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HJ

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

HJ 557-2010

Replacing GB 5086.2-1997

**Solid waste. Extraction procedure for leaching toxicity.
Horizontal vibration method**

固体废物 浸出毒性浸出方法 水平振荡法

(English Translation)

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Foreword

To implement the Environmental Protection Law of the People's Republic of China and the Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste, to protect the environment, this standard is formulated to ensure human health and to regulate the detection method of solid waste leaching toxicity.

This standard specifies the leaching procedure for solid waste leaching toxicity and its quality assurance measures.

This standard is a revision of the "Level Oscillation Method for Leaching of Solid Waste Leaching Methods" (GB 5086.2-1997).

This standard was first published in 1985. The original standard was drafted. Tsinghua University Nuclear Energy Technology Design and Research Institute, Beijing Environmental Protection Supervision Testing Center, China Environmental Monitoring Center, Tianjin Environmental Protection Research Institute and Energy and Electric Power Environmental Protection Research Institute. This is the second time Revised. The main contents of the revision are as follows.

-- Revised the scope of application of the method;

- Revised related terms and definitions;
- Added method principle;
- Improved experimental procedures and quality assurance and quality control requirements.

From the date of implementation of this standard, the national environmental protection standard approved by the former National Environmental Protection Agency on December 22, 1997 the horizontal oscillating method for bulk leaching toxicity leaching method (GB 5086.2-1997) is abolished.

This standard was formulated by the Science and Technology Standards Department of the Ministry of Environmental Protection.

This standard was drafted. Institute of Solid Waste Pollution Control Technology, Chinese Academy of Environmental Sciences.

This standard was approved by the Ministry of Environmental Protection on February 2, 2010.

This standard has been implemented since May 1, 2010.

This standard is explained by the Ministry of Environmental Protection.

Solid waste leaching toxicity leaching method horizontal oscillation method

1 Scope of application

This standard specifies the leaching procedure for solid waste leaching toxicity and its quality assurance measures.

This standard is applicable to the assessment of inorganic pollutants (cyanide, solid wastes and other solid materials) when immersed in surface water or groundwater.

Risk of leaching of unstable contaminants such as sulfides. This standard does not apply to samples containing water-insoluble liquids.

2 Normative references

The contents of this standard refer to the terms in the following documents. For undated references, the valid version applies to this standard.

GB/T 6682 Analytical laboratory water specifications and test methods HJ/T 20 Technical Specifications for Sampling and Sample Preparation of Industrial Solid Waste HJ/T 298 Hazardous Waste Identification Technical Specification

3 Terms and definitions

The following terms and definitions apply to this standard.

Leaching

The process of entering the liquid phase from the solid phase after the soluble component is dissolved.

Leaching toxicity

Solid waste is leached by water, and the leached harmful substances migrate and transform, polluting the environment. This hazard characteristic is called leaching toxicity.

Initial liquid phase A liquid-solid two-phase sample is apparently present, and the resulting liquid is filtered prior to the leaching step.

4 Principle of the method

Pure water is used as a leaching agent to simulate the leaching of surface water or groundwater by solid waste in specific occasions, in which harmful components are leached.

The process of entering the environment.

5 Reagents and materials

The reagents used in this standard are analyzed using analytical reagents that meet national standards unless otherwise stated.

Extracting agent. water, GB/T 6682, secondary.

6 Instruments and equipment

6.1

Oscillation equipment. Reciprocating horizontal oscillating device with adjustable frequency.

6.2

Extraction bottle. 2 L jar with screw cap and inner lid, made of inert material that cannot leach or adsorb the components contained in the sample (eg glass or polyethylene, etc.).

6.3 Filter

6.3.1

Filtration device. a pressure filtration device or a vacuum filtration device, and a centrifugal

separation device may also be used for samples that are difficult to filter.

6.3.2

Filter. 0.45 μm microporous membrane.

6.4 Balance. The accuracy is not less than ± 0.01 g.

6.5 Screen. Teflon-coated screen with a hole diameter of 3 mm.

7.1 Acquisition and preservation

Sample collection and storage were performed in accordance with the relevant regulations of HJ/T 298 and HJ/T 20.

7.2 Preparation of samples

Pick up the debris in the sample and crush all the collected samples so that the sample particles pass through the 3 mm pore size sieve (6.5).

8.1 Determination of moisture content

8.1.1

According to the water content of the solid waste, weigh 20 to 100 g of the sample, and dry it at 105 ° C in a pre-dried constant weight covered container.

Constant weight to ± 0.01 g, calculate the moisture content of the sample.

Note 1: The material of the container must not react with the waste.

8.1.2

When the sample contains the initial liquid phase, the sample shall be subjected to pressure filtration, and then the moisture content of the filter residue shall be determined. For the determination procedure, see 8.1.1. and the moisture content and dry solids percentage of the sample were calculated based on the total sample amount (the sum of the initial liquid phase and the weight of the filter residue).

Note 2: Samples after moisture content determination shall not be used for leaching toxicity testing.

8.2 Leaching step

8.2.1

When the sample contains the initial liquid phase, the sample is filtered using a pressure filter (6.3.1) and a filter (6.3.2). Dry solid hundred If the fraction is less than or equal to 9%, the initial liquid phase obtained is the leachate and analyzed directly; the percentage of dry solids greater than 9% will be the filter residue was leached according to 8.2.2, and the initial liquid phase was mixed with all the leachate and analyzed.