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

GB 23555-2009

25% Buprofezin wettable powders

25%噻嗪酮可湿性粉剂

(English Translation)

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Foreword

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

Since the implementation of this standard, HG2463.2-1993 "25% buprofezin WP" abolished.

Appendix A of this standard is the data appendix.

The standard proposed by China Petroleum and Chemical Industry Association.

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

1 Scope

This standard specifies 25% buprofezin WP requirements, test methods and marking, labeling, packaging, storage and transportation.

This standard applies to the buprofezin original drug, suitable additives and fillers

processed into 25% buprofezin WP.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB/T 1600 Determination of Water Pesticides 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 14825 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 be in line with the original drug buprofezin standard with suitable additives and fillers processing is made uniform loose powder, there should be no lumps.

3.2 Technical Specifications

25% buprofezin WP should meet the requirements of Table 1.

Table 1 25% buprofezin WP Control Project Index

Item Index

Buprofenzin mass fraction/25.0 + 1.5-1.5% Moisture /% $\leq$ 2.0 Suspension rate /% $\geq$ 75
Fineness (through 45 μ m test sieve) /% $\geq$ 98 Wetting time/s $\leq$ 90 pH range 6.0 to 10.5
Thermal storage stability of a qualified a thermal storage stability test under normal production conditions, measured at least once every 3 months.

Test Method 4

4.1 Sampling

Carried out according to GB/T 1605-2001 "on solid preparation sampling" method.
Determining sample package using a random number table method; the final sample the amount of not less than 300g.

4.2 Identification Test

Gas Chromatography --- The identification test can be carried out simultaneously with the determination of the content of buprofezin. Under the same chromatographic operating conditions, the sample solution the solution buprofezin peak retention time and the retention time of a standard solution peak, the relative difference should be less than 1.5%.

4.3.1 Method summary

Sample was dissolved in chloroform, dicyclohexyl phthalate esters as internal standard, using a HP-5 (5% diphenyl + 95% dimethylpolysiloxane Ketone) coated wall of the capillary column and flame ionization detector, the sample of buprofezin gas chromatography separation and determination. Also allows with filling column gas chromatography, chromatographic conditions see Appendix A.

4.3.2 Reagents and solutions

Chloroform;

Buprofezin standard. a known mass fraction $\geq 98.0\%$;

Dicyclohexyl phthalate esters. interference analysis should not contain impurities;

Internal standard solution. Weigh 4.0g dicyclohexyl phthalate esters, placed in 500mL flask with chloroform dissolved and diluted to the mark Degree, shake.

4.3.3 Instruments

Gas chromatograph. with a hydrogen flame ionization detector;

Chromatographic data processor or chromatography workstation;

Column. 30m x 0.32mm (i.d.) Capillary column, wall coated HP-5 (5% + 95% diphenyl dimethyl silicone), the film thickness 0.25 μ m;

Micro injector. 10 μ L.

4.3.4 GC operating conditions

Temperature ($^{\circ}$ C). 230 column temperature, the gasification chamber 270, the detector chamber 280;

Gas flow rate (mL/min). carrier gas (N₂) 2.0, hydrogen gas 30, air 300, the compensation gas (N₂) 25;

Split ratio. 20.1;

Injection volume (μ L). 1.0;

Retention time (min). 3.8 buprofezin, internal standard 7.0.

HPLC operating conditions described above, the Department of typical operating parameters. According to the characteristics of different instruments, given operating parameters adjusted as appropriate, in order to obtain the best results. A typical 25% buprofezin WP capillary gas chromatography shown in Figure 1.

1 --- solvent;

2 --- buprofezin;

3 --- internal standard (phthalate, dicyclohexyl phthalate).

1 25% buprofezin WP and the internal standard capillary gas chromatogram

4.3.5.1 Preparation of standard solution

Weigh buprofezin standard 0.08g (accurate to 0.0002g) in 15mL stoppered glass bottle with a pipette accurately added 10mL within Standard solution, shake.

4.3.5.2 Preparation of the sample solution

Weigh containing buprofezin 0.08g (accurate to 0.0002g) sample, in 15mL stoppered glass vial, with a shift with the 4.3.5.1 Pipette accurately added internal standard solution 10mL, shake.

4.3.5.3 Determination

Under these operating conditions, the instrument until a stable baseline, the number of continuous injection doses of the standard solution, calculated for each needle buprofezin and the internal standard peak area the ratio of repeatability to be two adjacent needles buprofezin relative change and the internal standard peak area ratio of less than 1.2%, the standard solution in accordance with the sample solution Solution, sample solution, the order of the standard solution was measured.

4.3.6 Calculation

The two needle sample solution and measured before and after the two doses of the standard sample solution piperazinone and thiophene internal standard peak area ratios are averaged. test 1 sample mass fraction (%) of buprofezin according to formula (1).

Where.

gamma1 --- standard solution, buprofezin and the internal standard peak area ratio of the average;

gamma2 --- sample solution, buprofezin and the internal standard peak area ratio of the average;