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

**中华人民共和国国家标准**

GB/T 19649-2006  
Replace GB/T 19649-2005

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**Method for determination of 475 pesticides and related  
chemicals residues in grains - GC-MS method**  
**粮谷中 475 种农药及相关化学品残留量的测定**  
**气相色谱-质谱法**

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of the People's Republic of China  
Standardization Administration of the People's Republic of China (SAC)

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# Method for determination of 475 pesticides and related chemicals residues in grains - GC-MS method

## 1. Scope

This standard specifies the gas chromatography-mass spectrometry (GC-MS) method for determination of 475 pesticides and related chemicals residues in barley, wheat, oat, rice and corn (see Annex A).

This standard applies to the determination of 475 pesticides and related chemicals residues in barley, wheat, oat, rice and corn.

The detection limit of the method in this standard is 0.0025 mg/kg~0.8000 mg/kg (see Annex A).

## 2. Normative References

The articles contained in the following documents have become this standard when they are quoted herein. For the dated documents so quoted, all the modifications (excluding corrections) or revisions made thereafter shall not be applicable to this Standard. For the undated documents so quoted, the latest editions shall be applicable to this Standard.

GB 5491 Inspection of grain and oilseeds—Methods for sampling and sample reduction

GB/T 6379.1 Accuracy (trueness and precision of measurement methods and results - Part 1: General principles and definitions (GB/T 6379.1-2004, ISO 5725-1: 1994, IDT)

GB/T 6379.2 Accuracy (trueness and precision) of measurement methods and results - Part 2: Basic method for the determination of repeatability and reproducibility of a standard measurement method (GB/T 6379.2-2004, ISO 5725-2: 1994, IDT)

## 3. Principle

Use acetonitrile in accelerated solvent extraction instrument for the extraction of the sample. After purification of the extraction solution by the solid phase extraction column, elute the pesticides and related chemicals with acetonitrile + toluene (3 + 1), and use gas chromatography - mass spectrometry for test.

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