

ICS 65.100
CCS G 23



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

GB/T 16150-1995

**Sieve test for dustable and wettable powders of pesticides
(English Translation)**

Issued on: December 21, 1995

Implemented on: August 1, 1996

Issued by: The State Bureau of Quality and Technical Supervision

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1 Scope

This method is applicable to the sieve test for dustable and wettable powders of pesticides.

2.1 Dry sieving method (applicable to powders)

2.1.1

Method summary

Dry the sample in the oven to constant weight and cool it naturally to room temperature. After the sample and the atmosphere reach humidity equilibrium, weigh a specimen. Sieve to the end point with a test sieve of appropriate hole size. Weigh the residue in the sieve. Calculate the fineness (if the dried sample is easy to absorb moisture, the sample must be placed in a desiccator to cool, and the contact between the sample and the atmospheric environment shall be minimized to complete the screening).

2.1.2 Instruments

Test sieve: appropriate aperture, with matching receiving plate and cover.

Glass dish: known mass.

Brush: 2.5 cm soft flat brush.

Constant temperature oven: temperature control accuracy within 100°C is $\pm 2^\circ\text{C}$.

Desiccator.

2.1.3.1 Sample preparation

Adjust the oven to the appropriate temperature according to the characteristics of the sample. A sufficient amount of sample is dried in the oven to constant weight. The sample is then naturally cooled to room temperature and equilibrated with atmospheric humidity for later use.

If the sample absorbs moisture easily, it shall be cooled to room temperature in the desiccator. And try to minimize contact with the atmospheric environment.

2.1.3.2 Determination

Weigh 20 g of specimen (accurate to 0.1 g). Place in a test sieve of appropriate aperture that fits the receiving plate. Close the lid. Carry out the test in one of two ways.

a. Vibrating screen method

Install the test sieve on the vibrating screen machine and vibrate, while tapping the left and right sides of the receiving plate alternately. After 10 min, turn off the vibrating screen machine. Let the dust settle for a few seconds and then remove the sieve lid. Use a brush to remove any material blocking the mesh. Also disperse soft clumps in the sieve, but hard particles shall not be crushed. Cover the screen cover and turn on the vibrating screen machine. Repeat the above process until less than 0.01 g is sifted within

2 min. Transfer the residue in the sieve to a glass dish and weigh it.

b. Hand screening method

Hold the screen cover and both sides of the receiving plate firmly with both hands. On the operating table with rubber cover, repeatedly touch the bottom of the left and right sides of the receiving plate with the operating table to vibrate the screen. Adjust the screen position clockwise from time to time (or counterclockwise). Allow the dust to settle for a few seconds before removing the lid. Use a brush to clean away material blocking the mesh. Also disperse soft clumps, but hard particles shall not be crushed.

Repeat vibrating and sieving until less than 0.01 g is sieved within 2 min. Transfer the residue in the sieve to a glass dish and weigh it.

2.2.1 Method summary

Place the weighed specimen in a beaker, moisten and dilute it. Pour into a moistened test sieve. Rinse directly with gentle running water. Then place the test sieve in a basin filled with water and continue washing. Transfer the residue in the sieve to a beaker.

Dry the residue and weigh. Calculate fineness.

2.2.2 Instruments

Test sieve: appropriate aperture, and equipped with matching receiving plate and lid.

Beakers: 250 mL, 100 mL.

Oven: temperature control accuracy within 100°C is $\pm 2^\circ\text{C}$.

Glass rod: with rubber cover.

Desiccator.

2.2.3.1 Wetting of specimen

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