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

GB/T 18654.7-2026

Replacing GB/T 18654.7-2008

**Inspection of germplasm for fishes - Part 7: Test method for
ecological characteristics**

鱼类种质检验 第7部分：生态特性分析

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1. Structure and Drafting Rules of Standardization Documents". Drafting. This document is Part 7 of GB/T 18654, "Fish Germplasm Inspection". GB/T 18654 has already published the following parts.

- 1. Inspection Rules;
- 2. Sampling Methods;
- 3. Characteristic Determination;
- 4. Measurement of Age and Growth;
- 5. Dietary Analysis;
- 6. Determination of reproductive performance;
- 7. Ecological Characteristics Analysis;
- 8. Determination of Oxygen Consumption Rate and Critical Asphyxia Point;
- 9. Meat Percentage Determination;
- 10. Determination of muscle nutrient composition;
- 12. Karyotype Analysis;
- 13. Isozyme Electrophoresis Analysis;

1 Scope

GB/T 18654.7-2026 is the Chinese national standard covering the ecological characters of

a fish stock - the temperature and salinity range it tolerates, its habitat and its migration, which determine where it can be farmed and whether a stocking programme has any chance. It replaces GB/T 18654.7-2008 and has been in force since 1 September 2026, one of the parts of the GB/T 18654 fish germplasm inspection series revised together. It was issued on 27 February 2026 and has been in force since 1 September 2026, replacing GB/T 18654.7-2008. The document is under the responsibility of the Ministry of Agriculture and Rural Affairs. This page is published from the official record of the 2026 edition; the clause text of a standard this recent is not yet in circulation, and the figures, limits and tables it contains are those of the document itself, delivered in full with the English translation.

This document describes the reagents, instruments, equipment, samples, and experimental procedures for analyzing ecological characteristics (temperature and salinity tolerance) in fish germplasm testing. And data processing. This document is applicable to the analysis of fish temperature and salinity tolerance.

4 Reagents

4.1 Solid sea salt. Industrial grade.

5 Instruments and Equipment

5.1 Water thermometer. measuring range 0°C~50°C, accuracy 0.1°C.

5.2 Salinity meter. Measurement range 0.0~80.0, accuracy 0.1.

5.3 Circulating aquarium. Volume $\geq$ 100L, temperature controllable, temperature range 0°C~50°C.

6 Samples

6.1 Sampling of test fish shall be carried out in accordance with the provisions of GB/T 18654.2.

6.2 Sample size $\leq$ 250g is preferred.

6.3 The number of test fish shall be determined according to the test items, with no less than 30 fish per group.

7 Experimental Procedure

7.1 Temporary care The experimental fish were temporarily housed in an indoor recirculating aquarium (5.3) for 7 days at room temperature, with suitable salinity, continuous oxygenation, and normal feeding. 24 hours before the experiment... Stop eating.

7.2 Determination of Critical Temperature The experiment was conducted in a circulating

aquarium (5.3). The initial water temperature was room temperature, and the temperature was continuously increased at a rate of 0.5°C/h to 1°C/h. Cool the water and observe and record the water temperature (T_i) at which each experimental fish loses its balance.

7.3 Determination of critical salinity The experiment was conducted in a circulating aquarium (5.3). The initial salinity was set at a suitable level, and the salinity was continuously increased in a gradient of (1–2)/day. Alternatively, the salinity could be lowered, and the salinity (S_i) at which each experimental fish lost its balance could be observed and recorded.

8 Data Processing

8.1 Critical Temperature The highest critical temperature and the lowest critical temperature are calculated according to formula (1).

8.2 Critical Salinity The maximum critical salinity and the minimum critical salinity are both calculated according to formula (2). GB/T 18654.7-2026. Fish germplasm testing - Part 7. Analysis of ecological characteristics ICS

50 National Standards of the People's Republic of China Replaces GB/T 18654.7-2008
Fish germplasm testing Part