International Standard 2291

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

Cocoa beans — Determination of moisture content (Routine method)

Fèves de cacao — Détermination de la teneur en eau (Méthode pratique)

Second edition — 1980-12-01

UDC 633.74 : 543.81 **Ref. No. ISO 2291-1980 (E)**

Descriptors : agricultural products, cocoa beans, tests, physical tests, determination of content, humidity.

Price based on 2 pages

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 2291 was developed by Technical Committee ISO/TC 34, *Agricultural food products.*

This second edition 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 the first edition (i.e. ISO 2291-1972), which had been approved by the member bodies of the following countries :

Brazil	Hungary	Romania
Bulgaria	India	South Africa, Rep. of
Canada	Ireland	Spain
Ceylon	Israel	Sweden
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Austria

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1 Scope and field of application

This International Standard specifies a routine method for the determination of the moisture content of cocoa beans.

2 Reference

ISO 2292, *Cocoa beans — Sampling.*

3 Definition

moisture content of cocoa beans: Conventionally, the loss in mass determined by the method specified in this International Standard, and expressed as a percentage by mass.

4 Principle

After crushing, drying of cocoa beans for 16 h in an oven controlled at 103 °C.

5 Apparatus

Usual laboratory equipment and :

5.1 Pestle and mortar, which will allow the beans to be crushed without heating.

5.2 Ventilated oven, preferably fitted with a fan, capable of being controlled at 103 ± 2 °C.

5.3 Dish with lid, of metal resistant to attack under the conditions of the test, or of glass, with at least 35 cm^2 of useful surface (for example minimum diameter 70 mm) and 20 to 25 mm deep.

5.4 Desiccator, containing an efficient desiccant.

5.5 Analytical balance.

6 Procedure

6.1 Preparation of the test sample

Carefully mix the laboratory sample (final lot sample) obtained by the method specified in ISO 2292.

By successive reductions of the mixed sample take approximately 10 g of cocoa beans, crush them roughly in the mortar (5.1), within 1 min, so that the greatest dimension of the particles does not exceed about 5 mm, but avoiding the formation of a paste. It is advisable to crush the beans individually, placing them in the mortar one by one.

The beans taken shall be representative of the laboratory sample.

6.2 Test portion

Weigh the previously dried empty dish (5.3) and lid; quickly place in it a test portion comprising practically all of the test sample prepared as described in 6.1.

Cover the dish with its lid and weigh to the nearest 1 mg.

6.3 Determination

Place the dish (5.3), containing the test portion, on its lid in the oven (5.2) controlled at 103 ± 2°C. Leave for 16 ± 1 h, taking care not to open the oven. At the end of this period, remove the dish, cover it immediately with its lid and place it in the desiccator (5.4). Allow to cool to ambient temperature (approximately 30 to 40 min after placing in the desiccator), and weigh, still covered, to the nearest 1 mg.

6.4 Number of determinations

Carry out two determinations, each on a quantity of beans which has been treated individually : crushing, taking the test portion and drying.