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

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Chlortoluron wettable powders

绿麦隆可湿性粉剂

(English Translation)

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Foreword

This standard in Chapter 3, Section 5 is mandatory, the rest are recommended.

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

This draft standard method using the reformed modified using FAOSpecification217/WP/S (1990) "chlorotoluron WP" (Chlo-this standard FAOSpecification217/WP/S (1990) "chlorotoluron WP" (Chlorotoluronwetttablepow-ders) The main technical differences and the reasons are as follows.

--- wetting time. FAO provisions $\leq 1\text{min}$, this standard specifies $\leq 90\text{s}$, in line with China's national conditions;

--- Persistent foaming (after 1min). FAO provisions $\leq 25\text{mL}$, this standard specifies $\leq 60\text{mL}$, more suitable for our products;

--- adds "1,1-dimethyl-3- (4-methylphenyl) urea", "1-methyl-3- (3-chloro-4-methylphenyl) urea" "water" requirements than FAO specifications more stringent.

Please note that some of the content of this document may involve patents. The issuing authority of this document does not assume responsibility to identify these patents.

The standard proposed by China Petroleum and Chemical Industry Association.

This standard by the National Pesticide Standardization Technical Committee (SAC/TC133).

Drafted by. the Ministry of Agriculture, Agrochemical Co., Ltd., Jiangsu Qantas.

1 Scope

This standard specifies the requirements chlorotoluron WP, test methods and marking, labeling, packaging, storage, security, quality guarantee period.

This standard applies to the original drug chlorotoluron, suitable additives and fillers chlorotoluron processed into a wettable powder.

Note: Other names, structural formulas and physicochemical parameters of basic impurities and chlorotoluron see Appendix A.

2 Normative references

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

GB/T 1600 Pesticide Method Moisture Determination 1601 pH value pesticides GB/T GB/T 1604 pesticide regulations for acceptance of goods GB/T 1605-2001 sampling commercial pesticides GB 3796 pesticide packaging General GB/T 5451 method for measuring the wettability of agrochemical wettable GB/T 14825-2006 Method for determination of pesticide suspension GB/T 16150 pesticide powders, wettable powder fineness measurement method GB T 19136 Determination of heat storage stability of pesticide /GB 20813 pesticide product labels General

3.1 Composition and appearance

This product should meet the criteria of the drug and chlorotoluron appropriate processing auxiliaries and fillers are made as a loose powder consisting of uniform, without clumps.

3.2 Project and indicators

Chlorotoluron WP shall comply with the requirements of Table 1.

Table 1 chlorotoluron WP Control Project Index

Item Index

Chlorotoluron mass fraction /% 25.0 ± 1.5 1,1-dimethyl-3- (4-methylphenyl) urea mass fraction a /% ≤ 0.3 1-methyl-3- (3-chloro-4-methylphenyl) urea mass fraction a /% ≤ 0.3 Suspension rate /% ≥ 65 Moisture /% ≤ 3.0 TABLE 1 (cont.) Item Index pH of 6.0 to 9.0 Wetting time/s ≤ 90 Fineness (45 μ m test sieve) /% ≥ 96 (After 1min) Persistent foaming/mL ≤ 60 Passing a heat storage stability when a normal production, was measured at least once every three months.

Test Method 4

4.1 Sampling

In accordance with GB/T 1605-2001 of "solid preparation sampling" approach. Determined by randomly sampling package, not the amount of the final sample Less than 300g.

4.2 Identification Test

This identification test can be carried out simultaneously with the determination of the mass fraction of chlorotoluron. Chromatography under the same operating conditions, the color of a sample solution the peak retention time of the standard solution chlorotoluron peak retention time of which relative difference should be less than 1.5%.

4.3.1 Method summary

Sample was dissolved in methanol, an aqueous solution of phosphoric acid to pH4.0 and acetonitrile as mobile phase, using a C18 packing of a stainless steel column and UV detection Detector, the sample chlorotoluron and high performance liquid chromatography assay.

4.3.2 Reagents and solutions

Phosphoric acid;

Methanol. HPLC grade;

Acetonitrile. HPLC grade;

Water. The new secondary steam distilled water;

Chlorotoluron Sample. chlorotoluron known mass fraction $w \geq 99.0\%$.

4.3.3 Instruments

HPLC. UV detector with tunable wavelength;

Chromatographic data processor or chromatography workstation;

Column. 250mm x 4.6mm (id) stainless steel column, built SHIMADZUVP-ODS5 μ m filler (or equivalent Effects column);

Filter. membrane pore size of about 0.45 μ m;

Ultrasonic cleaning.

4.3.4 HPLC operating conditions

Mobile phase. [Psi] [acetonitrile. water (phosphoric acid to adjust pH = 4)] = 50:50;

Flow rate. 1.0mL/min;

Column temperature. room temperature (a temperature change should be less than 2 deg.] C);

Detection wavelength. 243nm;

Injection volume. 25 μ L.

Retention time. chlorotoluron about 5.6min.

It is typical operating parameters of the above, according to the characteristics of different instruments, for a given operating parameter adjusted as appropriate, in order to obtain the best results.

25% HPLC chlorotoluron wettable powder shown in Figure 1.

1 --- chlorotoluron.

1 to 25% Wettable powders HPLC chlorotoluron FIG.

4.3.5.1 Preparation of standard solution

Chlorotoluron standard weighed about 0.1 g of (accurate to 0.0002g), a 50mL volumetric flask, dissolved in methanol ultrasound volume. Pipette 5.0mL of this solution to another 50mL volumetric flask, diluted with methanol.

The sample solution prepared 4.3.5.2 Containing samples weighed approximately 0.1g of chlorotoluron (accurate to 0.0002g), a 50mL volumetric flask, dissolved in methanol ultrasound volume.

The solution was pipetted 5.0mL at another 50mL volumetric flask, diluted with methanol. With 0.45 μ m pore size membrane filter, the filtrate was a sample Solution.