International Standard 3726

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Instant coffee — Determination of loss in mass at 70 °C under reduced pressure

Café soluble — Détermination de la perte de masse à 70 °C sous pression réduite

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Foreword

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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 3726 was developed by Technical Committee ISO/TC 34, *Agricultural food products*, and was circulated to the member bodies in April 1982.

It has been approved by the member bodies of the following countries :

Australia	India	Romania
Brazil	Iran	South Africa, Rep. of
Canada	Iraq	Sri Lanka
Chile	Israel	Thailand
Czechoslovakia	Jamaica	Turkey
Egypt, Arab Rep. of	Malaysia	United Kingdom
Ethiopia	Netherlands	USA
France	New Zealand	USSR
Germany, F.R.	Poland	Venezuela
Hungary	Portugal	Yugoslavia

No member body expressed disapproval of the document.

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Instant coffee — Determination of loss in mass at 70 °C under reduced pressure

0 Introduction

In the method described in this International Standard, a temperature of 70 °C and an absolute pressure of 5 000 Pa are used, since higher temperatures may cause decomposition of carbohydrates normally present in instant coffee, resulting in the formation of water as a reaction product.

The drying period of 16 h has been chosen because tests on instant coffees representative of those on the market demonstrated that no further loss in mass occurred when the drying period was extended.

1 Scope and field of application

This International Standard specifies a method for the determination of the loss in mass at 70 °C, under reduced pressure, of instant coffee.

It is applicable to all types of instant coffee, as defined in ISO 3509. It does not apply to liquid coffee extracts.

2 References

ISO 3509, *Coffee and its products — Vocabulary.*

ISO 6670, *Instant coffee in cases with liners — Sampling.*[1)]

3 Definition

loss in mass at 70 °C under reduced pressure : Principally water and small quantities of volatile matter vaporized under the conditions specified in this International Standard, and expressed as a percentage by mass.

4 Principle

Heating a test portion at 70 °C for 16 h under reduced pressure (5 000 Pa).

5 Apparatus

Usual laboratory apparatus, and in particular :

5.1 Isothermal vacuum oven, electrically heated and adjustable so that the temperature of the shelves can be controlled at 70 ± 1 °C.

5.2 Oven, capable of being controlled at 103 ± 2 °C.

5.3 Vacuum pump, capable of reducing the pressure in the oven (5.1) to 5 000 ± 100 Pa.[2)]

5.4 Dish, flat-bottomed, with a closely fitting lid, resistant to attack under the conditions of the test, made, for example, of stainless steel or glass, of diameter approximately 50 mm and of height 30 mm.

5.5 Air drying apparatus, consisting of two washing bottles made of glass, filled with glycerol, to form a bubble train, and two drying towers made of glass containing a desiccant.

The bubble train and the drying system are connected in series with the vacuum oven (5.1), the drying towers being between the oven and the bubble train.

5.6 Desiccator, containing an efficient desiccant, for example phosphorus(V) oxide or freshly dried silica gel.

5.7 Analytical balance.

1) At present at the stage of draft.

2) 5 000 Pa = 5 000 N/m^2 = 50 mbar = 37,5 mmHg