

ICS 65.100.20
CCS G 25



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

GB 23551-2009

Clomazone emulsifiable concentrates

异噁草松乳油

(English Translation)

Issued on: April 27, 2009

Implemented on: November 1, 2009

Issued by: Standardization Administration of China

Table of Contents

Foreword
1 Scope
2 Normative references
3 Requirements
3.1 Composition and appearance
3.2 Technical Specifications
4.1 Sampling
4.2 Identification Test
4.3 Determination of the mass concentration of pine and grass (mass fraction)
4.4 Determination of the mass fraction of nitrogen-one
4.5 Determination of the penetration time
4.6 Determination of Moisture
4.8 Emulsion stability test
4.9 Low temperature stability test
4.10 Thermal storage stability test
4.11 Product inspection and acceptance
5 Marking, labeling, packaging, storage and transportation

Foreword

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

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 the different Grass pine EC requirements, test methods and marking, labeling, packaging, storage and transportation.

This standard applies to the different Grass Matsubara drugs and preparation of the emulsifier is dissolved in a suitable solvent iso EC loose grass.

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 GB/T 1601 Pesticides pH value measurement method GB/T 1603 Determination of emulsion stability of pesticide GB/T 1604 Goods pesticide regulations for acceptance GB/T 1605-2001 Sampling Method commercial pesticides Determination of GB/T 4472 chemical product density, relative density GB 4838 EC pesticide packaging GB/T 19136 Determination of Pesticide Thermal storage stability GB/T 19137 Pesticide cryogenic stability Determination

3.1 Composition and appearance

This product should meet the standards of different Grass Matsubara drugs made of a stable homogeneous liquid, free from visible suspended matter and sediment.

3.2 Technical Specifications

Grass pine EC should be consistent with Table 1 requirements.

Table 1 Song Yi Cao EC Control Project Index

project

index

480g/L 360g/L

Grass loose concentration (20 °C) / (g/L) or mass fraction of a /% + 24-24 480 45.0 + 2.2-2.2 + 18-18 360 35.0 + 1.7-1.7 Penetrant (Azone) mass fraction b /% >= - 2.0

Penetration time/s <= - 150 Moisture /% <= 0.5 pH range of 5.0 to 8.0 Emulsion stability (diluted 200 times) Qualified Low temperature stability Qualified c Thermal storage stability c qualified when a dispute occurs when mass to the mass fraction of arbitration.

b allow additional penetrant, other detection methods and its corresponding index requirements in the National Standardization Technical Committee Pesticide obtained.

Thermal storage stability test when c normal production, low-temperature stability measured at least once every three months.

Test Method 4

4.1 Sampling

According to GB/T 1605-2001 in "liquid formulations sampling" approach. Determined by sampling a random number table method packages, the final sample size not less than 200mL.

4.2 Identification Test

--- The High Performance Liquid Chromatography with different identification test
Determination of the mass fraction of loose grass simultaneously. In the same chromatographic operating conditions, The retention time of the standard solution and the sample solution to a chromatographic peaks is Grass pine peak retention time, the relative difference should be 1.5% Fewer.

4.3.1 Method summary

Sample was dissolved in methanol, acetonitrile + water as the mobile phase, to use as filler AgilentTC-C18 stainless steel column and UV detector 236nm wavelength, the sample of the different grass pine reverse phase HPLC separation and determination of external standard.

4.3.2 Reagents and solutions

Methanol. HPLC grade;

Acetonitrile. HPLC grade;

Water. The new secondary steam distilled water;

Grass Song Sample. a known mass fraction $\geq 98.0\%$.

4.3.3 Instruments

High performance liquid chromatography. a variable wavelength UV detector;

Chromatographic data processor or chromatography workstation;

Column. 250mm x 4.6mm (i.d) stainless steel column, built AgilentTC-C18, 5 μ m filler (or with equivalent effect color the column);

Filter. pore size of about 0.45 μ m;

Micro injector. 50 μ L;

Quantitative sample line. 5 μ L;

Ultrasonic cleaner.

4.3.4 HPLC operating conditions

Mobile phase. phi (acetonitrile. water) = 50.50, by membrane filtration, and degassing;

Flow rate. 1.0mL/min;

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

Detection wavelength. 236nm;

Injection volume. 5μL;

Retention time. iso

Grass pine 11.0min.

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 differences

EC loose grass HPLC is shown in Figure 1.

1 --- Yi Cao loose.

1 Yi Cao Song EC HPLC diagram

4.3.5.1 Preparation of standard solution

Weigh 0.2g (accurate to 0.0002g) and grass loose standard in 50mL volumetric flask, dissolved in methanol and diluted to the mark.

Using a pipette to take the above solution 10mL in 50mL volumetric flask, diluted with methanol to the mark.

4.3.5.2 Preparation of sample solution

Weigh Iso

Grass pine 0.2g (accurate to 0.0002g) sample in 50mL volumetric flask, dissolved in methanol and diluted to the mark, shake uniform. Using a pipette to take the above solution 10mL in 50mL volumetric flask, diluted with methanol to the mark.

4.3.5.3 Determination

Under these operating conditions, after the instrument is stable, continuous injection of several doses of the standard solution until the two adjacent needles iso Peak area becomes relatively loose grass After less than 1.2% of the solution in accordance with the sample solution, the sample solution and standard sequence of the standard solution was