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

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Atrazine suspension concentrates

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(English Translation)

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Foreword

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

Appendix A of this standard is the data appendix.

Since the implementation of this standard, the original industry standard HG2204-1991 "Atrazine SC" void.

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 atrazine suspension of requirements, test methods and marking, labeling, packaging, storage and transportation.

This standard applies to the herbicide atrazine original medicines, additives and carriers from the processing of atrazine suspension.

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.

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 4472 chemical product density, relative density measurement General GB/T 14825 method for determination of pesticide wettable powder suspension GB/T 16150 pesticide powder, wettable powder fineness measurement method GB/T 19136 Determination of Pesticide Thermal storage stability GB/T 19137 Pesticide cryogenic stability Determination

3 Requirements

3.1

Composition and appearance. This product should be compliant atrazine original medicines, additives and fillers processing, the appearance should be flowing and easy to measure body Volume of liquid suspension; precipitation may occur during storage, handling shaken but should restitution; there should be no lumps.

3.2

atrazine suspension shall comply with the requirements in Table 1.

Table 1 Atrazine SC Control Project Index

project

index

38% 500g/L 50%

Atrazine mass fraction /% or concentration of a (20 °C) / (g/L) 38.0 + 2.0-2.0 45.0 + 2.0-2.0 + 20-20 500 50.0 + 2.0-2.0 Suspension rate /% ≥ 90 pH range 6.0 to 10.0 Wet sieve test (through 45 μ m test sieve) /% ≥ 98 Persistent amount of foam (1min after)/mL ≤ 40 Pourability b After pouring the mass fraction residue /% ≤ 5.0 After washing the mass fraction of residue /% ≤ 0.5 Low temperature stability Qualified b Thermal storage stability b qualified in atrazine mass fraction of arbitration when a dispute occurs when the quality.

b dumped, low-temperature stability, thermal storage stability test under normal production conditions, every 3 months test at least once.

Test Method 4

4.1 Sampling

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

4.2 Identification Test

Gas Chromatography - The identification test can be carried out simultaneously with the determination of the mass fraction of atrazine. GC under the same operating conditions, One sample solution peak retention time with the standard solution of atrazine chromatographic retention time, the relative difference should be 1.5% Fewer.

4.3.1 Method summary

Sample was dissolved in chloroform to triadimefon as internal standard, the use of the inner wall of the bonded Carbowax 20M capillary column and flame Ionization detector to sample atrazine gas chromatographic separation and determination. You can also use packed column gas chromatography, chromatographic conditions Senate See Appendix A.

4.3.2 Reagents and solutions

Chloroform;

Triadimefon. $\geq 95\%$, should not interfere with the analysis of impurities;

Atrazine Sample. Atrazine is known mass fraction $\geq 99.0\%$;

Internal standard solution. Weigh 6.8g triadimefon, placed 1000mL volumetric flask with chloroform to dissolve and dilute to volume, 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.) Double capillary column, wall-bonded polyethylene glycol 20M, film thickness 0.25 μ m;

Micro injector. 10 μ L.

4.3.4 GC operating conditions

Temperature ($^{\circ}$ C) Temperature. 195 gasification chamber. 230, detection chamber. 230;

Gas flow rate (ml/min). carrier gas (high purity nitrogen) 2.0, hydrogen gas 30, air 300;

Injection volume (μL). 1.0;

Retention time (min). atrazine about 4.2, internal standard (triadimefon) about 6.0.

GC 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. Typical atrazine suspension and internal standard gas chromatography is shown in Figure 1.

1 --- atrazine;

2 --- internal standard (triadimefon).

Figure 1 atrazine suspension and internal standard gas chromatograph

4.3.5.1 Preparation of standard solution

Weigh atrazine standard 0.1g (accurate to 0.0002g), placed in 15mL stoppered glass bottle with a pipette moved 10mL internal standard Solution, shake.

4.3.5.2 Preparation of the sample solution

Weigh about containing herbicide atrazine 0.1g sample of (accurate to 0.0002g), placed in 15mL stoppered glass bottle, which was then placed in a glass bottle Drying oven, at room temperature and then resume with 4.3.5.1 used a pipetted into internal standard solution 10mL, shake. Centrifuged, the supernatant Liquid injection, if necessary, filtered.

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 atrazine and the internal standard peak area when the ratio of repeatability, two needles herbicide atrazine to be adjacent to the internal standard peak area ratio of the relative change of less than 1.5%, according to the standard solution, sample Solution, sample solution, the order of the standard solution was measured.

4.3.5.4 Calculation

The two needle sample solution and measured before and after the two doses of the standard sample solution of atrazine and the internal standard peak area ratio of the average, respectively.

Atrazine mass fraction of 1 (%) according to equation (1) calculate the sample, the concentration ρ_1 [g/L (20 °C)] according to formula (2).

$\rho_1 =$

10 (2)