

ICS 71.100.40
CCS G 72



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 7381-2010

Replacing GB/T 7381-1993

Surface active agents -- Determination of stability in hard water

表面活性剂 在硬水中稳定性的测定方法

(English Translation)

Issued on: January 14, 2011

Implemented on: December 1, 2011

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine of the People's Republic of China**

Table of Contents

- Foreword
- 1 Scope
- 2 Normative reference documents
- 3 Terms and definitions
- 4 Principle
- 5 Reagents and materials
 - 5.1 General
 - 5.2 Hard aqueous solution

Foreword

This standard replaces GB/T 7381-1993 "Determination of stability of surfactants in hard water".

The main differences between this standard and the original standard.

- format written according to GB/T 1.1-2009 "Standardization of work guidelines Part 1. Standard structure and preparation";

- Added foreword;

- Added terms and definitions;

- Added test report section.

This standard uses the re-drafting method to modify ISO 1063. 1974 "Determination of Surfactant Stability in Hard Water".

The main differences between this standard and ISO 1063. 1974.

- in the preparation of the test solution to increase the centrifugal separation of the treatment;

- the capacity of the test tube is not specified;

- specifies the sample weighing accuracy;

- Added a small amount of precipitation or agglomerates and a large number of precipitation or agglomerates scoring criteria.

This standard is proposed by the China Petroleum and Chemical Industry Association.

This standard is owned by Shanghai Dyestuff Research Institute Co., Ltd.

The drafting unit. Shanghai Dyestuff Research Institute Co., Ltd., Zhejiang Synthetic Chemical Co., Ltd.

1 Scope

This standard specifies a method for determining the stability of surfactants in hard water.

This standard is applicable to the determination of surfactant stability in water that is readily soluble in water at a certain temperature.

2 Normative reference documents

The following documents are indispensable for the application of this document. For dated references, only the dated edition applies to this file. For undated references, the latest edition (including all modifications) applies to this document.

GB/T 6367 Surfactant Known Calcium Hardness Water Preparation (GB/T 6367-1997, idt ISO 2174..1990)

3 Terms and definitions

Hard water

Refers to the presence of soluble alkaline earth compounds, especially calcium salts. Expressed in millimoles of calcium per liter.

Surfactant stability in hard water surface active agents' stability in hard water is determined by the solubility of the compound formed by the surfactant and calcium ion exchange, or by the ionic force, the salt effect, and the like to decide.

4 Principle

Surfactants are ion-exchanged between hard water and calcium ions (magnesium ions) to form a compound, depending on its solubility or the stability of the surfactant in hard water can be determined by the principle of ionic force, salt effect and so on.

Mixing the different concentration of the surfactant solution with an aqueous solution of different known calcium hardness, allowing the mixture to stand under the prescribed conditions, Observation of its appearance can be divided into. clear, milky, turbid, a small amount of precipitation or aggregates, a large number of precipitation or aggregates.

Since there is no fundamental difference between calcium hardness and magnesium hardness, this method is represented by calcium hardness.

5.1 General

Prepared according to GB/T 6367.

5.2 Hard aqueous solution

5.2.1

hard aqueous solution S1. $c(1/2Ca^{2+}) = 6\text{mmol/L}$.