

ICS 83.080.01

CCS G 31



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

GB/T 48032-2026

**Plastics - Ecotoxicity testing scheme for soluble decomposition
intermediates from biodegradable plastic materials and products used
in the marine environment - Test methods and requirements**

塑料 海洋环境中使用的可生物降解塑料材料和制品可溶性分解中间体的生态毒性
试验方案 试验方法和要求

(English Translation)

Issued on: July 30, 2026

Implemented on: February 1, 2027

Issued by: State Administration for Market Regulation

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Foreword

This document conforms to GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents".

Drafting is scheduled.

This document is equivalent to ISO 5430:2023 "Plastics - Biodegradable plastic materials and articles used in the marine environment - Soluble components".

"Ecotoxicity testing protocols, methods, and requirements for decomposition intermediates".

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

1 Scope

This document specifies the corresponding assessment requirements for the potential adverse ecotoxicological effects on marine organisms and describes ecotoxicological testing.

The testing methods. Soluble decomposition products of plastic materials can adversely affect marine species, for example, those used in marine applications (such as aquaculture).

Plastic materials used in different marine areas (such as nearshore, sub-nearshore or open ocean areas).

Ecotoxicity testing included marine organisms at four trophic levels. primary producers, primary consumers, secondary consumers, and decomposers.

--Toxicity to seaweed;

--Toxicity to marine invertebrates;

--Toxicity to marine fish;

--Toxicity to marine microorganisms.

This document is not applicable to assessing the adverse effects of solid materials of any size.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are listed below.

For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies.

This document.

ISO 472 Plastics Vocabulary Note. GB/T 2035-2024 Plastics Terminology (ISO 472:2013, NEQ) ISO 5667-16 Water quality sampling-Part 16: Guidelines for biological testing of samples Guidance on biotesting of samples) ISO 10210 Methods for the preparation of samples for biodegradation testing of plastic materials samples for biodegradation testing of plastic materials) Note. GB/T 38787-2020 Sample preparation method for biodegradation testing of plastic materials (ISO 10210:2012, IDT) ISO 10253:2024 Water quality - Marine algae growth inhibition test of *Skeletonema spp.** and *Phaeodactylum tricornutum** (Water quality - Marine algae) Note. There are no technical differences between the content referenced in ISO 10253:2024 and the content referenced in ISO 10253:2016.

ISO 11348 (all parts) Determination of the inhibitory effect of water samples on the luminescence of *Vibrio fischeri* (luminescent bacteria test) [Water quality-] ity-Determination of the inhibitory effect of water samples on the light emission of *Vibrio fischeri* (Lumi-nescent bacteria test) ISO 11348-1:2007 Water quality - Determination of the inhibitory effect of *Vibrio fischeri* luminescence on water samples (luminescent bacteria test) - Part 1: New Fresh culture bacterial method [Water quality - Determination of the inhibitory effect of water samples on the light emisinin] sion of *Vibrio fischeri* (Luminescent bacteria test)-Part 1: Method using freshly prepared bacteria] ISO 11348-2:2007 Water quality - Determination of the inhibitory effect of water samples on *Vibrio fischeri* luminescence (luminescent bacteria test) - Part 2: Liquid Dry bacterial method [Water quality-Determination of the inhibitory effect of water samples on the light emission of