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

GB/T 28135-2011

**Testing method of acidity (alkalinity) for pesticides -- Indicator
method**

农药酸(碱)度测定方法 指示剂法

(English Translation)

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Foreword

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

This standard uses redrafted law revision adopted CIPACMT31 "Determination of free acidity or alkalinity of methyl red indicator --- Law" (Freeacidityoralkalinity-31.1, Methylredindicator method).

The standard main technical differences and the reasons CIPACMT31 follows.

--- Different sample volume. CIPACMT31 sample amount is about 10g; in this standard take into account the actual situation in China, as the original drug sample volume 1g ~ 3g, preparation 2g ~ 5g.

--- Indicator different. CIPACMT31 using methyl red indicator; of the standard, there are two to choose from, methyl red indicator Agent or methyl red - bromocresol green mixed indicator, broader scope.

--- Different solvents. CIPACMT31 using acetone and water, this standard uses 95% ethanol as solvent (if it is poorly soluble in ethanol use Dissolved in acetone).

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 pesticide acid (base) of the measurement method --- indicator method.

This standard applies to drugs and determination (applies only to ethanol or acetone soluble product) of acidity or alkalinity processing pesticide formulations.

2 Normative references

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

Preparation of GB/T 601 chemical reagent standard titration solution GB/T 603 chemical reagent in test methods - Preparations with Test Method 3

3.1 Method summary

Sample was dissolved in ethanol (if poorly soluble in ethanol then dissolved in acetone or acetone), methyl red (or mixed indicator) as indicator.

With a predetermined concentration of alkali or acid standard titration solution titration standard solution titration, determination of acidity or alkalinity of the sample.

3.2 Reagents and solutions

95% ethanol;

acetone;

Sodium hydroxide standard titration solution $c(\text{NaOH}) = 0.02\text{mol/L}$, according to GB/T 601 preparation;

Hydrochloric acid standard volumetric solution $c(\text{HCl}) = 0.02\text{mol/L}$, according to GB/T 601 preparation;

Methyl red indicator. 1g/L ethanol solution;

Mixed indicator. bromocresol green ethanol solution (1g/L) methyl red ethanol solution (2g/L) = 3 1, according to GB/T 603 formulation.

3.3 Instrument

Glass Graduates. 50mL , 100mL ;

Conical flask. 250mL ;

Buret. 25mL ;

Ultrasonic cleaner.

3.4.1 Determination of pesticide

A small amount of sample was dissolved in ethanol (if it is difficult to dissolve in ethanol with 90% or 95% dissolved in acetone solution) was added dropwise 3 to 5 drops of methyl red Indicator (or mixed indicator) to identify, if the solution is red acidic solution, measured

acidity; if it is yellow (mixed indicator is green) Compared with the alkaline solution, measured alkalinity.