Commission Regulation (EU) No 1272/2009 of 11 December 2009 laying down common detailed rules for the implementation of Council Regulation (EC) No 1234/2007 as regards buying-in and selling of agricultural products under public intervention (repealed)

ANNEX I

CEREALS

PART I

Eligibility criteria for cereals

The requirements referred to in Article 7(1) as regards cereals shall be, in particular, the following:

(a) cereals are of the typical colour of the cereal in question;

(b) cereals are free from abnormal smell and live pests (including mites) at every stage of their development;

(c) cereals meet the minimum quality requirements set out in Part II of this Annex; and

(d) the levels of contaminants, including radioactivity, do not exceed the maximum levels permitted under Community legislation.

The maximum contaminant level which must not be exceeded shall be as follows:

(a) for common wheat and durum wheat, those permitted under Council Regulation (EEC) No 315/93[(1)], including the requirements regarding the Fusarium-toxin level for common wheat and durum wheat laid down in points 2.4 to 2.7 of the Annex to Commission Regulation (EC) No 1881/2006[(2)];

(b) for barley, maize and sorghum, those set by Directive 2002/32/EC.

Member States shall check levels of contaminants, including radioactivity, on the basis of a risk analysis, taking account in particular of the information supplied by the offerer or tenderer and the commitments of the latter regarding compliance with the standards set, especially in the light of the results of the analyses.

In addition, in cases where analyses indicate that the Zeleny index of a batch of common wheat is between 22 and 30, for this wheat to be deemed sound, fair and of marketable quality, the dough obtained from it must be judged to be non-sticky and machinable.

PART II

Minimum quality requirements referred to in Part I

		Durum wheat	Common wheat	Barley	Maize	Sorghum
A.	Maximum moisture content	14,5 %	14,5 %	14,5 %	13,5 %	13,5 %

a As a % of dry matter.

‘—’ No specific provision applicable.

B.	Maximum percentage of matter which is not basic cereal of unimpaired quality:	12 %	12 %	12 %	12 %	12 %
1.	Broken grains	6 %	5 %	5 %	5 %	5 %
2.	Impurities consisting of grains (other than indicated at 3)	5 %	7 %	12 %	5 %	5 %
of which:						
(a)	shrivelled grains		—	—	—	—
(b)	other cereals	3 %	—	5 %	—	—
(c)	grains damaged by pests	—	—	—	—	—
(d)	grains in which the germ is discoloured	—	—	—	—	—
(e)	grains overheated during drying	0,5 %	0,5 %	3 %	0,5 %	0,5 %

a As a % of dry matter.

‘—’ No specific provision applicable.

3.	Mottled grains and/or grains affected with fusariosis, of which	5 %	—	—	—	—
—	grains affected with fusariosis	1,5 %	—	—	—	—
4.	Sprouted grains	4 %	4 %	6 %	6 %	6 %
5.	Miscellaneous impurities (*Schwarzbesatz*), of which:	3 %	3 %	3 %	3 %	3 %
(a)	extraneous seeds:		—	—	—	—
—	noxious	0,1 %	0,1 %	0,1 %	0,1 %	0,1 %
—	other	—	—	—	—	—
(b)	damaged grains: of which:					
—	grains damaged by spontaneous heating or too extreme heating during drying	0,05 %	0,05 %	—	—	—
—	other	—	—	—	—	—

a As a % of dry matter.

‘—’ No specific provision applicable.

(c)	extraneous matter	—	—	—	—	—
(d)	husks	—	—	—	—	—
(e)	ergot	0,05 %	0,05 %	—	—	—
(f)	decayed grains	—	—	—	—	—
(g)	dead insects and fragments of insects	—	—	—	—	—
C.	Maximum percentage of wholly or partially piebald grains	27 %	—	—	—	—
D.	Maximum tannin content[a]	—	—	—	—	1 %
E.	Minimum specific weight (kg/hl)	78	73	62	—	—
F.	Minimum protein content[a]	11,5 %	10,5 %	—	—	—
G.	Hagberg falling number (seconds)	220	220	—	—	—
H.	Minimum Zeleny index (ml)	—	22	—	—	—

a As a % of dry matter.

‘—’ No specific provision applicable.

Matter other than basic cereals of unimpaired quality shall be as defined in Part III of this Annex.

Grains of basic cereals and other cereals which are damaged, affected by ergot or decayed shall be classified as 'miscellaneous impurities' even if they have defects which belong to other categories.

PART III

1. DEFINITION OF MATTER OTHER THAN BASIC CEREALS OF UNIMPAIRED QUALITY

1.1. Broken grains

All grains whose endosperm is partially uncovered shall be regarded as broken grains. Grains damaged by threshing and grains from which the germ has been removed also belong to this group.

For maize, 'broken grains' means pieces of grain or grains which pass through a sieve with a circular mesh 4,5 mm in diameter.

For sorghum, 'broken grains' means pieces of grain or grains which pass through a sieve with a circular mesh 1,8 mm in diameter.

1.2. Grain impurities

(a) Shrivelled grains

Grains which, after elimination from the sample of all other matter referred to in this Annex, pass through sieves with apertures of the following dimensions: common wheat 2,0 mm, durum wheat 1,9 mm, barley 2,2 mm.

Notwithstanding this definition, however:

— for barley from Estonia, Latvia, Finland and Sweden with a specific weight of at least 64 kilograms per hectolitre offered for intervention in those Member States, or

— for barley with a moisture content of 12,5 % or less, 'shrivelled grains' means grains which, after elimination of all other matter referred to in this Annex, pass through sieves with apertures of 2,0 mm.

In addition, grains damaged by frost and unripe grains (green) belong to this group.

(b) Other cereals

All grains which do not belong to the species of grain sampled.

(c) Grains damaged by pests

Grains which have been nibbled. Bug-ridden grains also belong to this group.

(d) Grains in which the germ is discoloured, mottled grains, grains affected with fusariosis

Grains in which the germ is discoloured are those of which the tegument is coloured brown to brownish black and of which the germ is normal and not sprouting. For common wheat, grains in which the germ is discoloured shall be disregarded up to 8 %.

For durum wheat:

— grains which show a brown to brownish black discoloration elsewhere than on the germ itself shall be considered as mottled grains,

— grains affected with fusariosis are grains whose pericarp is contaminated with *Fusarium mycelium*; such grains look slightly shrivelled, wrinkled and have pink or white diffuse patches with an ill-defined outline.

(e) *Grains overheated during drying are those which show external signs of scorching but which are not damaged grains*

1.3. Sprouted grains

Sprouted grains are those in which the radicle or plumule is clearly visible to the naked eye. However, account must be taken of the general appearance of the sample when its content, of sprouted grains, is assessed. In some kinds of cereals the germ is protuberant, for example in durum wheat, and the germ tegument splits when the batch of cereals is shaken. These grains resemble sprouted grains but must not be included in that group. Sprouted grains are only those where the germ has undergone clearly visible changes which make it easy to distinguish the sprouted grain from the normal grain.

1.4. Miscellaneous impurities (*Schwarzbesatz*)

(a) Extraneous seeds

'Extraneous seeds' are seeds of plants, whether or not cultivated, other than cereals. They include seeds not worth recovering, seeds which can be used for livestock and noxious seeds.

'Noxious seeds' means seeds which are toxic to humans and animals, seeds hampering or complicating the cleaning and milling of cereals and seeds affecting the quality of products processed from cereals.

(b) Damaged grains

'Damaged grains' are those rendered unfit for human consumption and, as regards feed grain, for consumption by cattle, owing to putrefaction, mildew, or bacterial or other causes.

Damaged grains also include grains damaged by spontaneous heat generation or too extreme heating during drying. These 'heated' or 'smutty' grains are fully grown grains in which the tegument is coloured greyish brown to black, while the cross-section of the kernel is coloured yellowish-grey to brownish-black.

Grains attacked by wheat midge shall be considered damaged grains only when more than half the surface of the grain is coloured grey to black as a result of secondary cryptogamic attack. Where discoloration covers less then half the surface of the grain, they must be classed with grains damaged by pests;

(c) Extraneous matter

All matter in a sample of cereals retained by a sieve with apertures of 3,5 mm, (with the exception of grains of other cereals and particularly large grains of the basic cereal) and that passing through a sieve with apertures of 1,0 mm shall be considered extraneous matter. Also included are stones, sand, fragments of straw and other impurities in the samples which pass through a sieve with apertures of 3,5 mm and are retained by a sieve with apertures of 1,0 mm.

This definition does not apply to maize. For maize, all matter in a sample which passes through a sieve with apertures of 1 mm shall be considered extraneous matter, in addition to that referred to in the first subparagraph.

(d) *Husks (for maize: cob fragments)*

(e) *Ergots*

(f) *Decayed grains*

(g) *Dead insects and fragments of insects*

1.5. **Live pests**

1.6. Piebald grains which have lost their vitreous aspect (mitadiné or piebald)

Mitadiné grains of durum wheat are grains whose kernel cannot be regarded as entirely vitreous.

2. SPECIFIC FACTORS TO TAKE INTO CONSIDERATION FOR EACH TYPE OF CEREAL FOR THE DEFINITION OF IMPURITIES

2.1. Durum wheat

Grain impurities means shrivelled grains, grains of other cereals, grains damaged by pests, grains in which the germ is discoloured, mottled grains of grains affected with fusariosis and grains overheated during drying.

Miscellaneous impurities mean extraneous seeds, damaged grains, extraneous matter, husks, ergot, decayed grains, dead insects and fragments of insects.

2.2. Common wheat

Grain impurities means shrivelled grains, grains of other cereals, grains damaged by pests, grains in which the germ is discoloured and grains overheated during drying.

Miscellaneous impurities means extraneous seeds, damaged grains, extraneous matter, husks, ergot decayed grains, dead insects and fragments of insects.

2.3. Barley

Grain impurities means shrivelled grains, grains of other cereals, grains damaged by pests and grains overheated during drying.

Miscellaneous impurities mean extraneous seeds, damaged grains, extraneous matter, husks, dead insects and fragments of insects.

2.4. Maize

Grain impurities means grains of other cereals, grains damaged by pests and grains overheated during drying.

For maize, all matter in a sample which passes through a sieve with apertures of 1,0 mm shall be considered extraneous matter.

All extraneous seeds, damaged grains, extraneous matter, husks, dead insects and fragments of insects shall be considered miscellaneous impurities.

2.5. Sorghum

Grain impurities means grains of other cereals, grains damaged by pests and grains overheated during drying.

Miscellaneous impurities mean extraneous seeds, damaged grains, extraneous matter, husks, dead insects and fragments of insects.

PART IV

Methods used in order to determine the quality of cereals offered for intervention

To determine the quality of cereals offered for intervention, the following methods shall be used:

(a) the standard method for determining matter other than basic cereals of unimpaired quality shall be that set out in Part V to this Annex;

(b) the standard method for determining moisture content shall be that set out in Part VI of this Annex. However, Member States may also use other methods based on the principle set out in Annex V, method ISO 712:1998, or a method based on infrared technology. In case of dispute, only the results of using the method set out in Part V to this Annex shall be accepted;

(c) the standard method for determining the tannin content of sorghum shall be method ISO 9648:1988;

(d) the standard method for determining the non-stickiness and machinability of the dough obtained from common wheat shall be that set out in Part VII of this Annex;

(e) the standard method for determining the protein content of ground common wheat shall be that recognised by the International Association for Cereal Chemistry (ICC), the standards of which are laid down under heading No 105/2: 'method for the determination of the protein content of cereals and cereal products';

However, Member States may use any other method. In such a case, they must furnish the Commission with evidence of recognition by the ICC that the method in question gives equivalent results;

(f) the method for determining the Zeleny index of ground common wheat shall comply with method ISO 5529:1992;

(g) the method for determining the Hagberg falling number (amylase activity test) shall comply with method ISO 3093:2004;

(h) the standard method for determining the rate of loss of vitreous aspect of durum wheat shall be that set out in Part VIII of this Annex;

(i) the standard method for determining the specific weight shall comply with method ISO 7971/2:1995;

(j) the sampling methods and reference analysis methods for determining mycotoxin rates shall be those mentioned in Annex I to Regulation (EC) No 1881/2006 and set out in Annexes I and II to Commission Regulation (EC) No 401/2006[(3)].

PART V

Standard method for determining matter other than basic cereals of unimpaired quality

1. For common wheat, durum wheat and barley, an average sample of 250 g shall be passed through two sieves, one with slotted perforations of 3,5 mm and the other with slotted perforations of 1,0 mm, for half a minute each.

In order to ensure constant sifting, it is advisable to use a mechanical sieve, for example 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 1,0 mm must be weighed together and regarded as extraneous matter. Where the matter retained by the sieve with slotted perforations of 3,5 mm includes parts in 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 1,0 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.

The partial sample should then 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, extraneous 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 extraneous matter.

The partial sample shall be passed for half a minute through a sieve with a mesh size of 2,0 mm for common wheat, 1,9 mm for durum wheat and 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 shall 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 1,0 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 1,0 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 1,0 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, extraneous 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 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 analysis 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 above mentioned matter.

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

(a) sample separator, for example a conical or grooved apparatus;

(b) precision or assay balance;

(c) sieves with slotted perforations of 1,0 mm, 1,8 mm, 1,9 mm, 2,0 mm, 2,2 mm and 3,5 mm and sieves with a 1,8 mm and 4,5 mm round mesh. The sieves may be fitted to a vibrating table.

PART VI

Standard method of testing for moisture content

1. Principle

The product is dried at a temperature of 130 to 133 ^{o}C under normal atmospheric pressure, for a period appropriate to the size of the particles.

2. Scope

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 1,0 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 point 2 (for example 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 cm^2.

Electrically heated isothermic heating chamber, set at a temperature of 130 to 133 ^{o}C[(4)] having adequate ventilation[(5)].

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

4. Procedure

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 in a heating chamber heated to a temperature of 130 to 133 ^{o}C. This should be done as quickly as possible, so as to prevent too great a drop in temperature. Leave small-grained cereals to dry for two hours and maize for four hours after the heating chamber regains a temperature of 130 to 133 ^{o}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).

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) × 100/E,

— with previous preparation, ((M' - m)M/M' + E - M) × 100/E = 100 (1 - Mm/EM).

Tests to be made in duplicate at least.

6. Repetition

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.

PART VII

Method for determining the non-stickiness and machinability of the dough obtained from common wheat

1. Title

Method for test baking of wheat flour.

2. Scope

The method is applicable to flour, experimentally milled from wheat for the production of yeast-raised bread.

3. Principle

Dough is made from flour, water, yeast, salt and sucrose, in a specified mixer. After dividing and rounding, the pieces are given 30 minutes' rest; they are moulded, placed on baking sheets and baked after a final proof of fixed duration. Dough-handling properties are noted. The loaves are judged by volume and height.

4. Ingredients

4.1. Yeast

Active dry yeast of type *Saccharomyces cerevisiae* DHW-Hamburg-Wansbeck or a product having the same characteristics.

4.2. *Tap water*

4.3. Sugar-salt-ascorbic acid solution

Dissolve 30 ±0,5 g of sodium chloride (commercial grade), 30 ±0,5 g of sucrose (commercial grade), and 0,04 ±0,001 g ascorbic acid in 800 ± 5 g of water. Prepare fresh daily.

4.4. Sugar solution

Dissolve 5 ±0,1 g sucrose (commercial grade) in 95 ± 1 g of water. Prepare fresh daily.

4.5. Enzyme active malt flour

Commercial grade.

5. Equipment and apparatus

5.1. Baking room

Controlled to maintain a temperature of 22 to 25 ^{o}C.

5.2. Refrigerator

For maintaining a temperature of 4 ± 2 ^{o}C.

5.3. Balance

Maximum load 2 kg, accuracy 2 g.

5.4. Balance

Maximum load 0,5 kg, accuracy 0,1 g.

5.5. Analytical balance

Accuracy 0,1 × 10^{-3} g.

5.6. Mixer

Stephan UMTA 10, with mixing arm model 'Detmold' (Stephan Soehne GmbH) or similar equipment having the same characteristics.

5.7. Proving cabinet

Controlled to maintain a temperature of 30 ± 1 ^{o}C.

5.8. Open plastic boxes

Made from polymethylmethacrylate (Plexiglas, Perspex). Inside dimensions: 25 × 25 × 15 cm height, wall thickness 0,5 ±0,05 cm.

5.9. Square plastic sheets

Made from polymethylmethacrylate (Plexiglas, Perspex). At least 30 × 30 cm, thickness 0,5 ±0,05 cm.

5.10. Moulder

Brabender ball homogeniser (Brabender OHG) or similar equipment having the same characteristics.

6. Sampling

According to ICC Standard No 101.

7. Procedure

7.1. Determination of water uptake

Determine the water absorption according to ICC Standard No 115/1.

7.2. Determination of malt flour addition

Determine the 'falling number' of the flour according to ISO 3093-1982. If the 'falling number' is higher than 250, determine the malt flour addition required to bring it within the range 200 to 250, using a series of mixtures of the flour with increasing quantities of malt flour (4.5). If the 'falling number' is lower than 250, no malt flour is required.

7.3. Reactivation of active dry yeast

Adjust the temperature of the sugar solution (4.4) to 35 ± 1 °C. Pour one part by weight of the active dry yeast into four parts by weight of this tempered sugar solution. Do not stir. Swirl if necessary.

Allow to stand for 10 ± 1 minute, then stir until a homogeneous suspension is obtained. Use this suspension within 10 minutes.

7.4. Temperature adjustment of the flour and the dough liquid

The temperature of the flour and the water must be adjusted to give a dough temperature of 27 ± 1 °C after mixing.

7.5. Dough composition

Weigh, with a precision of 2 g, 10 y/3 g flour on as-is moisture basis (corresponding to 1 kg flour on a 14 % moisture basis), in which 'y' is the quantity of flour used in the farinograph test (see ICC Standard No 115/1).

Weigh, with a precision of 0,2 g, the quantity of malt flour necessary to bring the 'falling number' within the range 200 to 250 (7.2).

Weigh 430 ± 5 g sugar-salt-ascorbic acid solution (4.3) and add water to a total mass of (x - 9) 10 y/3 g, (see 10.2) in which 'x' is the quantity of water used in the farinograph test (see ICC Standard No 115/1). This total mass (usually between 450 and 650 g) must be achieved with a precision of 1,5 g.

Weigh 90 ± 1 g yeast suspension (7.3).

Note the total mass of the dough (P), which is the sum of the masses of flour, sugar-salt-ascorbic acid solution plus water, yeast suspension and malt flour.

7.6. Mixing

Before starting, bring the mixer to a temperature of 27 ± 1 °C by use of a suitable quantity of tempered water.

Place the liquid dough ingredients in the mixer and place the flour plus malt flour on top.

Start the mixer (speed 1, 1 400 rev/min), and allow to run for 60 seconds. Twenty seconds after the start of mixing, turn the scraper attached to the lid of the mixing bowl two revolutions.

Measure the temperature of the dough. If it is outside the range 26 to 28 °C, discard the dough and mix a new one after adjustment of ingredient temperatures.

Note dough properties using one of the following terms:

— non-sticky and machinable, or

— sticky and non-machinable.

To be considered 'non-sticky and machinable' at the end of mixing, the dough should form a coherent mass which hardly adheres to the sides of the bowl and spindle of the mixer. It should be possible to collect the dough by hand and remove it from the mixing bowl in a single motion without noticeable loss.

7.7. Dividing and rounding

Weigh, with precision of 2 g, three pieces of dough according to the formula:

p = 0,25 P, where:

p = mass of scaled dough piece,
P = total mass of dough.

Immediately round the pieces for 15 seconds in the moulder (5.10) and place them for 30 ± 2 minutes on the square plastic sheets (5.9), covered by the inverted plastic boxes (5.8) in the proving cabinet (5.7).

Do not use dusting flour.

7.8. Moulding

Bring the pieces of dough on the plastic sheets, covered by the inverted boxes, to the moulder (5.10), and re-round each piece for 15 seconds. Do not remove cover from a piece of dough until immediately before rounding. Note dough properties again, using one of the following terms:

— non-sticky and machinable, or
— sticky and non-machinable.

To be considered as 'non-sticky and machinable' the dough should adhere hardly, or not at all, to the sides of the chamber so that it can freely rotate around itself and form a regular ball during the operation of the machine. At the end of the operation the dough should not stick to the sides of the dough-moulding chamber when the lid of the chamber is raised.

8. Test report

The test report should mention:

— dough-handling properties at the end of mixing, and at moulding,
— the 'falling number' of the flour without addition of malt flour,
— any anomalies observed.

It should further include:

— the method used,
— all details required for the identification of the sample.

9. General remarks

9.1. The formula for the calculation of the quantity of dough liquid is based on the following considerations:

Addition of x ml water to the equivalent of 300 g flour at 14 % moisture produces the required consistency. As in the baking test 1 kg of flour (14 % moisture basis) is used, whereas x is based on 300 g of flour, for the baking test x divided by three and multiplied by 10 g of water is needed, so 10 x/3 g.

The 430 g sugar-salt-ascorbic acid solution contains 15 g salt and 15 g sugar. This 430 g solution is included in the dough liquid. So to add 10 x/3 g water to the dough, (10 x/3 + 30) g dough liquid composed of the 430 g sugar-salt-ascorbic acid solution and an additional quantity of water must be added.

Although part of the water added with the yeast suspension is absorbed by the yeast, this suspension also contains 'free' water. It is arbitrarily supposed that 90 g yeast suspension contains 60 g 'free' water. The quantity of the dough liquid must be corrected for this 60 g of 'free' water in the yeast suspension, so 10 x/3 plus 30 minus 60 g must finally be added. This can be rearranged as follows: (10 x/3 + 30) - 60 = 10 x/3 - 30 = (x/3 - 3) 10 = (x - 9) 10/3, the formula given in 7.5. If, for example, a water addition x in the farinograph test was found of 165 ml, this value must be substituted in this formula, so to the 430 g sugar-salt-ascorbic acid solution water must be added to a total mass of:

(165 - 9) 10/3 = 156 × 10/3 = 520 g.

9.2. The method is not directly applicable to wheat. The procedure to be followed for characterising the baking properties of wheat is as follows:

Clean the wheat sample, and determine the moisture content of the cleaned wheat. If the moisture content is within the range 15,0 % to 16,0 %, do not temper the wheat. If the moisture content is outside this range, adjust the moisture content to 15,5 ±0,5 %, at least three hours prior to milling.

Mill the wheat into flour using a Buehler laboratory mill MLU 202 or a Brabender Quadrumat Senior mill or similar equipment having the same characteristics.

Choose a milling procedure that yields a flour of minimum 72 % extraction, with an ash content of 0,5 to 0,6 % on dry matter basis.

Determine the ash content of the flour according to Annex II to Commission Regulation (EC) No 1501/95 and the moisture content according to this Regulation. Calculate the extraction

rate by the equation:

$E = (((100 - f) F)/(100 - w) W) \times 100\ \%$

where:

E	=	extraction rate,
f	=	moisture of the flour,
w	=	moisture content of the wheat,
F	=	mass of flour produced with moisture content f,
W	=	mass of wheat milled with moisture content w.

Note : Information concerning the ingredients and equipment to be used is published in Document T/77,300 of 31 March 1977 from the Instituut voor Graan, Meel en Brood, TNO — Postbus 15, Wageningen, Netherlands.

PART VIII

Determination of the rate of loss of vitreous aspect

1. Principle

Only part of the sample is used to determine the percentage of grains which have wholly or partially lost their vitreous aspect. The grains are cut using a Pohl grain cutter or an equivalent instrument.

2. Equipment and apparatus

— Pohl grain cutter or equivalent instrument,
— tweezers, scalpel,
— tray or dish.

3. Procedure

(a) The determination is carried out on a sample of 100 g after separation of any matter other than basic cereals of unimpaired quality.

(b) Spread the sample on a tray and homogenise well.

(c) Insert a plate in the grain cutter and spread a handful of grains on the grid. Tap firmly to ensure that there is only one grain in each hole. Lower the moveable section to hold the grains in place and then cut them.

(d) Prepare sufficient plates to ensure that a minimum of 600 grains are cut.

(e) Count the number of grains which have wholly or partially lost their vitreous aspect (mitadiné).

(f) Calculate the percentage of grains which have wholly or partially lost their vitreous aspect (mitadiné).

4. Expression of results

I = mass, in grams, of matter other than basic cereals of unimpaired quality.
M = percentage of cleaned grains examined which have wholly or partially lost their vitreous aspect (mitadiné).

5. Result

The percentage of grains which have wholly or partially lost their vitreous aspect (mitadiné) in the test portion is:

$(M \times (100 - I))/100 = \ldots$

PART IX

Price increases and reductions

TABLE I

Price increases for moisture content

Maize and sorghum		**Other cereals**	
Moisture content(%)	**Increases(EUR/ tonne)**	**Moisture content(%)**	**Increases(EUR/ tonne)**
—	—	13,4	0,1
—	—	13,3	0,2
—	—	13,2	0,3
—	—	13,1	0,4
—	—	13,0	0,5
—	—	12,9	0,6
—	—	12,8	0,7
—	—	12,7	0,8
—	—	12,6	0,9
—	—	12,5	1,0
12,4	0,1	12,4	1,1
12,3	0,2	12,3	1,2

12,2	0,3	12,2	1,3
12,1	0,4	12,1	1,4
12,0	0,5	12,0	1,5
11,9	0,6	11,9	1,6
11,8	0,7	11,8	1,7
11,7	0,8	11,7	1,8
11,6	0,9	11,6	1,9
11,5	1,0	11,5	2,0
11,4	1,1	11,4	2,1
11,3	1,2	11,3	2,2
11,2	1,3	11,2	2,3
11,1	1,4	11,1	2,4
11,0	1,5	11,0	2,5
10,9	1,6	10,9	2,6
10,8	1,7	10,8	2,7
10,7	1,8	10,7	2,8
10,6	1,9	10,6	2,9
10,5	2,0	10,5	3,0
10,4	2,1	10,4	3,1
10,3	2,2	10,3	3,2
10,2	2,3	10,2	3,3
10,1	2,4	10,1	3,4
10,0	2,5	10,0	3,5

TABLE II

Price reductions for moisture content

Maize and sorghum		**Other cereals**	
Moisture content(%)	**Reduction(EUR/ tonne)**	**Moisture content(%)**	**Reduction(EUR/ tonne)**
13,5	1,0	14,5	1,0
13,4	0,8	14,4	0,8
13,3	0,6	14,3	0,6
13,2	0,4	14,2	0,4
13,1	0,2	14,1	0,2

TABLE III

Price reductions for specific weight

Cereal	**Specific weight(kg/hl)**	**Price reduction(EUR/ tonne)**
Common wheat	Less than 76 to 75	0,5
	Less than 75 to 74	1,0
	Less than 74 to 73	1,5
Barley	Less than 64 to 62	1,0

TABLE IV

Price reductions for protein content

Protein content[a](N × 5,7)	**Price reduction(EUR/tonne)**
Less than 11,5 to 11,0	2,5
Less than 11,0 to 10,5	5

a As % of dry matter.

PART X

Practical method for determining the reduction to be applied to the price of sorghum by intervention agencies

1. Basic data

P = the percentage of tannin in raw product,
0,4 % = the percentage of tannin above to which the reduction is to be applied,
11 %[(6)] = the reduction corresponding to 1 % tannin in the dry matter.

2. Calculation of the reduction

The reduction, expressed in euro to be applied to the reference price, shall be calculated in accordance with the following formula:

11 (P - 0,4)

$$100 - \left(\frac{3917 - (4{,}19 \times 1{,}0)}{3917 - (4{,}19 \times 0{,}30)} \times 100 \right) = 7{,}74\%$$

$$\frac{7{,}74}{0{,}70} = \text{EUR } 11$$

PART XI

Calculation of prices increases and reductions

The price increases and reductions provided for in Article 38 shall be expressed in euro per tonne and apply to the intervention price for cereals offered for intervention by multiplying it by the sum of the established percentage increases or reductions, as follows:

(a) where the moisture content of cereals offered for intervention is less than 13 % for maize and sorghum and 14 % for other cereals, the price increases to be applied shall be those listed in Table I of Part IX of this Annex. Where the moisture content of these cereals offered for intervention is higher than 13 % and 14 % respectively, the price reductions to be applied shall be those listed in Table II of Part IX of this Annex;

(b) where the specific weight of cereals offered for intervention differs from the weight/volume ratio of 76 kg/hl for common wheat, and 64 kg/hl for barley, the reductions to be applied shall be those listed in Table III of Part IX of this Annex;

(c) where the percentage of broken grains exceeds 3 % for durum wheat, common wheat and barley, and 4 % for maize and sorghum, a reduction of EUR 0,05 shall be applied for each additional 0,1 percentage point;

(d) where the percentage of grain impurities exceeds 2 % for durum wheat, 4 % for maize and sorghum, and 5 % for common wheat and barley, a reduction of EUR 0,05 shall be applied for each additional 0,1 percentage point;

(e) where the percentage of sprouted grains exceeds 2,5 %, a reduction of EUR 0,05 shall be applied for each additional 0,1 percentage point;

(f) where the percentage of miscellaneous impurities (*Schwarzbesatz*) exceeds 0,5 % for durum wheat and 1 % for common wheat, barley, maize and sorghum, a reduction of EUR 0,1 shall be applied for each additional 0,1 percentage point;

(g) where the percentage of piebald grains in durum wheat exceeds 20 %, a reduction of EUR 0,2 shall be applied for each additional percentage point or fraction thereof;

(h) where the protein content of common wheat is less than 11,5 %, the reductions to be applied shall be those listed in Table IV of Part IX of this Annex;

(i) where the tannin content of sorghum offered for intervention is higher than 0,4 % of the dry matter, the reduction to be applied shall be calculated in accordance with the method laid down in Part X of this Annex.

PART XII

Methodology of sampling and analyses for cereals

1. For each lot of cereals, the quality characteristics shall be established on the basis of a representative sample of the lot offered, consisting of samples taken at the rate of once every delivery for at least every 60 tonnes.

2. The intervention agency shall analyse under its responsibility the characteristics of the samples taken within 20 working days from the date on which the representative sample was taken.

3. The reference methods used for determining the quality of cereals for intervention are established in Parts IV, V, VI and VII of this Annex.

4. The results of the analyses are communicated to the tenderer or offerer by means of the takeover record referred to in Article 34.

5. In cases of dispute, the intervention agency shall have the necessary tests on the cereals in question carried out again.

(**1**) OJ L 37, 13.2.1993, p. 1.

(**2**) OJ L 364, 20.12.2006, p. 5.

(**3**) OJ L 70, 9.3.2006, p. 12.

(**4**) Air temperature inside the heating chamber.

(**5**) Its heating capacity should be such that, when it has been pre-set to a temperature of 130 to 133 °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 and sorghum) 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.

(**6**) Reduction to be applied to the price of sorghum on the basis of the tannin content of 1 000 g of dry matter:

(a) Poultry-metabolisable energy of 1 000 g of sorghum dry matter with a theoretical tannin content of 0 %: 3 917 K calories;

(b) Reduction of the poultry-metabolisable energy of 1 000 g of sorghum dry matter per additional percentage point of tannin: 419 K calories;

(c) Difference, expressed in percentage points, between the maximum tannin content laid down for sorghum accepted for intervention and the tannin content laid down for the standard quality: 1,0 - 0,3 = 0,7;

(d) Difference, expressed as a percentage, between the poultry-metabolisable energy of sorghum containing 1,0 % tannin and the poultry-metabolisable energy of sorghum with the same tannin content as the standard quality (0,3 %);

(e) Reduction corresponding to a 1 % tannin content in the dry matter, in excess of 0,3 %.