



National Standard of the People's Republic of China

GB/T 13173—2008

Replace GB/T 12030—1989, GB/T 12031—1989, GB/T 13173.1—1991, etc.

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# Surface active agents— Detergents—Testing methods

## 表面活性剂 洗涤剂试验方法

(ISO 607:1980, ISO 2996:1974, ISO 4313:1976, ISO 4325:1990,  
ISO 697:1981, MOD; ISO 4321:1977, IDT)

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Surface active agents—  
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# Contents

Foreword .....	III
1 Scope .....	1
2 Normative references .....	1
3 Terms and definitions .....	2
4 Sample division .....	4
5 Determination of particle size of detergent powder .....	10
6 Determination of total phosphorus pentoxide content in detergents .....	11
7 Determination of total active matter content in detergents .....	17
8 Determination of nonionic surface active agents in detergents-Ion exchange method .....	21
9 Separation and determination of different forms of phosphate in detergents-Ion exchange column chromatography .....	25
10 Determination of toluene sulfonate content in detergents .....	29
11 Determination of foaming power for synthetic detergents-Ross-Miles method .....	33
12 Determination of chelating agents (EDTA) content in detergents-Titrimetric method .....	36
13 Determination of apparent density of detergent powder-Method by measuring the mass of a given volume .....	39
14 Measurement of whiteness for detergent powder .....	43
15 Determination of moisture and volatile matter content in detergents-Oven method .....	46
16 Determination of active oxygen content in detergents-Titrimetric method .....	47
17 Determination of 4A zeolite content in detergents-Titrimetric method .....	49

18	Determination of relative activity or content of protease in detergents .....	52
19	Determination of available chlorine in detergents-Titrimetric method .....	59
20	Test report .....	61
Annex A (Informative)	The relationships among the relevant provisions and the replaced standards and references .....	62
Annex B (Informative)	Relationships among the provisions and corresponding ISO standards .....	64
B.1	Relationships among the provisions and corresponding ISO standards .....	64
B.2	Comparison between Clause 4 of this standard and ISO 607:1980 .....	64
B.3	Comparison between Clause 5 of this standard and ISO 2996:1974 .....	65
B.4	Comparison between Subclause 6.1 of this standard and ISO 4313:1976 .....	66
B.5	Comparison between Clause 12 of this standard and ISO 4325:1990 .....	68
B.6	Comparison between Clause 13 of this standard and ISO 697:1981 .....	69

## Foreword

SAC/TC 272 is in charge of this English translation. In case of any doubt about the contents of English translation, the Chinese original shall be considered authoritative.

Clause 4, Clause 5, Clause 12, Clause 13, Clause 16 and Subclause 6.1 of this standard are identical with or modified adoption of corresponding ISO standards. The technical deviations between this standard and the equivalent ISO standards are marked with a vertical line in the right margin of the relevant provisions. A complete list of technical deviations, together with their justifications, is given in Annex B.

This standard is a comprehensive revision of GB/T 12030—1989, GB/T 12031—1989, GB/T 13173.1—1991, GB/T 13173.2—2000, GB/T 13173.3—13173.6—1991, GB/T 13173.7—1993, GB/T 13175—1991 and GB/T 13176.1—13176.3—1991. Methods for determination of three common components in detergents, i.e. 4A zeolite content, alkaline protease relative activity or content and available chlorine content, are added.

This standard replaces the following standards from the implementation date of this standard:

GB/T 12030—1989 *Determination of particle size of powdered detergents*

GB/T 12031—1989 *Determination of total phosphorus pentoxide content in detergents-Quinoline phosphomolybdate gravimetric method*

GB/T 13173.1—1991 *Methods of sample division for detergents*

GB/T 13173.2—2000 *Determination of total active matter content in detergents*

GB/T 13173.3—1991 *Determination of nonionic surface active agents in detergents — Ion exchange method*

GB/T 13173.4—1991 *Separation and determination of different forms of phosphate in detergents-Ion exchange column chromatography*

GB/T 13173.5—1991 *Determination of toluenesulfonate content in detergents*

GB/T 13173.6—1991 *Determination of foaming power for synthetic detergents—Ross—Miles method*

GB/T 13173.7—1993 *Soaps and detergents—Determination of EDTA (chelating agents) content-Ti-*

GB/T 13173—2008

*trimetric method*

GB/T 13175—1991 *Determination of apparent density of powdered detergents—Method by measuring the mass of a given volume*

GB/T 13176.1—1991 *Measurement of whiteness for powdered detergents*

GB/T 13176.2—1991 *Determination of moisture and volatile matter content in washing powders—Oven method*

GB/T 13176.3—1991 *Washing powders—Determination of active oxygen content—Titrimetric method*

The following deviations have been made with respect to the standards replaced:

—The 13 national standards above-mentioned have been incorporated to become Clause 4 ~ 16 of this standard with editing errors corrected.

—Method for determination of toluene sulfonate content in detergents, as specified in GB/T 13173.5—1991, is modified adoption of British Standard BS 3762—3.10: 1989 and ASTM D 2023:1989 (2003);

—Methods for determination of three common components in detergents, i.e. 4A zeolite content, alkaline protease relative activity or content, and available chlorine content, have been added as Clause 17, Clause 18 and Clause 19;

—The relationships among the relevant provisions and the replaced standards, as well as the references are listed in Annex A of this standard.

Annex A and Annex B of this standard are informative.

This standard was proposed by China National Light Industry Council (CNLIC).

This standard was prepared by SAC/TC 272, the National Technical Committee on Surfactant and Detergent of Standardization Administration of China.

The previous editions of this standard are as follows:

—GB/T 12030—1989, GB/T 12031—1989, GB/T 13173.1—1991, GB/T 13173.2—2000, GB/T 13173.3~13173.6—1991, GB/T 13173.7—1993, GB/T 13175—1991 and GB/T 13176.1~13176.3—1991.

# Surface active agents- Detergents-Testing methods

## 1 Scope

This standard specifies 16 methods for determination of surface active agent (or surfactant) and detergent, including sample division, particle size, total phosphorus pentoxide, total active matter, nonionic surface active agents, different forms of phosphate, toluene sulfonate, foaming power, chelating agents (EDTA), apparent density, whiteness, moisture and volatile matter, 4A zeolite, active oxygen, alkaline protease activity and available chlorine.

This standard is applicable to determination of properties of surfactant and detergent. Choose the appropriate method according to the sample characteristic.

## 2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this standard. For dated references, subsequent amendments (excluding corrections), or revisions, of any of these publications do not apply to this standard. However parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies.

GB/T 6003.1—1997, *Test sieves of metal wire cloth*

GB/T 9087, *The white powdered standard plate for colorimetry and photometry*

QB/T 2623.1—2003, *Test methods of soaps—Determination of free caustic alkali content in soaps*

QB/T 2739—2005, *Preparations of standard volumetric solutions of general test methods for washing products*

JB/T 9327, *Whiteness meter*

JJG 512, *Verification regulation of the whiteness meter*