

ICS 13.020
CCS Z 06

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

HJ 442.5-2020

Replacing HJ 442-2008

**Technical specifications for environmental monitoring in
coastal waters - Part 5: Monitoring of biological quality in
coastal waters**

近岸海域环境监测技术规范 第五部分 近岸海域生物质量监测

(English Translation)

Issued on: December 16, 2020

Implemented on: March 1, 2021

Issued by: Ministry of Ecology and Environment

Table of Contents

Foreword

- 1 Technical specifications for environmental monitoring in coastal waters
- 2 Normative references
- 3 General requirements for biological quality monitoring in coastal waters
- 24 Collection, storage and transportation of biological quality samples
- 45.4 Preparation of large fish samples

Foreword

To implement the Environmental Protection Law of the People's Republic of China, the Marine Environmental Protection Law of the People's Republic of China, and the People's Republic of China Regulations of the People's Republic of China on the Prevention and Control of Land-Source Pollutants Pollution and Damage to the Marine Environment "Regulations on the Management of Environmental Pollution Damage to the Marine Environment" and the "Administrative Measures for Environmental Functional Zones in Coastal Sea Areas" to regulate the ecological environment Environmental quality monitoring, protect the ecological environment, and ensure the scientific, accurate, systematic, and feasible Comparability and representativeness, formulate this standard.

This standard was first published in 2008. The original standard drafting unit was China Environmental Monitoring Station and Zhoushan Ocean Ecological environment monitoring station. This is the first revision. The revised standard consists of the following ten parts.

Part One General Provisions Part Two. Data Processing and Information Management Part III Water Quality Monitoring of Inshore Waters Part Four. Monitoring of Sediment in Coastal Seas Part V Monitoring of Biological Quality in Coastal Waters Part VI Biological Monitoring in Inshore Waters Part VII Monitoring of rivers entering the sea Part 8: Monitoring of Direct Discharge of Sea Pollution Sources and Impact on the Water Environment of Inshore Waters Part IX Emergency and Special Monitoring in Coastal Waters Part 10 Evaluation and Report this standard, as the fifth part of the revised standard, focuses on sample collection, the methods and procedures of preservation, transportation, laboratory analysis, and quality control are mainly revised in the following aspects.

--Add relevant requirements for routine monitoring in accordance with GB 18421;

--Detailed sample preparation process;

--Improved the selection requirements of analysis methods;

- Supplement related requirements for quality control.

Appendix A of this standard is an informative appendix.

From the date of implementation of this standard, the "Environmental Monitoring Specifications for Coastal Sea Areas" (HJ 442-2008) shall be abolished.

This standard was formulated by the Department of Ecological Environment Monitoring and the Department of Regulations and Standards of the Ministry of Ecology and Environment.

Drafting organizations of this standard. China Environmental Monitoring Station, Zhoushan Marine Ecological Environmental Monitoring Station of Zhejiang Province, Tianjin Ecological Environmental Monitoring Center, Dalian Ecological Environmental Monitoring Center of Liaoning Province.

This standard was approved by the Ministry of Ecology and Environment on December 16, 2020.

This standard will be implemented on March 1, 2021.

This standard is interpreted by the Ministry of Ecology and Environment.

1 Technical specifications for environmental monitoring in coastal waters

Part V Monitoring of Biological Quality in Coastal Waters

1 Scope of application this standard specifies the collection, storage and transportation of biological quality samples in coastal waters, sample preparation, sample analysis, quality Control and other aspects.

This standard applies to biological quality monitoring in coastal waters.

2 Normative references

The content of this standard refers to the terms in the following documents. For undated references, the valid version is applicable to this standard.

GB 17378.3 Marine Monitoring Specification Part 3: Sample Collection, Storage and Transportation GB 18421 Marine Life Quality Standard HJ 168 Technical Guidelines for the Preparation and Revision of Environmental Monitoring and Analysis Methods HJ 442.1 The general rules of the first part of the technical specifications for environmental monitoring in coastal waters HJ 442.2 Technical Specification for Environmental Monitoring in Coastal Seas Part 2 Data Processing and Information Management HJ 442.4 Technical Specification for Environmental Monitoring in Coastal Seas Part 4 Monitoring of Sediment in Coastal Seas HJ 442.10 Technical Specifications for Environmental Monitoring in Coastal Seas Part Ten Evaluation and Report HJ 730 Technical Specification for Layout of

Environmental Monitoring Points in Coastal Waters

3 General requirements for biological quality monitoring in coastal waters

The implementation plan for routine monitoring of biological quality in coastal waters shall be formulated in accordance with the relevant requirements of HJ 442.1;

The relevant requirements of HJ 730 shall be implemented; data processing and data reporting shall be implemented according to the requirements of HJ 442.2; evaluation and reporting shall be implemented according to HJ 442.10 Require execution.

The biological quality monitoring frequency for routine monitoring of important estuaries, bays and key regions determined by the state is once a year.

According to the monitoring conditions and evaluation requirements, the area can be sampled once a year or once every two years. The sampling time is arranged in July to August or Class maturity. The biological maturity period is determined according to the specific conditions of each region, and the sampling time in different years should be consistent. collection for crustaceans, fish and algae samples, the frequency and time of sampling shall be determined according to the monitoring purpose. The sampling is generally during the fishing period;

Fish and shrimp monitoring are generally in the mature period; sampling times in different years should be kept the same.

The mandatory test items for routine monitoring are the shellfish pollution evaluation items specified in GB 18421; the selected test items are the monitoring area Quality of other shellfish pollution factors and other organisms (crustaceans, fish and algae) except those specified in GB 18421 Wait.

The biological quality monitoring items, time and frequency of other monitoring tasks shall be determined according to the monitoring purpose.

24 Collection, storage and transportation of biological quality samples

4.1 Collection of samples

4.1.1 Basic principles

a) The principle of regional representativeness. The sample collection for routine monitoring should be able to reflect the Accumulation status; should choose to represent different types of habitats (intertidal zone, subtidal zone and nearshore sea area);

Avoid sources of pollution. For sample collection for other thematic monitoring, select those

that meet the monitoring purpose and are suitable for thematic evaluation.

area.

b) The principle of species representativeness. For the types of samples collected for routine monitoring, shellfish samples should be selected in accordance with GB 18421;

When the requirements of GB 17378.3 cannot be met, local dominant species should be selected; such as crustaceans, fish and general when monitoring the biological quality of algae, local dominant species or economic species should be collected.

4.1.2 Selection of sample types the species should be economic organisms with abundant yields, preferably edible; for settlers in this area, the life cycle requirement is one Over years; have an appropriate size to provide enough tissue samples for analysis; have a strong ability to accumulate pollutants;

The main species is shellfish, and fish, crustaceans and algae can be selected according to the characteristics of the sea area (tidal flat); according to my country's marine life According to the characteristics of distribution, the shellfish recommended to be sampled are mussels, oysters, cockles, clams, razor clams, etc.; fish are yellow croaker, plum boy, Pomfret, mullet, flounder, etc.; crustaceans are portunus, sturgeon, shrimp, etc.; algae are kelp, seaweed, sargassum, etc. With the type of body may be determined according to the actual local conditions.

4.2 Collection of samples

4.2.1 Sampling method Sampling methods include benthic trawl fishing, nearshore fixed-point aquaculture sampling, fishing boat fishing, fixed-net fishing in coastal waters and for fishing or direct purchase from the market, the samples obtained should be newly collected and uncontaminated samples.

4.2.2 Sampling tools when sampling, attention should be paid to the impact of sampling tools on the items to be tested, and general iron tools cannot be used to determine metal items.

And galvanized and chrome-plated tools.

4.2.3 Sampling area

The sampling of environmental quality monitoring points in coastal waters can be directly collected at the points and nearby areas;

The sampling of environmental quality monitoring points in coastal waters can also be collected in the intertidal zone or breeding farms in adjacent areas. To the monitoring point when samples cannot be collected nearby, the actual situation should be noted.

Shellfish in the intertidal zone should be collected at designated locations; the shellfish, fish, shrimp, and algae samples in the subtidal zone and inshore waters should be collected