

ICS 65.150
CCS B 50



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

GB/T 18654.5-2026

Replacing GB/T 18654.5-2008

**Inspection of germplasm for fishes - Part 5: Test method for
feeding habits**

鱼类种质检验 第5部分：食性分析

Issued on: February 27, 2026

Implemented on: September 1, 2026

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

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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 5 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 18654.5-2026 is the Chinese national standard covering what a fish actually eats - the gut content analysis and the indices computed from it, which determines how a species can be fed in culture and what it will do in a polyculture pond. 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 18654.5-2008 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 18654.5-2008. 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, experimental procedures, and data processing for fish diet analysis. This document is applicable to fish diet analysis.

4 Reagents and Materials

4.1 Solution Preparation 4.1.1 10% formaldehyde (CH₂O) solution. Measure 10 mL of formaldehyde (CH₂O) solution and mix it with 90 mL of distilled water.

4.2 Materials

4.2.1 Filter paper.

4.2.2 Petri dish.

4.2.4 Glass slides.

5 Instruments and Equipment

5.1 Electronic balance. Sensitivity 0.001g.

5.2 Electronic scale. Sensitivity 1.0g.

5.3 Dissecting microscope.

6 Samples

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

6.2 Dissect immediately after sampling. Remove the contents of the stomach or anterior segment of the intestine, place them on filter paper (4.2.1) to absorb the moisture, and obtain a food bolus. Analyze the bolus using an electronic balance. (5.1) Weigh the total weight (m) of the food bolus sample, and weigh the fish body (W) after removing internal

organs using an electronic balance (5.1) or an electronic scale (5.2), and record the weight. Record. Food clump samples for off-site analysis were labeled and stored in 10% formaldehyde (CH₂O) solution (4.1.1).

7 Experimental Procedure

7.1 Place the food clump in a petri dish (4.2.2), add an appropriate amount of water and mix well. Then, use a pipette (4.2.3) to pipette the mixture onto a glass slide (4.2.4) and use... Species identification is performed using a dissecting microscope (5.3) or a microscope (5.4), generally down to the smallest taxonomic level. For partially digested food, the remaining... Identification of bone fragments, appendages, shells, scales, etc.

7.2 Record the number of individuals containing a certain type of food (nx) and the total number of individuals containing food (N).

7.3 After identification, each type of food was dried and weighed separately using an electronic balance (5.1) (mx).

8 Data Processing

8.1 Food Composition The food composition of the sample is obtained by statistically analyzing the different food types in the food mass.

8.2 Frequency of Occurrence The frequency of occurrence (P) is calculated according to formula (1).

8.3 Fullness Index The fullness index (B) and the fullness fraction (Bt) of a certain type of food are calculated according to formulas (2) and (3), respectively. GB/T 18654.5-2026.

Fish germplasm testing - Part 5. Feeding analysis ICS

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