

# DETERMINATION OF MOISTURE IN TOBACCO, TOBACCO PRODUCTS, AND FIBRE-BASED MATRICES, THROUGH DRYING ACCORDING TO CORESTA/FED. REG. PROCEDURES

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## Purpose

Determination of moisture in tobacco, tobacco products, and fibre-based matrices, through drying according to (b) (4) and the “Total moisture determination” method prescribed by Federal Register.

## Applies to

Analytical Product and Regulatory Science (APRS)

## General

Moisture/Oven volatile compounds (OVC) are defined in the following manner.

Moisture: (b) (4)

Moisture is a non-specific method, and what evaporates consists of water and volatile compounds.

## Principle of the method

The method is a somewhat modified version of the Federal Register method [1] and (b) (4). An account of the differences between the methods is given in Table 1.

**Table 1.** Differences between this method, the Federal Register method, and Coresta Recommended Method No. 76.

Equipment/procedure	Federal Register method	CORESTA Recommended Method No. 76	APRS method
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Sample quantity for analysis	5 grams	Between 2g – 10g
Dimensions of sample cups	Aluminium sample cups, 45-65mm in diameter, 20-45mm in depth, with tight-fitting covers.	Stainless steel, or aluminium sample cups with lids (diameter 90mm, depth 50mm)
Handling of sample	Separate bag material and matrix	Not specified

(b) (4)

(b) (4)

**The method's scope of application, measurement range, and certainty of measurement**  
The method is used to measure moisture in tobacco, tobacco products and fibre-based matrices.

(b) (4)

#### Literature references

1. Federal Register/ vol. 74, no. 4/712-719/Wednesday, 7 January 2009/Notices "Total moisture determination"
2. (b) (4)
3. CORESTA Recommended method No. 76 (Version 2, July 2017)

#### Risk assessment and protection guidelines

##### Overall risk assessment

(b) (4)

##### Danger- and protection notifications

(b) (4)

## Equipment

### Apparatus and laboratory utensils

(b) (4)

### Chemicals, reagents and dilutants

(b) (4)

### Control sample

(b) (4)

### Maintenance

(b) (4)

### Handling of samples

### Sample quantity

(b) (4)

## Analysis

### Calibration and inspection of apparatus



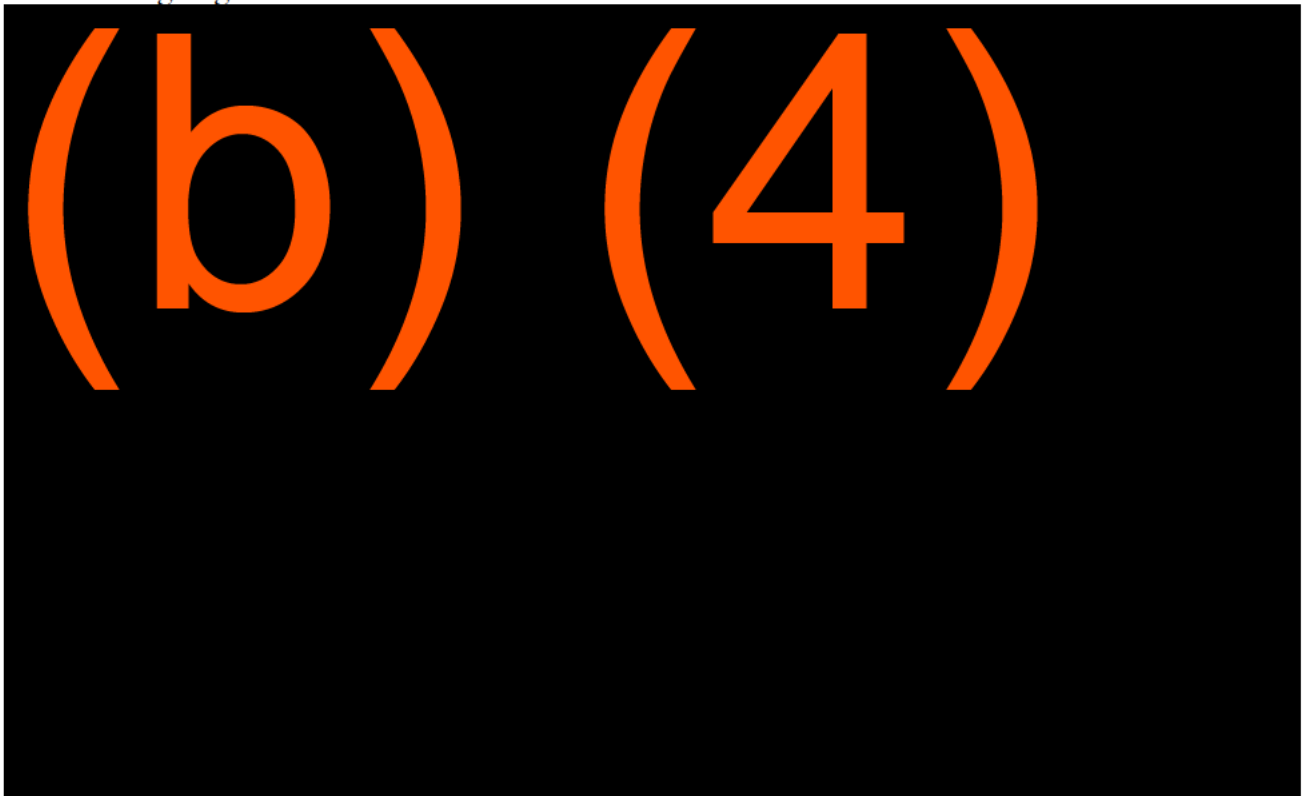
### Analysis procedure



Steps in the analysis procedure:



Initial weighing



(b) (4)

#### Completion

(b) (4).

#### Documentation

For each round of analysis, the following data is noted in the logbook: (b) (4)

#### Measurement data

##### Collection and storage of measurement data

(b) (4)

##### How to find results and raw data

(b) (4)

## Calculations

Moisture is calculated according to the principle.

Moisture of the sample, expressed in

(b) (4)

Sample quantity in the initial weighing = A  
after-weighing = B

Sample quantity in the

Moisture of the sample (b) (4)

## Quality assurance

### Control cards

(b) (4)

If the control sample is not approved, the following steps can be taken:

(b) (4)

### Duplicate samples

(b) (4)

### Sample comparison - Quarterly inspection

(b) (4)

## Reporting of analysis results

Results are reported to the customer as percentages, with an accuracy of one decimal place.

## History

Date	Comments
(b) (4)	

(b) (4)

**Responsible personnel member**

Director - APRS

**Validation**

**Validation report**

Matrices below were used

Article	Approx. Water %	Approx. Moisture %	Format	Tobacco	Technique	Validation
(b) (4)						

**Sample preparation prior to validation**

(b) (4)



(b) (4)

### **Specificity**

(b) (4)  
[Redacted]  
[Redacted].

### **Repeatability**

(b) (4)  
[Redacted]  
[Redacted]  
[Redacted]

### **Precision in the laboratory**

(b) (4)  
[Redacted]  
[Redacted]

### **Reproducibility/Round-robin tests**

Reproducibility for moisture has been achieved in round-robin tests organised by Coresta.

### **Bias from round-robin tests**

(b) (4)  
[Redacted]

### **Measurement range and certainty of measurement**

(b) (4)  
[Redacted]  
[Redacted]  
[Redacted]