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Chlorsulfuron technical material

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(English Translation)

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5.1 Marking, labeling, packaging

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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 FAOSpecification391/TC (2003) "chlorsulfuron TC" (Chlorsulfuron to technical differences and the reasons are as follows.

--- This standard increased the water content, pH value range, mass fraction insoluble in acetone was controlled more comprehensive index item, character Combined domestic pesticide registration requirements, FAO specifications not control these three indicators.

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).

This standard is drafted. Shenyang Chemical Research Institute Co., Ltd.

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1 Scope

This standard specifies the requirements chlorsulfuron original drug, Test Method for marking, labeling, packaging, storage and acceptance period.

This standard applies to impurities derived from the production of chlorsulfuron and the composition of the original drug chlorsulfuron.

Note: Other names, structural formulas and physicochemical parameters of the basic chlorsulfuron 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 19138 Determination of acetone insoluble pesticide

3.1 Appearance

White powdery solid.

3.2 Technical Specifications

Chlorsulfuron TC should meet the requirements of Table 1.

Table 1 TC control chlorsulfuron Item Index

Item Index

Chlorsulfuron mass fraction /% ≥ 95.0 Moisture content /% ≤ 0.5 the pH range of 3.0 to 6.0 Mass acetone insoluble fraction a /% ≤ 0.5 when a normal production, the acetone insoluble matter content measured at least once every three months.

Test Method 4

4.1 Sampling

Carried out in GB/T 1605-2001 of "original drug product sampling" approach. Determined by sampling a random number table method packages, the amount of the final sample not less than 100g.

4.2 Identification Test

Optionally one of the following methods. When not identified using a method, it should then be determined using another method.

Infrared spectroscopy and chlorsulfuron --- Sample Sample infrared 4000cm⁻¹ ~ 400cm⁻¹ absorption spectrum should be no significant difference.

Chlorsulfuron standard infrared spectra of Figure 1.

FIG 1 chlorsulfuron standard IR spectrum

HPLC --- This identification test can be carried out simultaneously with the determination of the mass fraction of chlorsulfuron. In the same chromatographic operating conditions Next, a peak in the sample solution and the retention time chlorsulfuron retention time of the standard solution chlorsulfuron peaks, the relative difference should 1.5% or less.

4.3.1 Method summary

Sample solution was dissolved in methanol with aqueous ammonia, acetic acid in acetonitrile and water as mobile phase, using Nova-PakC18 filler to a stainless steel column and a UV detector (230nm), the sample chlorsulfuron and high performance liquid chromatography assay.

4.3.2 Reagents and solutions

Methanol. HPLC grade;

Acetonitrile. HPLC grade;

Acetic acid;

Water. The new secondary steam distilled water;

Aqueous ammonia. w (NH₃) = 26% ~ 30%;

Ammonia solution. [Psi] (ammonia. water) = 1.300;

Ammonia in methanol. [Psi] (ammonia solution. methanol) = 1.4;

Chlorsulfuron Sample. chlorsulfuron known mass fraction, w>=98.0%.

4.3.3 Instruments

HPLC. a variable wavelength UV detector;

Chromatographic data processor or workstation;

Color 150mm x 3.9mm (id) stainless steel column Nova-PakC18,5 μ m filler contents (or equivalent effect. Column Spectrum column);

Filter. membrane pore size of about 0.45 μ m;

Microsyringe. 50 μ L;

Quantitative sampling tube. 5 μ L;

Ultrasonic cleaning.

4.3.4 HPLC operating conditions

Mobile phase. [Psi] (acetonitrile. water. glacial acetic acid) = 40.60.0.5;

Flow rate. 1.0mL/min;

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

Detection wavelength. 230nm;

Injection Volume. 5 μ L;

Retention time. chlorsulfuron about 4.3min.

Are typical operating parameters of the above, according to the characteristics of different instruments, for a given operating parameters appropriately adjusted to obtain the best result.

Typical chlorsulfuron HPLC TC shown in Figure 2.

1- chlorsulfuron.

Figure 2 HPLC original drug chlorsulfuron

4.3.5.1 Preparation of standard solution

Weigh 0.05g chlorsulfuron standard (accurate to 0.0002g), a 100mL volumetric flask, dilute to volume with methanol solution of ammonia, to dissolve the sample ultrasonic vibration 5min, cooled to room temperature, shaking.