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

GB/T 27852-2011

**Chemicals -- Biodegradation screening test -- Biochemical
oxygen demand**

化学品 生物降解筛选试验 生化需氧量

(English Translation)

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Foreword

This standard was drafted in accordance with GB/T 1.1-2009 given rules.

This standard and the European Commission Regulation 440/2008. the European Parliament and the Council on the Registration, Evaluation, Authorisation and Restriction Methods C.5 (REACH) No. 1907/2006 Test method regulations (2008) "BOD degradation" in the technical the same contents.

This standard configuration and do the following editorial changes.

- The units of measurement to our legal units of measurement;
- Consistent with the existing standard series, the standard name will be changed to "Chemicals biodegradability screening tests Biochemical Oxygen Demand";
- Terminology and definitions provisions, the use of national standards and consistent definition of already published.

This standard is managed by the National Standardization Technical Committee chemicals dangerous (SAC/TC251) and focal points.

This standard was drafted. MEP Chemical Registration Center, Shanghai Testing Center, Ministry of Environmental Protection, Nanjing Institute of Environmental Sciences, Guangdong Province, microbiological analysis Testing Center, Chinese Academy of Inspection and Quarantine.

Introduction

The purpose of this method is to determine the solid or liquid organic biochemical oxygen demand (BOD).

The Test Guidelines apply to water-soluble test substance, at least in theory also applies to the volatility and low water solubility of the test substance.

This method applies only to the next test concentration had no effect on bacteria organic test substances. If the concentration of the test substance at the test-insoluble, should be adopted with a particular method of ultrasonic dispersion, etc., so the test was to obtain good dispersion.

Toxicity data test substance may help to explain the phenomenon of low test results and selection of appropriate test concentrations.

Chemicals biodegradation screening test BOD

1 Scope

This standard specifies the test methods for chemical biodegradability screening tests BOD.

This standard applies to solid or liquid water-soluble organic substances, it can also be used for volatility, low water solubility of the organic matter.

This standard applies to the concentration of bacteria in the test no inhibitory effect of organic matter.

This standard gives a test substance biodegradability screening method.

2 Terms and definitions

The following terms and definitions apply to this document.

BOD biochemicaloxygendemand, BOD the amount of oxygen consumed by the microbial decomposition of organic matter, can be expressed as the number of milligrams of oxygen (mg/mg) of the test substance consumed per milligram.

3 Test substance information

Test information, including.

- a) the formula or the formula;
- b) purity and impurity;
- c) water solubility or dispersion;
- d) vapor pressure;

e) microbial toxicity or inhibitory.

4 Reference substances

Using a suitable reference material test inoculum activity.

5 Principle of the method

A certain amount of test substance is dissolved or dispersed in a sufficiently aerated suitable medium, inoculated with microorganisms, thermostatic dark airtight culture. through Measuring the start of the test and the dissolved oxygen content at the end to determine the difference between the BOD. Test period of at least 5d, but not more than 28d.

6.1 Preparation of the test solution

Test for solubility greater than the concentration of test substance, the test needs to be formulated based on the initial solution of the test substance.