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Tea — Determination of water extract

Thé — Détermination de l'extrait à l'eau

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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.

Prior to 1972, the results of the work of the Technical Committees were published as ISO Recommendations; these documents are now in the process of being transformed into International Standards. As part of this process, Technical Committee ISO/TC 34 has reviewed ISO Recommendation R 1574 and found it technically suitable for transformation. International Standard ISO 1574 therefore replaces ISO Recommendation R 1574-1970 to which it is technically identical.

ISO Recommendation R 1574 was approved by the Member Bodies of the following countries :

Australia	India	South Africa, Rep. of
Brazil	Iran	Spain
Chile	Israel	Sri Lanka
Colombia	Korea, Rep. of	Thailand
Czechoslovakia	Netherlands	Turkey
Egypt, Arab Rep. of	Poland	United Kingdom
France	Portugal	U.S.A.
Hungary	Romania	U.S.S.R.

No Member Body expressed disapproval of the Recommendation.

No Member Body disapproved the transformation of ISO/R 1574 into an International Standard.

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Tea — Determination of water extract

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies a method for the determination of the water extract of tea.

2 REFERENCE

ISO 1572, *Tea — Preparation of ground sample of known dry matter content.*

3 DEFINITION

For the purpose of this International Standard, the following definition applies :

water extract : The soluble matter extracted from the sample by boiling water under the conditions specified.

4 PRINCIPLE

Extraction of soluble matter from a test portion of the product by means of water boiling under reflux, filtration, evaporation of the filtrate to dryness and weighing of the residue.

5 APPARATUS

Usual laboratory apparatus not otherwise specified, and the following items :

5.1 Constant-temperature oven, capable of being controlled at 103 ± 2 °C.

5.2 Steam bath.

5.3 Desiccator, containing an effective desiccant.

5.4 Analytical balance.

6 SAMPLE

Use a ground sample of known dry matter content, prepared as specified in ISO 1572.

7 PROCEDURE

7.1 Test portion

Weigh, to the nearest 0,001 g, about 2 g of the ground sample into a 500 ml boiling flask.

7.2 Determination

Add to the test portion 200 ml of hot distilled water, or water of at least equal purity, and reflux over a low flame for 1 h, rotating the flask occasionally. Cool to 20 °C, dilute to 500 ml in a volumetric flask, mix thoroughly and filter through dry filter paper[1].

Pipette 50 ml of the filtrate into a weighed dish and evaporate to dryness on the steam bath (5.2). Heat the dish and contents in the oven (5.1) at 103 ± 2 °C for 2 h, cool in the desiccator (5.3) and weigh. Heat again for 1 h, cool in the desiccator and weigh; repeat these operations, if necessary, until the difference between two successive weighings does not exceed 0,002 g.

NOTE — When the dish is taken from the oven at the end of each heating period, care should be taken (for example, by temporarily covering the dish) to prevent loss of material by the spontaneous ejection of particles. The use of about 5 g of purified sand in the dish facilitates evaporation and prevents this loss of material.

Carry out two determinations on the same ground sample.

8 EXPRESSION OF RESULTS

The percentage, by mass, of water extract yielded by the ground sample, on the dry basis, is given by the formula

$$m_1 \times \frac{500}{50} \times \frac{100}{m_0} \times \frac{100}{RS}$$

where

m_0 is the mass, in grams, of the test portion;

m_1 is the mass, in grams, of the dried water extract;

RS is the dry matter content, as a percentage by mass, of the ground sample, determined in accordance with ISO 1572.

1) Filter paper for general analytical use is suitable.

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