ICS 65.150
CCS B 50

NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 18654.6-2026

Replacing GB/T 18654.6-2008

Inspection of germplasm for fishes - Part 6: Determination of fecundity

鱼类种质检验 第6部分：繁殖性能的测定

Issued on: February 27, 2026 **Implemented on: September 1, 2026**

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

Table of Contents

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 6 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 18654.6-2026 is the Chinese national standard covering the reproductive performance of a broodstock - the fecundity absolute and relative to body weight, the egg size and the fertilisation and hatching rates, which is what a hatchery's output is calculated from. Germplasm inspection is what establishes that a broodstock population really is the species and strain it is sold as, and that it has not degenerated through generations of hatchery breeding. It replaces GB/T 18654.6-2008 and has been in force since 1 September 2026, one of the six parts of the GB/T 18654 series revised together. It was issued on 27 February 2026 and has been in force since 1 September 2026, replacing GB/T 18654.6-2008. 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 and materials, instruments and equipment, samples, test procedures and data processing for determining the reproductive performance of fish. This document applies to the determination of fish reproductive performance.

4.Reagents and Materials 4.1 5% formaldehyde (CH2O) solution. Measure 5 mL of formaldehyde (CH2O) solution and mix it with 95 mL of distilled water.

5 Instruments and Equipment

5.1 Electronic scale. Sensitivity 1.0g.

5.2 Electronic balance. sensitivity 0.01g.

5.3 Dissecting microscope.

6 Samples

6.1 Sampling Perform in accordance with the provisions of GB/T 18654.2.

6.2 Sample Preparation for Gestation Count Measurement Weigh the female fish at ovarian development stage IV (W) using an electronic scale (5.1) or electronic balance (5.2). Remove the ovary and weigh it (m). Approximately 1g samples (m1, m2, and m3) were taken from the anterior, middle, and posterior parts of the ovary, respectively, and weighed using an electronic balance (5.2) to an accuracy of 0.01g. After fixation with 5% formaldehyde (CH2O) solution (4.1), the samples were placed in petri dishes (4.2) and labeled as Sample 1, Sample 2, and Sample

3.For eggs that are too small or too large... For large fish, adjust the amount of sample taken by reducing or increasing the quantity.

6.3 Sample Preparation for Egg Laying Determination Weigh the female parent fish before and after spawning using an electronic scale (5.1) (W1 and W2). Take a sample of approximately 1g (m) of freshly laid eggs and weigh them using an electronic scale. Weigh the sample (5.2) to an accuracy of 0.01g and place it in a petri dish (4.2).

7 Experimental Procedure

7.1 Age determination of parent fish Perform in accordance with the provisions of GB/T 18654.4.

7.2.1 Measurement of fertility Take the sample prepared in

6.2 and count the number of eggs (n1, n2 and n3) that have begun to deposit yolk under a dissecting microscope (5.3).

7.2.2 Measurement of egg production Take the sample prepared in step

6.3 and count the number of oocytes (n) under a dissecting microscope (5.3).

8 Data Processing

8.1 Calculation of fertile egg count The absolute fertility (F) and relative fertility (FW) are calculated according to formulas (1) and (2), respectively.

8.2 Calculation of Egg Laying The number of eggs laid is calculated according to formula (3). GB/T 18654.6-2026. Fish germplasm testing - Part 6. Determination of reproductive performance ICS

50 National Standards of the People's Republic of China Replaces GB/T 18654.6-2008 Fish germplasm testing Part