

ICS 07.060

CCS A45



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

GB 17378.4-2007

**The specification for marine monitoring - Part 4: Seawater
analysis**

海洋监测规范 第4部分: 海水分析

Issued on: October 18, 2007

Implemented on: May 1, 2008

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine of the People's Republic of China;
Standardization Administration of China**

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Foreword

All technical content in this section is mandatory. GB 17378 "marine monitoring" is divided into seven parts.

--- Part 1. General;

--- Part 2. Data processing and analysis of quality control;

- Part 3. Sample collection, storage and transport;
- Part 4. Seawater analysis;
- Part 5. Sediment analysis;
- Part 6. Analysis of the organism;
- Part 7. Ecological survey of offshore pollution and biological monitoring. This section GB Part of 417,378, instead of GB 17378.4-1998 "specification for marine monitoring Part 4. Seawater Analysis." This section compared with GB 17378.4-1998 main changes are as follows:
 - Water sample collection, storage and transport adjusted normative appendix (1998 Version 4.3; edition of Appendix B);
 - The detection limit adjustment is an informative annex (1998 edition Chapter 5; edition Appendix C);
 - Increased mercury atomic fluorescence assay (see 5.1);
 - Canceled mercury dithizone spectrophotometry (1998 edition 6.2);
 - Modified flameless atomic copper, lead and cadmium absorption spectrophotometry, adjusted to copper, lead and cadmium continuous assay (1998 Edition of 7.1,8.1,9.1; this edition 6.1,7.1,8.1);
 - Canceled copper diethyldithiocarbamate sodium spectrophotometry (1998 Version 7.4);

1 Scope

Part 4 of China's mandatory specification for marine monitoring, covering seawater analysis. This part gives the methods themselves, and its content is shaped by the awkwardness of the matrix: seawater is a concentrated salt solution, and the determinands are present at a billionth of that concentration. Almost every method therefore has a separation or preconcentration step before the measurement - chelation and solvent extraction for the trace metals, purge and trap or liquid extraction for the organics - and the interferences from the salt matrix are the reason most direct instrumental methods cannot simply be applied. The part specifies the methods for the nutrients, the dissolved gases, the trace metals, the petroleum hydrocarbons, the organochlorines and the other determinands of the national programme, with their detection limits and their precision, so that results from different laboratories can be compared.

GB 17378 of the provisions of this part of the analysis of the water monitoring program for the analysis of sea water sample collection, storage, transportation, measurement results If the calculation proposed technical regulations and requirements. This section applies to oceans, coastal waters, estuaries and brackish waters mixed. It can be used for marine

environmental monitoring, water quality monitoring routine, nearshore shallow waters Environmental pollution investigation and monitoring, as well as marine dumping, dredged material, red tides and marine pollution accident emergency monitoring and special investigations related to the sea ocean Marine environment investigation and monitoring.

2 Normative references

The following documents contain provisions which, through reference in this Part of GB 17378, constitute provisions of this part. For dated reference documents Member, all subsequent amendments (not including errata content) or revisions do not apply to this section, however, encouraged to reach under this section Parties to research agreement to use the latest versions of these documents. For undated reference documents, the latest versions apply to this section.

GB/T 12763.2 specification for oceanographic survey - Part 2. Marine hydrographic observations

GB/T 12763.4 specification for oceanographic survey - Part 4. Chemical elements Marine Survey

GB 17378.2 specification for marine monitoring Part 2. Data processing and quality control analysis

GB 17378.3 specification for marine monitoring Part 3. Sample collection, storage and transportation HY/T 07-1992 reversed thermometer

3 Terms and Definitions

The following terms and definitions apply to this part of GB 17378.

3.1 Using 0.45μm fiber membrane filter water.

3.2 Metering vessel volume mark.

4.1 Reagents, solvents, membrane purification and treatment

4.1.1 ammonia isothermal diffusion method Purification. each containing ammonia and high water on the glass container division dryer separator or lower deck, Closed place. Diffusion time depends on temperature may be about 1 week to 2 weeks.

4.1.2 chloroform, carbon tetrachloride purification. the opening of the new solvent can be a simple process that added 200mL of hydrochloric acid per liter of solvent Hydroxylamine solution (0.5% volume fraction), shaking in a separatory funnel and washed aqueous phase was discarded, and washed with water once, dried over filter paper Filter can be. If the recovery of waste as a solvent or after the above-described method of treatment is still not eligible, instead dismount treatment. Pour the solvent into the distillation flask to half Full,