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**INTERNATIONAL STANDARD**



**3406**

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INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

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**Tobacco and tobacco products — Expression of analytical test results**

*Tabac et produits du tabac — Expression des résultats d'analyse*

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## FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO Member Bodies). The work of developing International Standards is carried out through ISO Technical Committees. Every Member Body interested in a subject for which a Technical Committee has been set up has the right to be represented on that Committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work.

Draft International Standards adopted by the Technical Committees are circulated to the Member Bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 3406 was drawn up by Technical Committee ISO/TC 126, *Tobacco and tobacco products*, and circulated to the Member Bodies in May 1974.

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It has been approved by the Member Bodies of the following countries :

ISO 3406:1975

Belgium	India	Sweden
Bulgaria	Iran	Switzerland
Canada	Netherlands	Thailand
Czechoslovakia	Poland	Turkey
Egypt, Arab Rep. of	Portugal	United Kingdom
France	Romania	U.S.S.R.
Germany	South Africa, Rep. of	Yugoslavia
Hungary	Spain	

The Member Bodies of the following countries expressed disapproval of the document on technical grounds :

Australia  
Japan

# Tobacco and tobacco products – Expression of analytical test results

## 1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies methods for the reporting of results of analytical determinations on tobacco leaf or cut tobacco, excluding waste and offal.

## 2 REFERENCES

ISO 2817, *Tobacco and tobacco products – Determination of silica content.*

ISO . . . , *Tobacco and tobacco products – Determination of water content.*<sup>1)</sup>

## 3 REPORTING

### 3.1 Basis of expression of results

The results of tests according to any of the agreed methods shall be reported as a percentage of the water-free mass of the sample and, if higher precision is required, of the water- and silica-free mass of the sample.

### 3.2 Mode of expression of results

**3.2.1** In the case of samples where the percentage as calculated is found to be less than 0,01 %, the result shall be reported as milligrams per kilogram (parts per million or a similar basis) to the nearest 1 or 0,1 ppm according to the precision of the method.

**3.2.2** In the case of samples where the percentage as calculated is greater than 0,01 % but less than 5,0 %, the result shall be reported to the nearest 0,1 % or 0,01 % according to the precision of the method.

**3.2.3** In the case of samples where the percentage as calculated is greater than 5,0 %, the results shall be reported to the nearest 0,1 %.

### 3.3 Precision of method

It is assumed that the precision of the test method concerned is sufficient to enable the results to be obtained to within closer limits than the precision to which the results are reported.

### 3.4 Standard deviation and confidence interval

All results shall be accompanied by a statement of the standard deviation and the confidence interval for the mean.

## 4 CALCULATION OF WATER- AND SILICA-FREE MASS

The water-free mass of the sample is given by the formula

$$M_{WF} = M_0 \left( 1 - \frac{W}{100} \right)$$

The water- and silica-free mass of the sample is given by the formula

$$M_{WSF} = M_0 \left( 1 - \frac{S}{100} \right) \left( 1 - \frac{W}{100} \right) \text{ or } M_{WF} \left( 1 - \frac{S}{100} \right)$$

where

$M_{WF}$  is the mass, in grams, of the water-free test portion;

$M_{WSF}$  is the mass, in grams, of the water- and silica-free test portion;

$M_0$  is the mass, in grams, of the test portion on an air-dry (as taken) basis;

$S$  is the silica content as a percentage by mass of the test portion (see 4.1);

$W$  is the water content as a percentage by mass of the test portion (see 4.2).

### 4.1 Silica content

The silica content is that determined according to either of the methods specified in ISO 2817. The method used shall be stated in the test report.

### 4.2 Water content

The water content is that determined according to the method specified in ISO . . .

1) In preparation.

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