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YC/T 476-2013

**Determination of the density of cut tobacco in cigarette.
Microwave method
(English Translation)**

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Table of Contents

Foreword
Introduction
1 Scope
2 Normative references
3 Terms and Definitions
4 Principle of Measurement

Foreword

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

This standard was proposed by the State Tobacco Monopoly Bureau.

This standard by the National Standardization Technical Committee on Tobacco Cigarette Technical Committee (SAC/TC144/SC1) centralized.

This standard was drafted. Hongta Tobacco (Group) Co., Ltd., China Electronics Technology Group Corporation The 41st Institute of Hainan red Tower cigarette LLC, Hongta Liaoning Tobacco Co., Ltd., Sichuan and Chongqing Tobacco Industry Co., Ltd., in Anhui tobacco industry limited liability any company.

Introduction

When issuing authority of the document drew attention to the statement of compliance with this document may involve Chapter 5, Appendix A and the "end of cigarette smoke density fulcrum the method of compensation data, "" smoke disk storage device with alarm "," continuous single device for smoke, "" an elimination of metal exterior influence cigarettes dense water the method of measurement "related to the use of patents.

The issuing authority for the patent document authenticity, validity and scope without any position.

The patent holder has to ensure that the issuing authority of the document, he was willing to reasonable and non-discriminatory terms and conditions with any applicant, Patent licensing negotiations. The patent holder's statement has been filed in the release mechanism of the present document. Related information is available through the following Contact at.

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Please note that in addition to the above patents, some of the contents of this document may still involve patents. The issuing authority of this document does not undertake to recognize these special Lee responsibility.

Cigarette tobacco densitometry microwave method

1 Scope

This standard specifies the method for measuring microwave cigarette tobacco density.

This standard applies to cigarettes and cigarette tobacco density uniformity of measurement.

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.

GB/T 5606.1 cigarette - Part 1. Sampling GB/T 16447 Tobacco and tobacco products conditioning and testing atmosphere

3 Terms and Definitions

The following terms and definitions apply to this standard.

Measuring unit measurementunit 1mm length cigarette tobacco segment cylinder.

Compaction segment compactionsection Cigarette tobacco cigarette dense end portion of the tobacco by the machine to adjust the leveling plate is formed with a length of flat plate smooth arc groove 1/2.

Non-compaction segment non-compactionsection in addition to the compaction segment portion cigarette tobacco segment.

Cigarette tobacco segment average density averagedensityofcuttobaccoincigarette
Cigarette tobacco arithmetic mean of all measurement range segment certain cell density, in units of milligrams per cc (mg/cm³).

Cigarette tobacco density distribution of densitydistributionuniformityofcuttobaccoincigarette
Cigarette tobacco density uniformity of distribution of cigarettes to non-compacted within paragraph variance characterize all measuring cell density.

4 Principle of Measurement

Offset resonant frequency of the microwave resonator cavity occurred with the change in dielectric constant of the dielectric material, and its rates are changed. Different secret After the test of the sample can be obtained with the amount of change in the resonant frequency, the resonant frequency variation and amplitude variation ratio by linear regression method Arc tangent function of the corresponding equation parameters d_1 , d_2 , d_3 , d_4 . When cigarettes of different densities through the microwave cavity of the cavity resonance frequency the rate of change and amplitude were measured according to the formula (1) can be calculated by measuring cell density of cigarette tobacco, cigarette tobacco segment and then calculate its average density uniformity.