International Standard 585

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Plastics — Non-plasticized cellulose acetate — Determination of moisture content

Plastiques — Acétate de cellulose non plastifié — Détermination de l'humidité

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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 585 was developed by Technical Committee ISO/TC 61, *Plastics*.

It was submitted directly to the ISO Council, in accordance with clause 5.10.1 of part 1 of the Directives for the technical work of ISO. It cancels and replaces ISO Recommendation R 585-1967, which had been approved by the member bodies of the following countries :

Argentina	Hungary	South Africa, Rep. of
Australia	India	Romania
Austria	Israel	Spain
Belgium	Italy	Sweden
Canada	Japan	Switzerland
Czechoslovakia	Korea, Rep. of	Turkey
Egypt, Arab Rep. of	Morocco	United Kingdom
Finland	Netherlands	USA
France	New Zealand	USSR
Germany, F. R.	Poland	

No member body had expressed disapproval of the document.

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Plastics — Non-plasticized cellulose acetate — Determination of moisture content

1 Scope and field of application

This International Standard specifies a method for the determination of the moisture content of non-plasticized cellulose acetate.

This determination may be required for the calculation of the dry mass of the cellulose acetate used in analytical methods.

This method applies only to cellulose acetate with a moisture content of not more than 10 %.

2 Principle

Drying of the test sample at 105 °C in a thermostatic oven, then weighing. Calculation of the moisture content from the loss of mass of the test portion.

3 Apparatus

3.1 Glass weighing bottle, low wide form, with a ground-glass lid.

3.2 Desiccator, containing anhydrous calcium chloride.

3.3 Oven, capable of being maintained at 105 ± 2 °C.

3.4 Balance, accurate to 0,001 g.

4 Procedure

4.1 Dry the weighing bottle and its ground-glass lid (3.1) in the oven (3.3), maintained at 105 ± 2 °C, for 1/2 h, cool in the desiccator (3.2) and weigh to the nearest 0,001 g.

Weigh approximately 5 g of cellulose acetate, to the nearest 0,001 g, in the weighing bottle.

Introduce the weighing bottle containing the test portion, with its lid removed and placed along side, into the oven, maintained at 105 ± 2 °C for 3 h.

Remove the weighing bottle from the oven, cover with its lid, cool in the desiccator and then re-weigh to the nearest 0,001 g.

4.2 Carry out two determinations. If the difference in percentage moisture content between the two is more than 0,1, repeat the test.

5 Calculation and expression of results

The moisture content, expressed as a percentage by mass, is given by the formula

$$\frac{m_1 - m_2}{m_1} \times 100$$

where

m_1 is the mass, in grams, of the test portion before drying;

m_2 is the mass, in grams, of the test portion after drying.

Take as the result the mean of two acceptable determinations (see 4.2).

6 Test report

The test report shall include the following particulars :

a) reference to this International Standard;

b) complete identification of the product tested, including physical form;

c) percentage moisture content.