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INTERNATIONAL ORGANIZATION FOR STANDARDIZATION
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МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ

Tea — Determination of acid-insoluble ash

Thé — Détermination des cendres insolubles dans l'acide

Reference number
ISO 1577 : 1987 (E)

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established 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. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 1577 was prepared by Technical Committee ISO/TC 34, *Agricultural food products.*

This second edition cancels and replaces the first edition (ISO 1577 : 1980), clause 6 of which has been the subject of a minor revision.

Users should note that all International Standards undergo revision from time to time and that any reference made herein to any other International Standard implies its latest edition, unless otherwise stated.

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Tea — Determination of acid-insoluble ash

1 Scope and field of application

This International Standard specifies a method for the determination of the acid-insoluble ash from tea.

2 References

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

ISO 1575, *Tea — Determination of total ash.*

3 Definition

For the purposes of this International Standard, the following definition applies.

acid-insoluble ash : The part of the total ash, obtained in accordance with ISO 1575, remaining after treatment with hydrochloric acid solution under the conditions specified in this International Standard.

4 Principle

Treatment of the total ash with hydrochloric acid solution, filtration, ignition and weighing of the residue.

5 Reagents

All reagents shall be of recognized analytical grade. The water used shall be distilled water or water of equivalent purity.

5.1 Hydrochloric acid solution.

Dilute 1 volume of concentrated hydrochloric acid (ϱ_{20} 1,16 to 1,18 g/ml) with 2,5 volumes of water.

WARNING — Concentrated hydrochloric acid is corrosive, has an irritant vapour and causes burns.

5.2 Silver nitrate, approximately 17 g/l solution.

6 Apparatus

Usual laboratory apparatus, and the following items :

6.1 Dish, of capacity 50 to 100 ml, made of platinum, porcelain or other material unaffected by the conditions of the test used for the determination of total ash.

NOTE — It is considered that silica dishes are unsuitable for use with this test.

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

6.3 Boiling water bath.

6.4 Filter paper, ashless.

6.5 Desiccator, containing an efficient desiccant.

6.6 Analytical balance.

7 Procedure

7.1 Test portion

See ISO 1575.

7.2 Determination

To the total ash obtained as described in ISO 1575, contained in the dish (6.1), add 25 ml of the hydrochloric acid solution (5.1). Cover the dish with a watch glass to prevent spattering, and boil gently the solution for 10 min. Allow to cool and filter the contents of the dish through the filter paper (6.4). Wash the dish and the filter paper with hot water until the washings are free from the acid, as confirmed by the silver nitrate solution (5.2). Return the filter paper and contents to the dish, evaporate the water carefully on the boiling water bath (6.3) and heat in the furnace (6.2), controlled at 525 ± 25 °C, until the residue is free from visible carbon particles. Cool the dish in the desiccator (6.5) and weigh. Heat again in the furnace for 30 min, allow to cool and weigh; repeat these operations, if necessary, until the difference between two successive weighings does not exceed 0,001 g. Note the lowest mass.