
INTERNATIONAL STANDARD



1575

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

Tea – Determination of total ash

Thé – Détermination des cendres totales

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Descriptors : agricultural products, tea, chemical analysis, determination of content, ash content.

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 1575 and found it technically suitable for transformation. International Standard ISO 1575 therefore replaces ISO Recommendation R 1575-1970 to which it is technically identical.

ISO Recommendation R 1575 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 1575 into an International Standard.

Tea – Determination of total ash

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies a method for the determination of the total ash of tea.

2 REFERENCES

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

ISO 1576, *Tea – Determination of water-soluble ash and water-insoluble ash.*

ISO/R 1577, *Tea – Determination of acid-insoluble ash.*

3 DEFINITION

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

total ash : The residue obtained after incineration at 525 ± 25 °C under the conditions specified.

4 PRINCIPLE

Destruction of organic matter by heating at 525 ± 25 °C to constant mass.

5 REAGENT

5.1 Vegetable oil (for example, olive oil), leaving no residue on incineration.

6 APPARATUS

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

6.1 Dish, capacity 50 to 100 ml, of platinum, porcelain or other material unaffected by the conditions of the test.

6.2 Furnace, capable of being controlled at 525 ± 25 °C.

6.3 Steam bath.

6.4 Hot-plate.

6.5 Desiccator, containing an effective desiccant.

6.6 Analytical balance.

7 SAMPLE

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

8 PROCEDURE

8.1 Test portion

Weigh, to the nearest 0,001 g, about 5 g of the ground sample into the dish (6.1). Alternatively, the test portion taken for the determination of the dry matter content of the ground sample (see ISO 1572) may be used, if this test portion has been dried in a dish as specified in 6.1.

8.2 Determination

8.2.1 Heat the test portion, if necessary, in the dish, at a temperature near 100 °C until the moisture is expelled. Cool and add a few drops of the vegetable oil (5.1) and heat slowly over a flame until swelling ceases. Transfer the dish to the furnace (6.2) and heat at 525 ± 25 °C until the ash is visibly free from carbon particles (at least 2 h is usually required). Allow to cool, then moisten the ash with distilled water, dry it on the steam bath (6.3) and then on the hot-plate (6.4). Return the dish to the furnace for 60 min, cool in the desiccator and weigh. Heat again in the furnace for 30 min, cool and weigh. Repeat these operations, if necessary, until the difference between two successive weighings does not exceed 0,001 g.

8.2.2 Carry out two determinations on the same ground sample.

8.2.3 Reserve the total ash for determination of water-soluble ash and water-insoluble ash (see ISO 1576), and of acid-insoluble ash (see ISO/R 1577), if required.

9 EXPRESSION OF RESULTS

9.1 Method of calculation and formula

The percentage, by mass, of total ash yielded by the ground