ICS 71.100.01
CCS G 55

NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 21878-2025

Replacing GB/T 21878-2008

Water-soluble dyes - Determination of shade and spectrostrength

水溶性染料 色光和分光强度的测定

Issued on: August 29, 2025 **Implemented on: March 1, 2026**

Issued by: State Administration for Market Regulation;
Standardization Administration of the PRC

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting.

This document replaces GB/T 21878-2008 "Determination of spectral intensity of water-soluble sulfur dyes" and is consistent with GB/T 21878-2008.

In addition to structural adjustments and editorial changes, the main technical changes are as follows.

a) The scope has been changed (see Chapter 1, Chapter 1 of the 2008 edition);

b) Added terms and definitions (see Chapter 3);

c) Added reagents (see Chapter 6);

d) The content of the test method has been changed (see Chapter 7, Chapter 5 of the 2008 edition);

e) Added content on color light assessment (see 7.2);

f) The content of the test report has been changed (see Chapter 8, Chapter 6 of the 2008 edition).

Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents.

This document was proposed by the China Petroleum and Chemical Industry Federation.

This document is under the jurisdiction of the National Technical Committee on Standardization of Dyes (SAC/TC134).

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This document was first published in 2008 and this is the first revision.

1 Scope

This document describes the principles, equipment and materials, reagents, test methods, and test reports for the determination of the colorimetric and spectrophotometric intensity of water-soluble dyes.

This document applies to the determination of colorimetry and spectral intensity of water-soluble dyes.

2 Normative references

GB/T 2374-2017

GB/T 6687

GB/T 8170-2008

3 Terms and Definitions

The terms and definitions defined in GB/T 6687 apply to this document.

4 Principles

Prepare the test sample (test specimen) and the standard sample (standard sample) of the same type into a solution of appropriate concentration under the same conditions and measure the concentration in a spectrophotometer.

The absorbance of the sample is measured at the maximum absorption wavelength, and the relative absorbance of the sample is expressed as the percentage of the absorbance of the sample to the absorbance of the standard.

The spectral intensity of the standard sample.

When the absorbance values are basically the same, the color of the sample is evaluated by visually observing the color difference between the sample and the standard in the colorimetric tube.

5 Equipment and Materials

The materials and equipment used shall comply with the provisions of Chapter 3 and Chapter 4 of GB/T 2374-2017.

a) Analytical balance. accuracy 0.0001g;

b) spectrophotometer;

c) Cuvette. 10 mm.

6 Reagents

The reagents and test water used should comply with the requirements of GB/T 2374-2017.