



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

GB 23200.88-2016

Replacing SN 0598-1996

**Food safety national standard -- Detection of Organochlorine
Pesticide Residues in Aquatic Products**

水产品中多种有机氯农药残留量的检测方法

(English Translation)

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Foreword

This standard replaces SN/T 598-1996 "Test methods for the determination of multiple organochlorine pesticide residues in aquatic products".

Compared with SN/T 598-1996, the main changes are as follows.

- Standard text format is modified to national standard text format for food safety;
- the name of the "export aquatic products" to "aquatic products";
- increase the "other food reference implementation" in the standard range.

This standard replaced the previous version of the standard release.

-SN/T 598-1996.

National standards for food safety Detection of Organochlorine Pesticide Residues in Aquatic Products

1 Scope

This standard specifies the six or six (BHC) and isomers of aquatic products, hexachlorobenzene (HCB), heptachlor, epoxidized heptachlor, aldrin, (DDT) and isomers and analogues (DDD, DDE), Samples, and Gas Chromatography law.

This standard is applicable to 14 kinds of organochlorine pesticides (alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, hexachlorobenzene, heptachlor, ring O, p'-DDT, p, p'-DDT, p, p'-DDD, p, p'-DDE) were measured, its it can refer to the implementation of food.

2 Normative reference documents

The following documents are indispensable for the application of this document. For dated references, only the dated edition applies to this article Pieces. For undated references, the latest edition (including all modifications) applies to this document.

GB 2763-2014 National Standard for Food Safety - Maximum Residue Limits for Pesticides in Foodstuffs GB/T 6682 Analytical laboratory water specifications and test methods

3 Principle

After the sample was dried and dried with anhydrous sodium sulfate, the pesticide residue was extracted with acetone-petroleum ether, and the extract was purified by florisil the sample was purified by a gas chromatograph equipped with an electron capture detector and quantified by external standard method.

4 Reagents and materials

Unless otherwise specified, all reagents are of analytical grade and water is in accordance with the primary water specified in GB/T 6682.

4.1 Reagents

4.1.1

Acetone (C₃H₆O). Distillation.

4.1.2

petroleum ether. boiling range 60-90 ° C after purification by alumina column distillation with

an all-glass distiller, collecting 60-90 ° C fractions.

4.1.3

ether (C₄H₁₀O). re-distillation.

4.1.4

anhydrous sodium sulfate (Na₂SO₄). analytical pure; 650 °C burning 4 h, stored in a sealed container in reserve.

4.2 Solution preparation

4.2.1

ether - petroleum ether leaching solution (15 85). take 150 mL of ether, add 850 mL of petroleum ether, shake back.

4.3 Standards

4.3.1

Organochlorine pesticide standards (alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, hexachlorobenzene, heptachlor, epoxidized heptachlor, aldrin O, p'-DDT, p, p'-DDT, p, p'-DDD, p, p'-DDE). purity ≥99%.

4.4 Standard solution preparation

4.4.1 14 kinds of organochlorine pesticide standard solution. accurately weighed the right amount of each pesticide standard, respectively, with a small amount of benzene dissolved, and then use petroleum ether A standard stock solution with a concentration of 0.100 mg/mL was prepared. According to the need to then prepare the appropriate concentration of petroleum ether mixed standard working solution.

Store in 4 °C refrigerator.

4.5 Materials

4.5.1

Alumina. chromatography, neutral, 100-200 mesh, 800 °C burning 4 h, cooled to room temperature stored in a sealed container in reserve. before use should be dried at 130 ° C for 2 hours.

4.5.2

Fluorine Silica. 60-100 mesh, 650 °C burning 4 h, stored in a sealed container in reserve. And dried at 130 ° C for 1 hour before use.

Note: Each batch of florisil should be used before the leaching curve.

5 Instruments and equipment

5.1

Gas Chromatograph. Electron Capture Detector (ECD).

5.2

Alumina purification column. 300 mm x 20 mm (inner diameter) glass column, filled with alumina 40 g, the top into the 10 g anhydrous sodium sulfate dry method the column is rinsed with 40 mL of petroleum ether before use.

5.3

Analysis of balance. 0.01 g and 0.0001 g.

5.4

Soxhlet extractor. 250 m L.

5.5

All glass re-distillation unit.

5.6 Glass mortar. caliber 11.5 cm

5.7 Rotary Evaporator or Nitrogen Flow Concentrator. 250 mL of vials.

5.8 Microiner. 10 μ L.

5.9 absorbent cotton. after acetone a petroleum ether (2 8) mixture solution 6 h treatment.

5.10 meat grinder.

6 Preparation and storage of samples

The extracted sample was thoroughly crushed and mixed. Divided out by 1 points, divided equally for the two, respectively, into the clean container, as a sample. Sealed and marked with mark. The sample is stored at a temperature below 18 ° C.

During sample and sample preparation, it is necessary to prevent contamination of the sample or the change in the content of the residue.

Note: The above sample sampling site according to GB 2763 Appendix A implementation.

7.1 Extraction

Weigh the sample 10.0 g (accurate to 0.1 g) in a mortar, add 15 g of anhydrous sodium sulfate for several minutes, the sample made of dry powder.

Into the filter tube. Into the Soxhlet extractor. Add 100 mL of acetone-petroleum ether (2 8) to the vial of the extractor on a water bath Extraction for 6 h (reflow rate 10-12 times per