of soaps and detergents

QB/T 2117-1995 General water-based metal detergents

QB/T 2951 Inspection rules for detergent products

QB/T 2952 Requirements for detergent marks and packaging

JJF 1070 Rules for metrological testing for net quantity of products in prepackages with fixed content

The State Administration of Quality Supervision, Inspection and Quarantine's Directive [2005] No.75 - Measures for the measurement and supervision of products in prepackages with fixed content.

3 Requirements

3.1 Materials

The kitchen grease stain detergent products and raw materials used shall comply with the requirements of category C products in GB/T 26396 -2011.

3.2 Sensory indicators

3.2.1 Appearance

The product shall be of uniform liquid which is free from delamination, suspended matter, sedimentations, or obvious mechanical impurities (except for the product having the uniformly suspended grain components).

3.2.2 Odor

The product shall have no odor, AND be in consistent with the specified flavor type.

3.2.3 Stability

PLACE the product into (-5 ± 2) °C refrigerator for 24 h; TAKE it out and LET it restore to room temperature; CONDUCT observation; it shall be free from sedimentations or discoloration, AND the transparent product shall not be turbid; PLACE the product in the (40 ± 2) °C incubator for 24 h; TAKE it out and CONDUCT observation immediately; it shall be free from odor, delamination, or discoloration, AND transparent product shall not be turbid

Note: Stability means that the sample appearance has no obvious change before and after the test.

3.3 Physical and chemical indicators

The physical and chemical indicators of the kitchen grease stain detergent products shall comply with the provisions of Table 1.

- d) UV constant temperature aging box, temperature control at (45 ± 2) °C, the working chamber size 500mm x 500mm x 650mm, the UV lamp installed, distributed as per Figure A.1;
- e) Constant temperature water bath, temperature control at (30 ± 2) °C;
- f) Test piece, 1Cr18Ni9Ti, brushed stainless steel, 50mm x 50mm x 3mm;
- g) Electric stirring device, controllable speed 1000 r/min;
- h) Hair brush, width 10 mm ~ 20 mm;
- i) Porcelain plate M₁, M₂, 330 mm x 250 mm; small porcelain plate, 4 pieces, 165 mm x 125 mm;
- j) Plastic beaker 250 mL;
- k) Glass beaker, 300 mL, Φ (80 ± 1) mm OR the other beaker types of same diameter;
- l) Glass culture dish, Φ 90 mm;
- m) Tray, ceramic or stainless steel;
- n) Dryer, built-in allochroic silica gel;
- o) Analytical balance, maximum weighing is 200 g AND sensitivity is 0.0002 g;
- p) Balance, maximum weighing is 500 g AND sensitivity is 0.01 g;
- q) Stopwatch.

A.4 Test procedure

A. 4.1 Artificial stain preparation

Formula: soybean oil 64.0 g, nitrogen free caramel pigment 8.0 g, wheat flour 12.0 g, lard 8.0 g, butter 8.0 g, glycerin monostearate 2.4 g.

In a 250 mL plastic beaker, WEIGH soybean oil, butter, lard, and glycerin monostearate. At the water bath of 50 °C, HEAT to melt them; STIR to cool it to 30 °C; ADD nitrogen free caramel pigment; at the speed not less than 1000 r/min, STIR it for 30 min; after they are emulsified uniformly, ADD the wheat flour; STIR them for another 10 min; MAKE it subject to aging for 24 h; PRESERVE it in refrigerator freezer for use; before use, MAKE its temperature reach to 20 ~ 25 °C.

M_1 – The mass of the stained test piece before being washed, in the unit of gram (g);

M_2 – The mass of the stained test piece after being washed, in the unit of gram (g);

USE the Grubbs method to remove the suspected data, BUT at least retain four data; USE the arithmetic mean of the retained data as the final detergency.

A.4.5 Precision

Under the repeated conditions, the absolute difference between the obtained two independent measurement results is not more than 3%; AND the preconditions are based wherein the said difference is not more than 5% if it exceeds 3%.