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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 19648-2006  
Replace GB/T 19648-2005

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**Method for determination of 500 pesticides and related  
chemicals residues in fruits and vegetables - GC-MS method**  
**水果和蔬菜中 500 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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Standardization Administration of the People's Republic of China (SAC)

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# Method for determination of 500 pesticides and related chemicals residues in fruits and vegetables - GC-MS method

## 1. Scope

This standard specifies the gas chromatography-mass spectrometry (GC-MS) method for determination of 500 pesticides and related chemicals residues in apple, orange, grape, cabbage, celery and tomato (see Annex A).

This standard is applicable to the determination of 500 pesticides and related chemicals residues in apple, orange, grape, cabbage, celery and tomato.

The detection limit of the method in this standard is mg/kg 0.0063 - 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/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)

GB/T 8855 Fresh fruits and vegetables – Sampling (GB/T 8855-1988, eqv ISO 874: 1980)

## 3. Principle

Use acetonitrile for homogenate extraction of the sample, take the supernate after salting-out and centrifugation, purify it with solid phase extraction column, elute with acetonitrile + toluene (3 +1) the pesticides and related chemicals, and after the solvent exchange, use gas chromatography-mass spectrometer(GC-MS) for the detection.

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