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YC

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

YC/T 181-2004

**Tobacco and tobacco products. Determination of
organochlorine herbicides residues. Gas chromatographic
method**

(English Translation)

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Foreword

Appendix A of this standard is an informative annex.

This standard was proposed by the State Tobacco Monopoly Bureau.

This standard is under the jurisdiction of the National Tobacco Standardization Technical Committee (TC144).

This standard was drafted. National Tobacco Quality Supervision and Inspection Center.

1 Scope

This standard specifies the determination method of three organochlorine herbicide pesticide residues in wheat, such as dicamba, 2,4-D and 2,4,5-anthracene.

This standard applies to tobacco and tobacco products.

2 Normative references

The terms in the following documents become the terms of this standard by reference to this standard. All dated references, followed by all Modifications (not including errata content) or revisions do not apply to this standard, however, parties to agreements based on this standard are encouraged to study if it is possible to use the latest version of these files? For undated references, the latest edition applies to this standard.

GB/T 5606.1 Cigarette Part 1. Sampling GB/T 19616 General Principles for Sampling of Tobacco Batch Raw Materials (GB/T 19616-2004, ISO 4874:2000, MOD) YC/T 31 Preparation of tobacco and tobacco product samples and moisture determination oven method

3 Principle

The dicamba, 2,4-D and 2,4,5-indene in the tobacco were extracted with dichloromethane. The extract is concentrated and dried, and then derivatized with trimethylphosphonium hydroxide.

It is converted to its corresponding methyl ester. Determined by gas chromatography/mass spectrometry and quantified by internal standard method.

4 Reagents and materials

The water should be distilled water or water of equivalent purity. All reagents should be suitable for pesticide residue analysis. All solvents should be determined according to the sample (Extraction and Gas Chromatography/Mass Spectrometry) The same procedure was performed in a blank test to check the purity. The solvent/mass spectrogram should not be apparent on the baseline.

A peak that affects the determination of pesticide residues.

4.1

dicamba, 2,4-D and 2,4,5-anthraquinone standards.

4.2

Methanol, need to be re-steamed and verified.

4.3

Dichloromethane, re-steamed and verified.

4.4 2,4-Dichlorobenzoic acid, analytically pure, internal standard.

4.5

Trimethyl hydrazine hydroxide (TMSH).

4.6

hydrochloric acid solution, 0.5 mol/L.

4.7

anhydrous sodium sulfate, analytically pure (dried at 550 ° C for at least 2 h).

4.8

Single standard stock solution. Weigh 0.03g (accurate to 0.0001g) of dicamba, 2,4-D and 2,4,5-? three pesticide standards (4.1) to three 10mL volumetric flasks, fixed to volume with acetone, formulated into dicamba, 2,4-D and 2,4,5-? at a concentration of about 3mg/mL A standard stock solution. A single standard stock solution should be stored in the dark at 0 ° C ~ 4 ° C, can be stable for at least 6 months.

4.9

Mixing standard stock solution. Pipette 3mL (4.8) of each pesticide single standard stock solution into a 10mL volumetric flask, mix well, and make up the volume.

The concentration is approximately 1 mg/mL mixed standard stock solution. A single standard stock solution should be stored in the dark at 0 ° C ~ 4 ° C, can be at least stable 6 Months.

4.10

Working standard solution. Pipette the mixed stock solution (4.9) 100 µL in a 50 mL volumetric flask, and dilute to volume with dichloromethane to obtain each pesticide standard.

A working standard solution with a concentration of approximately 2.0 µg/mL. Ready to use.

4.11

Internal standard stock solution. Weigh 0.01g of 2,4-dichlorobenzoic acid (4.4) in a 100mL volumetric flask and dilute with dichloromethane to obtain the concentration.