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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB 28142-2011

Imidacloprid wettable powders

吡虫啉可湿性粉剂

(English Translation)

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Foreword

The standard Chapter 3, Chapter 5 is mandatory, the rest are recommended.

This standard was drafted in accordance with GB/T 1.1-2009 given rules.

Please note that some content of this document may involve patents, the issuing authority of this document does not assume responsibility for the identification of these patents.

The standard proposed by China Petroleum and Chemical Industry Association.

This standard by the National Standardization Technical Committee on Pesticides (SAC/TC133) centralized.

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1 Scope

This standard specifies the imidacloprid WP requirements, test methods and marking, labeling, packaging, storage and warranty.

This standard applies to the original drug imidacloprid, suitable additives and fillers from the processing of imidacloprid wettable powder.

Note: Other name, structural formula and basic physicochemical parameters of imidacloprid in Appendix A.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

Determination of GB/T 1601 Pesticides pH value GB/T 1604 Goods pesticide regulations for acceptance GB/T 1605-2001 Sampling Method commercial pesticides GB 3796 pesticide packaging General GB/T 5451 WP Pesticide wettability measurement method GB/T 6682-2008 analytical laboratory use specifications and test methods (ISO 3696. 1987, MOD) GB/T 8170-2008 revised value represents about rules and limit values and judgment GB/T 14825-2006 Method for determination of pesticide suspension GB/T 16150 pesticide powder, wettable powder fineness measurement method GB/T 19136 Determination of Pesticide Thermal storage stability

3.1 Composition and appearance

This product should meet the standards of imidacloprid with suitable additives and fillers processing is made uniform loose powder, there should be no lumps.

3.2 Technical Specifications

Imidacloprid WP should meet the requirements of Table 1.

Table 1 imidacloprid WP Control Project Index

project

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10% 20% 25% 50% 70%

Imidacloprid mass fraction /% 20.0 10.0 1.0 to 1.0 1.5-1.5 1.2-1.2 25.0 50.0 70.0 2.5-2.5 2.5-2.5 pH range 6.0 to 10.0 Wetting time/s <= 90 Fineness (through 45μm test sieve) /% >= 98

Table 1 (continued)

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10% 20% 25% 50% 70%

Suspension rate /% >= 85 Thermal storage stability of a qualified when a normal production of heat storage stability test was measured at least once every three months.

Test Method 4

Safety Tips. Use of this standard shall have practical experience of laboratory personnel work. This standard does not point out all of the safety issues. Make with those who have the responsibility to take appropriate safety and health practices and to ensure compliance with the relevant national regulations.

4.1 General provisions

This standard reagents and water in the absence of other requirements specified, refers to three analytical reagent and GB/T 6682-2008 specified in water. Test results determined in accordance with GB/T 8170-2008 4.3.3 Rounding the value comparison method.

4.2 Sampling

According to GB/T 1605-2001 "on solid preparation sampling" approach. Determining sample package using a random number table method; the final sample size not less than 300g.

4.3 Identification Test

Liquid chromatography --- The identification test can be carried out simultaneously with the determination of the mass fraction of imidacloprid. Under the same chromatographic operating conditions, the test the retention time of the sample solution and the standard solution to a peak of imidacloprid chromatographic retention time, the relative difference should be 1.5% Fewer.

4.4.1 Method summary

Sample dissolved in mobile phase, methanol and water as the mobile phase, use as filler to C18 stainless steel column and UV detector at a wavelength 260nm, the sample of imidacloprid reverse phase HPLC separation and determination of external standard.

4.4.2 Reagents and solutions

Methanol. HPLC grade;

Water. The new secondary steam distilled water;

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Imidacloprid standard. a known mass fraction w>=99.0%.

4.4.3 Instruments

High performance liquid chromatography. a variable wavelength UV detector;

Chromatographic data processor or chromatography workstation;

Column. 250mm x 4.6mm (id) stainless steel column, built C18,5μm filler (or with equivalent effect column);

Filter. pore size of about 0.45μm;

Micro injector. 50μL;

Quantitative sample line. 5μL;

Ultrasonic cleaner.

4.4.4 HPLC operating conditions

Mobile phase. Psi (methanol. water) = 40.60, by membrane filtration, and degassing;

Flow rate. 0.8mL/min;

Column temperature. room temperature (temperature change should not exceed 2 °C);

Detection wavelength. 260nm;

Injection volume. 5μL;

Retention time. about imidacloprid 6.0min.

It said operating parameters are typical, according to the characteristics of different instruments, given operating parameters adjusted as appropriate, in order to obtain the best results.

Typical imidacloprid WP HPLC is shown in Figure 1.

1 --- imidacloprid.

Figure 1 imidacloprid WP High Performance Liquid Chromatographic

4.4.5.1 Preparation of standard solution

Weigh 0.1g (accurate to 0.0002g) imidacloprid standard in 100mL flask with methanol to volume, ultrasonic oscillation 5min make sample dissolution, cooled to room temperature and shake well. Using a pipette to take the above solution 5mL to 50mL volumetric flask, dilute with mobile phase to the mark.

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