COMMISSION REGULATION (EEC) No 1908/84
of 4 July 1984
fixing the standard methods for determining the quality of cereals

THE COMMISSION OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community,

Having regard to Council Regulation (EEC) No 2727/75 of 29 October 1975 on the common organization of the market in cereals [1], as last amended by Regulation (EEC) No 1018/84 [2], and in particular Article 3 (2) thereof,

Having regard to Council Regulation (EEC) No 2731/75 of 29 October 1975 fixing standard qualities for common wheat, rye, barley, maize, sorghum and durum wheat [3], as last amended by Regulation (EEC) No 1028/84 [4], and in particular Article 6 thereof,

Whereas Regulation (EEC) No 2731/75 provides that the methods necessary for determining the quality of soft wheat, durum wheat, rye, barley, maize and sorghum are to be established in accordance with the procedure laid down in Article 26 of Regulation (EEC) No 2727/75 ; whereas this Regulation defines the said methods ;

Whereas the measures provided for in this Regulation are in accordance with the opinion of the Management Committee for Cereals,

HAS ADOPTED THIS REGULATION :

Article 1

In applying Article 6 of Council Regulation (EEC) No 2731/75 :

— the standard method for determining matter other than basis cereals of unimpaired quality shall be that set out in Annex I,

— the standard method for determining moisture content shall be that set out in Annex II.

Article 2

This Regulation shall enter into force on the third day following its publication in the *Official Journal of the European Communities.*

It shall apply from :

— 1 July 1984 in the case of durum wheat,

— 1 August 1984 in the case of the other cereals.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 4 July 1984.

For the Commission

Poul DALSAGER

Member of the Commission

(1) OJ No L 281, 1. 11. 1975, p. 1.
(2) OJ No L 107, 19. 4. 1984, p. 1.
(3) OJ No L 281, 1. 11. 1975, p. 22.
(4) OJ No L 107, 19. 4. 1984, p. 17.

ANNEX I

STANDARD METHOD FOR DETERMINING MATTER OTHER THAN BASIC CEREALS OF UNIMPAIRED QUALITY

1. For *common wheat, durum wheat, rye and barley*, an average sample of 250 g is passed through two sieves, one with slotted perforations of 3,5 mm and the other with slotted perforations of 1 mm, for half a minute each.

   In order to ensure constant sifting, it is advisable to use a mechanical sieve, e.g. a vibrating table with fitted sieves.

   The matter retained by the sieve with slotted perforations of 3,5 mm and that passing through the sieve with slotted perforations of 1 mm must be weighed together and considered as extraneous matter. Where the matter retained by the sieve with slotted perforations of 3,5 mm includes parts of the 'other cereals' group or particularly large grains of the basic cereal, those parts or grains shall be returned to the sifted sample. During sifting, in the sieve with slotted perforations of 1 mm, a close check must be made for live pests.

   From the sifted sample, a sample of 50 to 100 g shall be taken using a separator. This partial sample must be weighed.

   Then, this partial sample should be spread out on a table with tweezers or a horn spatula and broken grains, other cereals, sprouted grains, grains damaged by pests, grains damaged by frost, grains in which the germ is discoloured, mottled grains, weed seeds, ergots, damaged grains, decayed grains, husks and live pests and dead insects must be extracted.

   Where the partial sample includes grains still in the husk, they shall be husked by hand, the husks obtained being considered as pieces of husks. Stones, sand and fragments of straw shall be considered as extraneous matter.

   The partial sample shall be sifted for half a minute in a sieve with slotted perforations of 2 mm for common wheat, 1,8 for rye, 1,9 mm for durum wheat, 2,2 mm for barley. Matter which passes through this sieve shall be considered as shrivelled grains. Grains damaged by frost and unripe green grains belong to the 'shrivelled grains' group.

2. An average sample of 500 g in the case of *maize* and 250 g for *sorghum*, is shaken for half a minute in a sieve which has slotted perforations of 1 mm. Check for the presence of live pests and dead insects.

   Using tweezers or a horn spatula ; extract from the matter retained by the sieve with slotted perforations of 1 mm stones, sand, fragments of straw and other extraneous matter.

   Add the extraneous matter thus extracted to the matter which has passed through the sieve with slotted perforations of 1 mm and weigh them together.

   Using a separator, prepare a partial sample of 100 to 200 g in the case of maize or 25 to 50 g for sorghum from the sample passed through the sieve. Weigh this partial sample.

   Spread it out in a thin layer on a table. Using tweezers or a horn spatula, extract the pieces of other cereals, grains damaged by pests, grains damaged by frost, sprouted grains, weed seeds, damaged grains, husks, live pests and dead insects.

   Next, pass this partial sample through a sieve with a 4,5 mm round mesh for maize and 1,8 mm round mesh for sorghum. The matter which passes through this sieve shall be considered as broken grains.

3. Groups of matter other than basic cereals of unimpaired quality, determined according to the methods referred to in 1 and 2, the percentages of which are laid down in Articles 1 to 5, must be weighed very carefully to the nearest 0,01 g and distributed according to percentage over the average sample. The particulars entered in the analyses report shall be to the nearest 0,1 %. Check for live pests.

   As a general rule, two analyses must be made for each sample. They must not differ by more than 10 % in respect of the total of the abovementioned matter.

4. The apparatus to be used for the operations referred to in 1,2 and 3 is as follows :

   (a) sample separator, e.g. a conical or grooved apparatus ;

   (b) precision or assay balance ;

   (c) sieves with slotted perforations of 1, 1,8, 1,9, 2, 2,2 and 3,5 mm and sieves with a 1,8 and 4,5 mm round mesh. The sieves may be fitted to a vibrating table.

ANNEX II

STANDARD METHOD OF TESTING FOR MOISTURE CONTENT

1. PRINCIPLE

The product is dried at a temperature of 130 to 133 °C under normal atmospheric pressure, for an appropriate period of time according to the size of the particles.

2. FIELD OF APPLICATION

This drying method applies to cereals crushed into particles of which at least 50 % pass through a sieve with 0,5 mm mesh and leave not more than 10 % residue on the sieve with a 1 mm round mesh.

It also applies to flour.

3. APPARATUS

Precision balance.

Crusher made of a material which does not absorb moisture, is easy to clean, enables crushing to be effected quickly and evenly without overheating, limits contact with the outside air to the minimum, and meets the requirements mentioned in 2 (e.g. a detachable roller mill).

Receptacle made of non-corrodible metal or glass, fitted with a sufficiently tight-fitting lid ; working surface allowing distribution of the test sample at 0,3 g per square centimetre.

Electrically heated isothermic heating chamber, set at a temperature of 130 to 133 °C (1), having adequate ventilation (2).

Dessicator with a metal or, failing metal, porcelain plate (thick, perforated), containing any suitable dessicant.

4. METHOD

(a) **Drying**

Weigh to the nearest 1 mg a quantity slightly greater than 5 g of the crushed small-grained cereals or 8 g of the crushed maize in the pre-weighed receptacle. Place the receptacle and lid in a heating chamber heated to 130 °C. To prevent too great a drop in temperature, the receptacle must be introduced in as short a time as possible. Leave small-grained cereals to dry for two hours and maize for four hours after the heating chamber regains a temperature of 130 °C. Remove the receptacle from the heating chamber, quickly replace the lid, leave to cool for 30 to 45 minutes in a dessicator and weigh (to the nearest 1 mg).

(b) **Pre-drying**

Grains with a moisture content higher than 17 % (15 % for oats and maize) must be pre-dried as follows :

Small-grained cereals : weigh to the nearest 1 mg 20 g of unground grain in the pre-weighed metal receptacle, leave to dry in a heating chamber for seven to 10 minutes at a temperature of 130 °C, remove from the heating chamber, leave the grains uncovered to cool in the laboratory for two hours and weigh (to the nearest 1 mg). Crush the partially dried grains and determine the remaining moisture content as described in (a).

---

(1) Air temperatures inside the heating chamber.

(2) Its heating capacity should be such that, when it has been pre-set to 131 °C, that temperature can be regained in less than 45 minutes after the maximum number of test samples have been placed in the chamber to dry simultaneously. Ventilation should be such that, when small-grained cereals (common wheat, durum wheat, barley, oats and rye) are dried for two hours and maize for four hours, the results from all the test samples of semolina or, as the case may be, maize that the heating chamber can hold differ by less than 0,15 % from the results obtained after drying small-grained cereals for three hours and maize for five hours.

Maize : weigh to the nearest 10 mg about 100 g of the sample in a metal scoop (whose working surface is such that the grains can be spread in a single layer), leave to dry in a heating chamber at between 60 and 80 °C until the water content is reduced to between 9 and 15 %, remove from the heating chamber, leave the grains uncovered to cool in the laboratory for at least two hours and weigh to the nearest 10 mg. Crush about 30 of the partially dried grains, homogenize with a spatula and determine the moisture content as described in (a).

5. METHOD OF CALCULATION AND FORMULAE

E = the initial mass, in grams, of the test sample ;

M = the mass, in grams, of the test sample after preparation ;

M′ = the mass, in grams, of the test sample after crushing ;

m = the mass, in grams, of the dry test sample.

The moisture content as a percentage of the product is equal to :

— without previous preparation $(E - m) \times \frac{100}{E}$

— with previous preparation $\left[\frac{(M' - m)\ M}{M'} + E - M\right] \times \frac{100}{E} = 100\left(1 - \frac{Mm}{EM'}\right)$.

Tests to be made in duplicate at least.

6. REPEATABILITY

The difference between the values obtained from the two determinations carried out simultaneously or in rapid succession by the same analyst shall not exceed 0,15 g of moisture per 100 g of sample. If it does so, the determinations shall be repeated.