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COMMITTEE ON TRADE

Working Party on Agricultural Quality Standards

Specialized Section on Standardization of Dry and Dried Produce

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Working Group meetings

**EXPLANATORY BROCHURE FOR UNECE STANDARD FOR INSHELL  
HAZELNUTS**

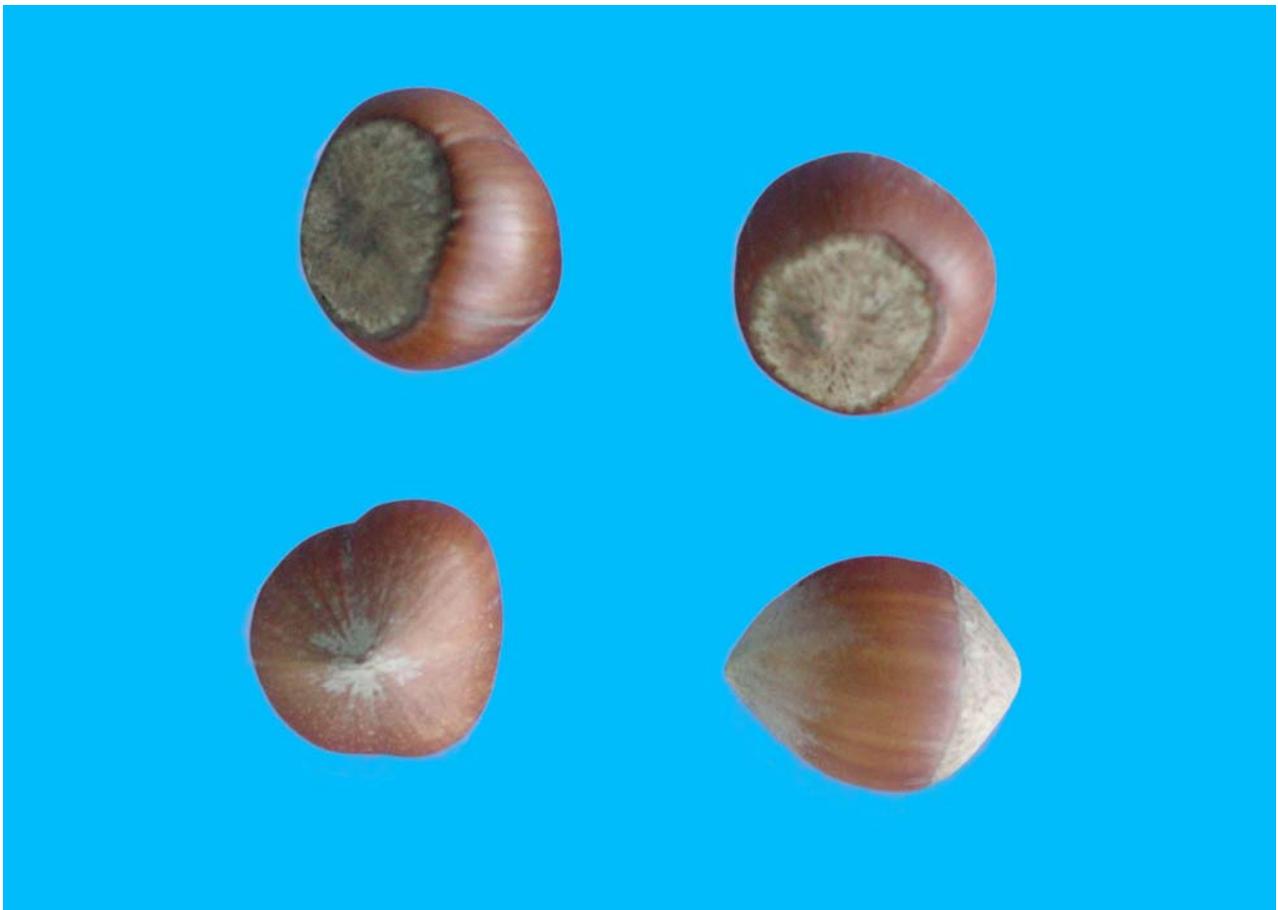
Note by the secretariat

This document is submitted by the delegation of Turkey and contains pictures and the textual part of the draft brochure for inshell hazelnuts.

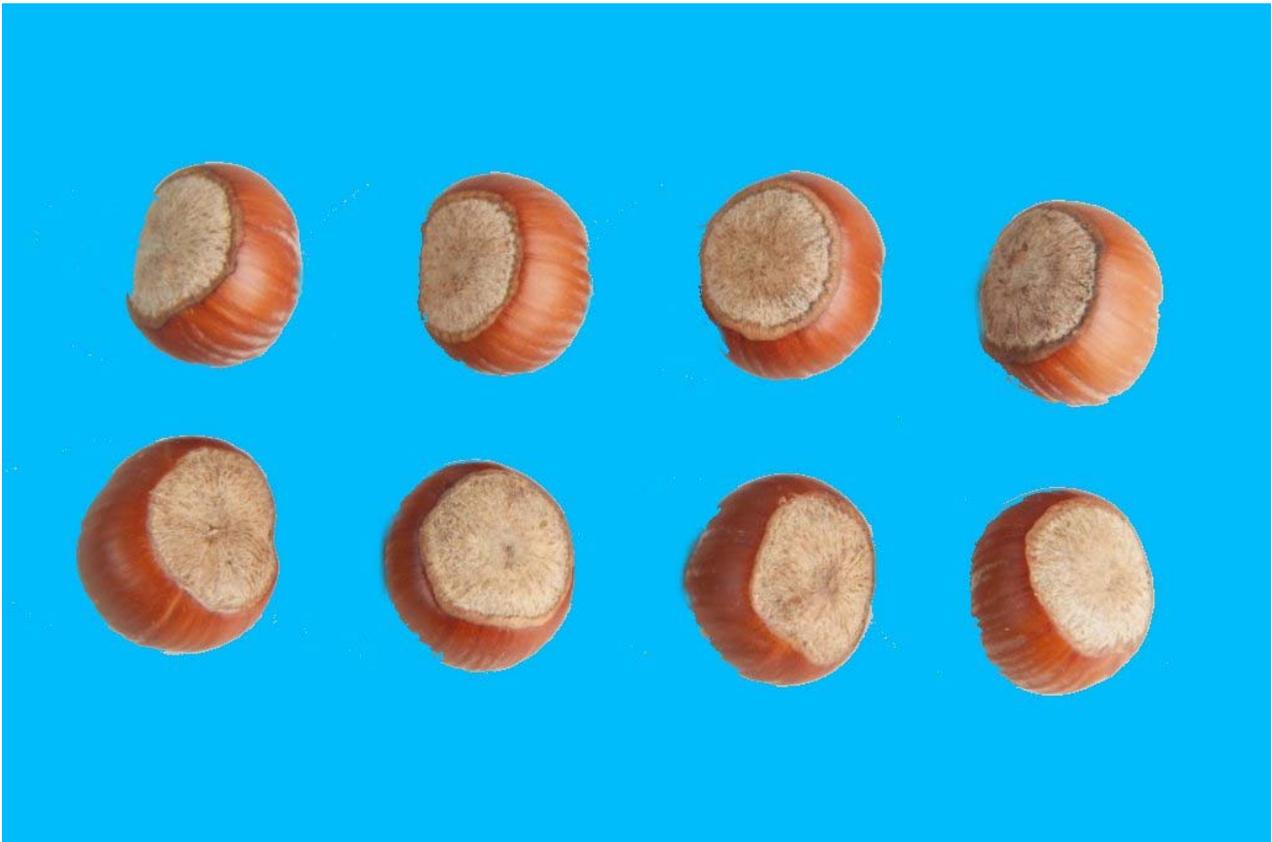
## I. DEFINITION OF PRODUCE

This standard applies to inshell hazelnuts free from involucre or husk of varieties (cultivars) grown from *Corylus avellana* L. and *Corylus maxima* Mill. and their hybrids, intended for direct consumption or for food when intended to be mixed with other products for direct consumption without further processing. This standard does not apply to inshell hazelnuts for industrial processing.

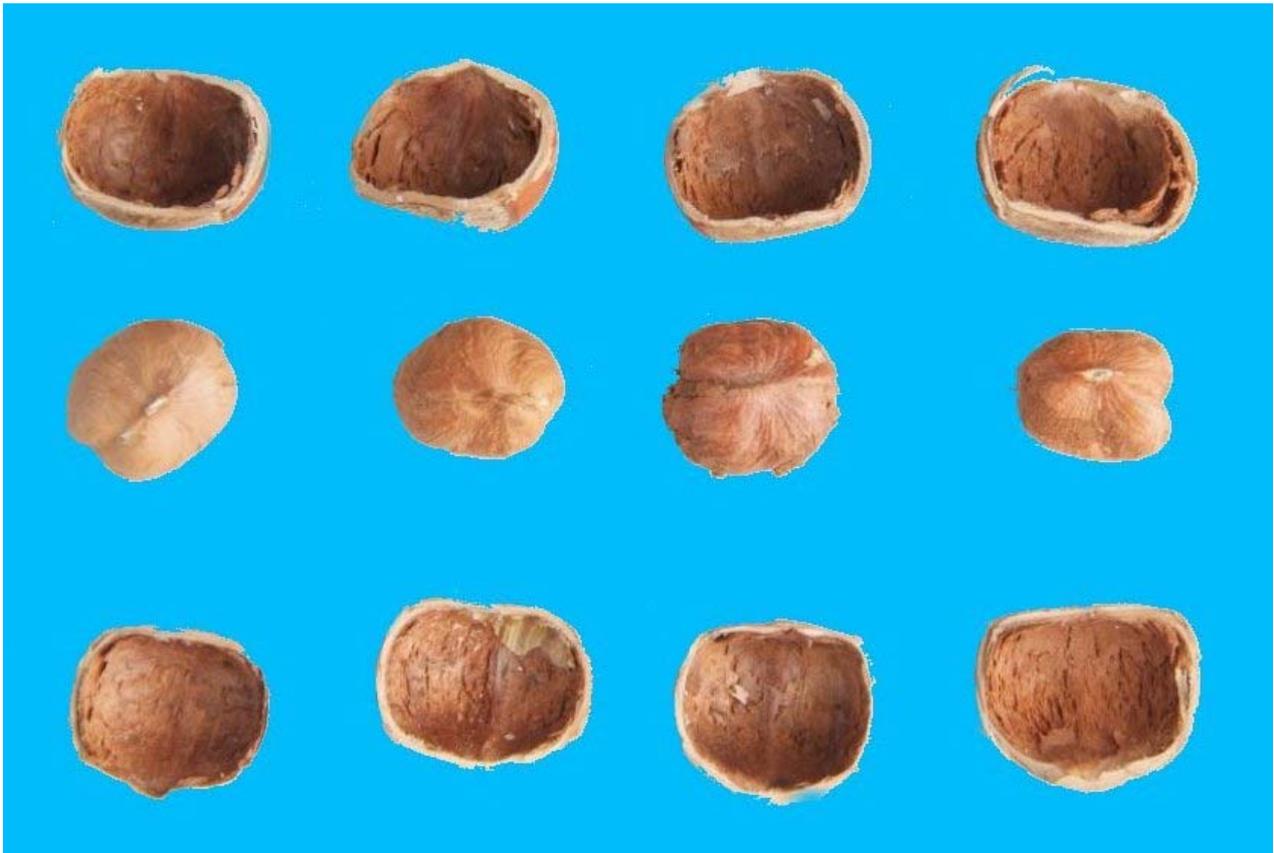
The commercial types of *C. avellana* L. and *C. maxima* photos ..... to ....



**Photo 1**  
**Round**



**Photo 2**  
**Round**



**Photo 3**  
**Round**



**Photo 4**  
**Oblong**



**Photo 5**  
**Oblong**



**Photo 6**  
**Pointed**



**Photo 7**  
**Pointed**

## II. PROVISIONS CONCERNING QUALITY

The purpose of the standard is to define the quality requirements for inshell hazelnuts at the export control stage, after preparation and packaging.

### A. Minimum requirements<sup>1</sup>

(i) In all classes subject to the special provisions for each class and the tolerances allowed, the inshell hazelnuts must display the following characteristics:

(a) The shell must be:

- intact; however, slight superficial damage is not considered as a defect provided the kernel is physically protected;

Intact means not having any mutilation or injury spoiling the integrity of the produce. According to the definitions given in Annex III of the Standard Layout – Recommended Terms and Definition of Defects for Standards of Dry Fruits (Inshell Nuts and Nut Kernels) and Dried Fruits, the characteristics and defects mentioned below must affect the shell only but not the kernel. This means that the shell is not broken, spilt or mechanically damaged; a slight crack is not considered as a defect provided the kernel is still protected. photos 4 to 5

According to the definitions given in Annex III of the Standard Layout – Recommended Terms and Definition of Defects for Standards of Dry Fruits (Inshell Nuts and Nut Kernels) and Dried Fruits, any crack which is open and conspicuous, and larger than one-fourth of the circumference of the shell is regarded as defect.

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<sup>1</sup> Definitions of terms and defects are listed in Annex III (See Annex II, Standard Layout – Recommended Terms and Definition of Defects for Standards of Dry (Inshell Nuts and Nut Kernels) and dried produce)

([http://www.unece.org/trade/agr/standard/dry/StandardLayout/StandardLayout\\_DDP\\_e.doc](http://www.unece.org/trade/agr/standard/dry/StandardLayout/StandardLayout_DDP_e.doc))



**Photo 8**  
*Slight crack*  
**Limit allowed**



**Photo 9**  
*Slight crack*  
**Limit allowed**



**Photo 10**  
*Open crack*  
**Not Allowed**



**a-Normal**



**b-Allowed**



**c- Not Allowed**

**Photo 11**  
*Open crack*



**a-Normal**  
**Photo 12**  
*Open crack*



**b-Allowed**



**c-Not Allowed**



**Photo 13**  
*Open crack*  
**Not Allowed**

- clean; practically free of any visible foreign matter including residues of adhering husk affecting in aggregate more than 5 per cent of the total shell surface;

Inshell hazelnuts must be practically free of visible soil, dust, chemical residue or other foreign matter. According to the definitions given in Annex II foreign matter means any matter not normally associated with the product. photo....

- free from blemishes, areas of discoloration or spread stains in pronounced contrast with the rest of the shell affecting in aggregate more than 25 per cent of the surface of the shell.



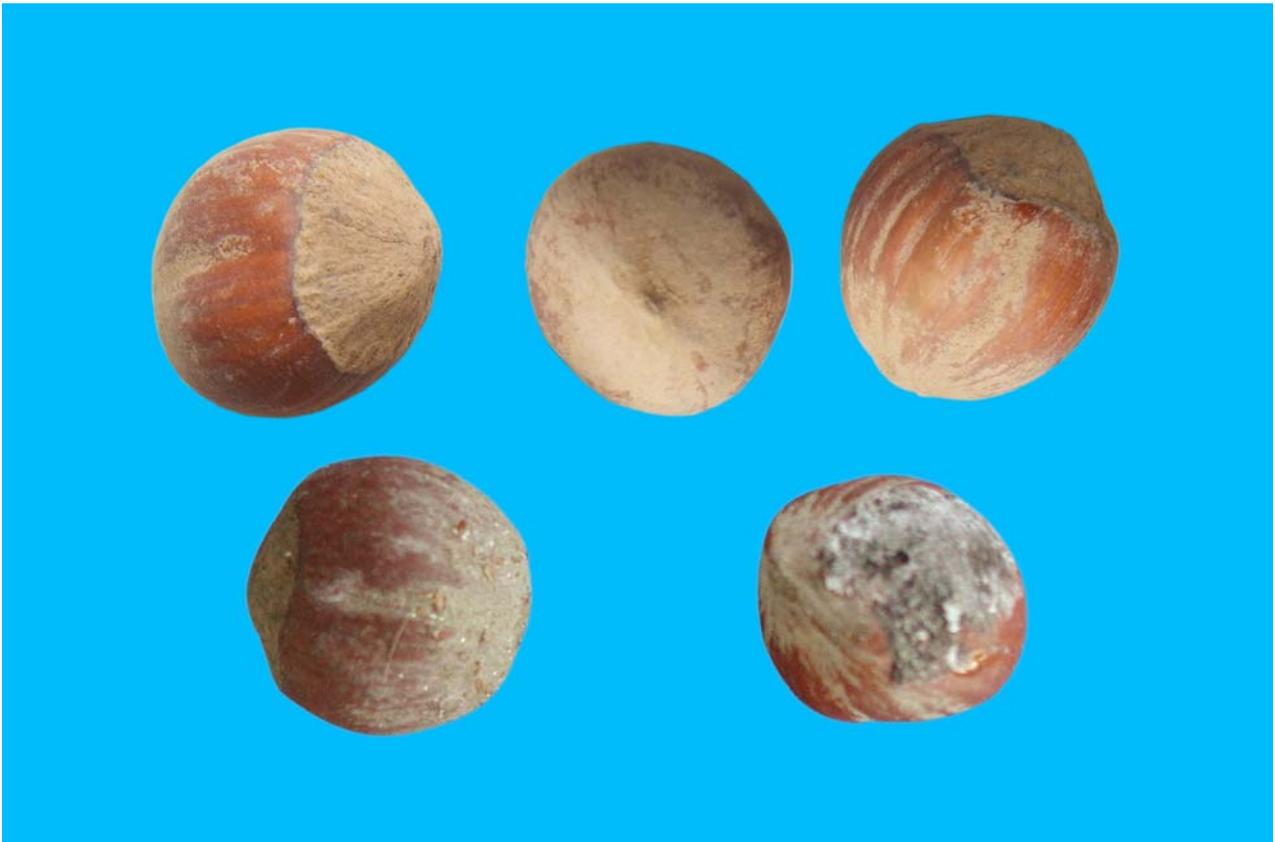
**Photo 14**  
*Hazelnut covered with residues of adhering husk*  
**Allowed**



**a-Normal**                      **b-Allowed**                      **c- Not Allowed**  
**Photo 15**  
*Hazelnut covered residues of adhering husk*



**Photo 16**  
*Hazelnut covered residues of adhering husk*  
**Not Allowed**



**Photo 17**  
*Hazelnut covered with dust*  
**Not Allowed**

- well formed; not noticeably misshapen;

According to the definitions given in Annex II, well-formed means that the shell is not noticeably misshapen and that its shape concords with the characteristics of the variety or commercial type. photo.....



**Photo 18**  
*Shell noticeably misshapen*  
**Not Allowed**



**a-Normal**

**b-Allowed**

**c-Not Allowed**

**Photo 19**  
*Shell noticeably misshapen*

(b) The kernel must be:

Any defect affecting the kernel but not the shell.

- free from rancidity;
- sufficiently developed; kernels should fill at least 50 per cent of the shell cavity  
photos..... to .....



**Photo 20**  
*Kernel sufficiently developed*

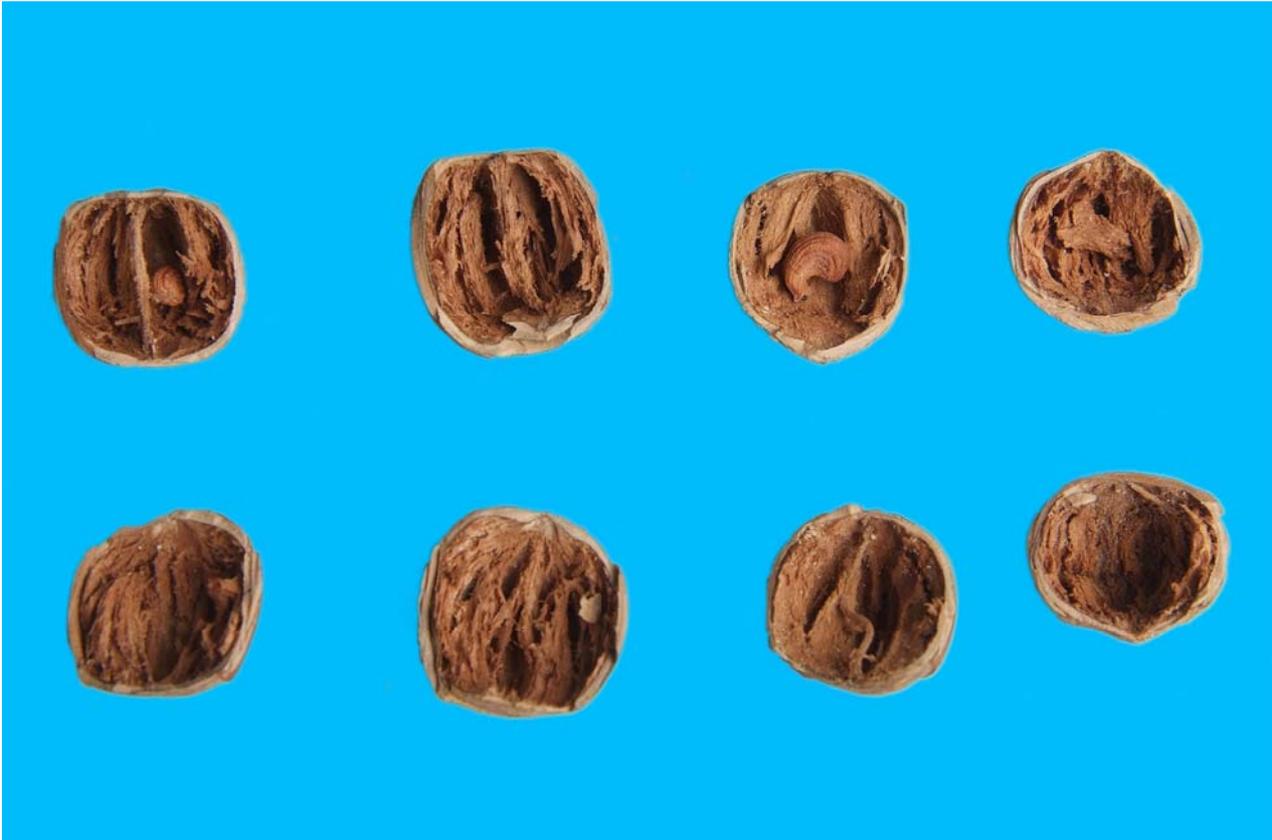


**Photo 21**  
*Kernel not sufficiently developed*  
**Not allowed**



**a-Normal**                      **b-Not Allowed**                      **c-Not Allowed**

**Photo 22**  
*Kernel not sufficiently developed*

**Photo 23**

***Kernel not sufficiently developed/empty***  
**Not allowed**

According to the definitions given in Annex III of the Standard Layout – Recommended Terms and Definition of Defects for Standards of Dry Fruits (Inshell Nuts and Nut Kernels) and Dried Fruits, a kernel is regarded as empty if the inshell hazelnut contains no kernel. A kernel is regarded as not sufficiently developed if it is shrunken or shriveled.

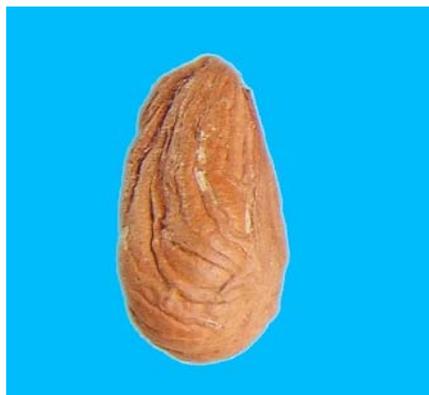
A shrunken kernel is an undeveloped firm fruit. Shrunken ness usually occurs as a result of poor nutrition,



**Photo 24**  
*Shrunken kernel*  
**Not allowed**



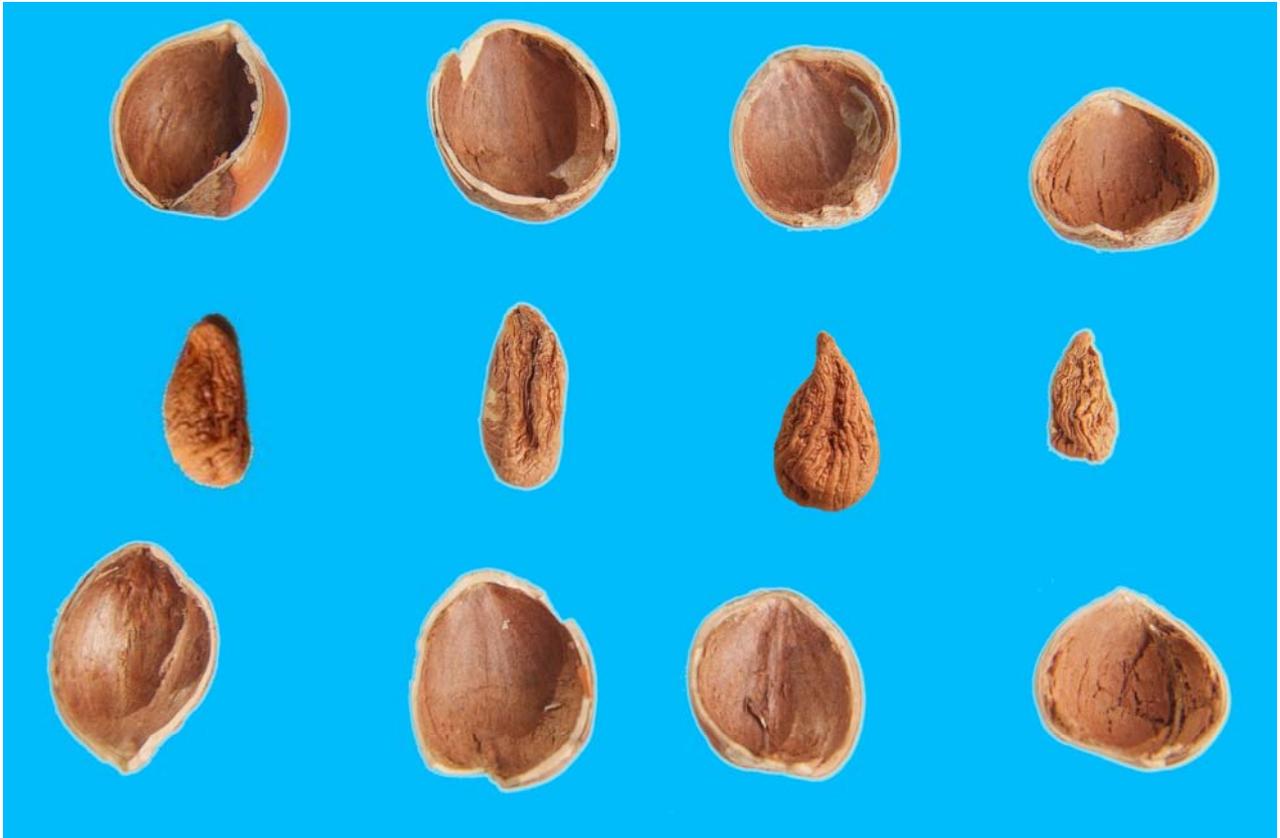
**a-Normal**  
**Photo 25**  
*Shrunken kernel*



**b- Allowed**

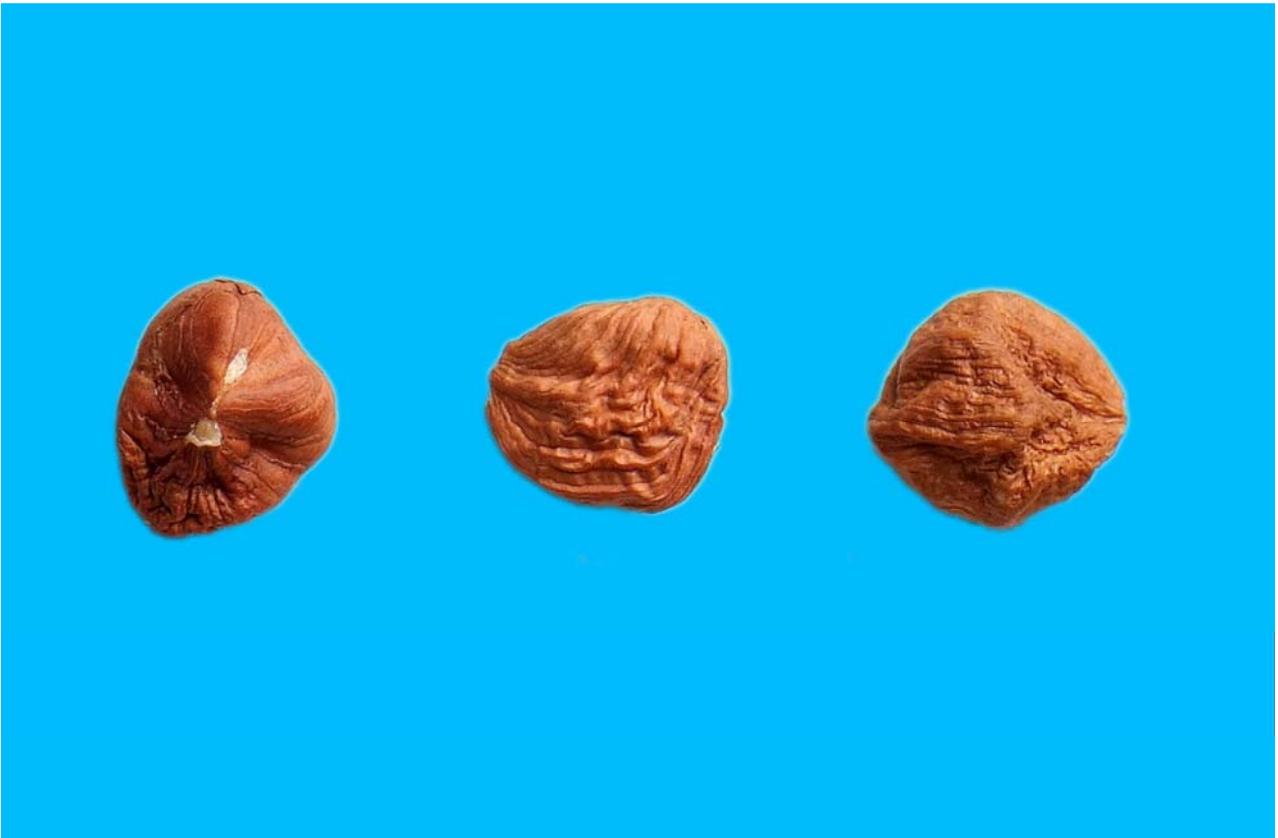


**c- Not Allowed**



**Photo 26**  
***Shrunken kernel***  
**Not allowed**

A kernel is shriveled if the wrinkling of more than 50% of the skin surface of the compact fruit is affected. Shriveling usually occurs in seasons when there are high crop yields, or when there is stress from drought, or inherited trait.



**Photo 27**  
***Shriveled Kernel***  
**Not allowed**



**a- Normal**

**b-Allowed**

**c-Not Allowed**

**Photo 28**

*Shrivelled Kernel*



**a-Normal**

**b-Allowed**

**c-Not Allowed**

**Photo 29**

*Shrivelled Kernel*

- not desiccated; kernels with dried out or tough portions affecting more than 25 per cent of the surface are to be excluded



**Photo 31**  
*Desiccated Kernel*  
**Not allowed**



**a-Normal**

**b-Allowed**

**c-Not Allowed**

**Photo 32**  
*Desiccated Kernel*

- free from blemishes, areas of discoloration or spread stains in pronounced contrast with the rest of the kernel affecting in aggregate more than 25 per cent of the surface of the kernel.

Blemishes that do not affect the edibility of the hazelnut kernels are not regarded as a defect. Therefore, in case of kernels showing blemishes a taste check is required.  
photo .....



**a-Normal**



**b-Allowed**



**c-Not Allowed**

**Photo 33**

***Blemishes, areas of discoloration***



**a-Normal**



**b-Not Allowed**



**c-Not Allowed**

**Photo 34**

***Blemishes, areas of discoloration***

***Blemishes, areas of discoloration***

- well formed
  
- (b) The whole produce (shell and kernel) must be:
  - dried in accordance with Section "B. Moisture content";
  - sound; produce affected by rotting or deterioration such as to make it unfit for consumption is excluded;
  - free from mould filaments visible to the naked eye;

According to the definitions given in Annex III of the Standard Layout – Recommended Terms and Definition of Defects for Standards of Dry Fruits (Inshell Nuts and Nut Kernels) and Dried Fruits, the kernels must be free from mould filaments either on the outside or on the inside of the kernel. photos .....to .....



**Photo 35**  
*Kernel showing mould filaments, external aspect*  
**Not allowed**



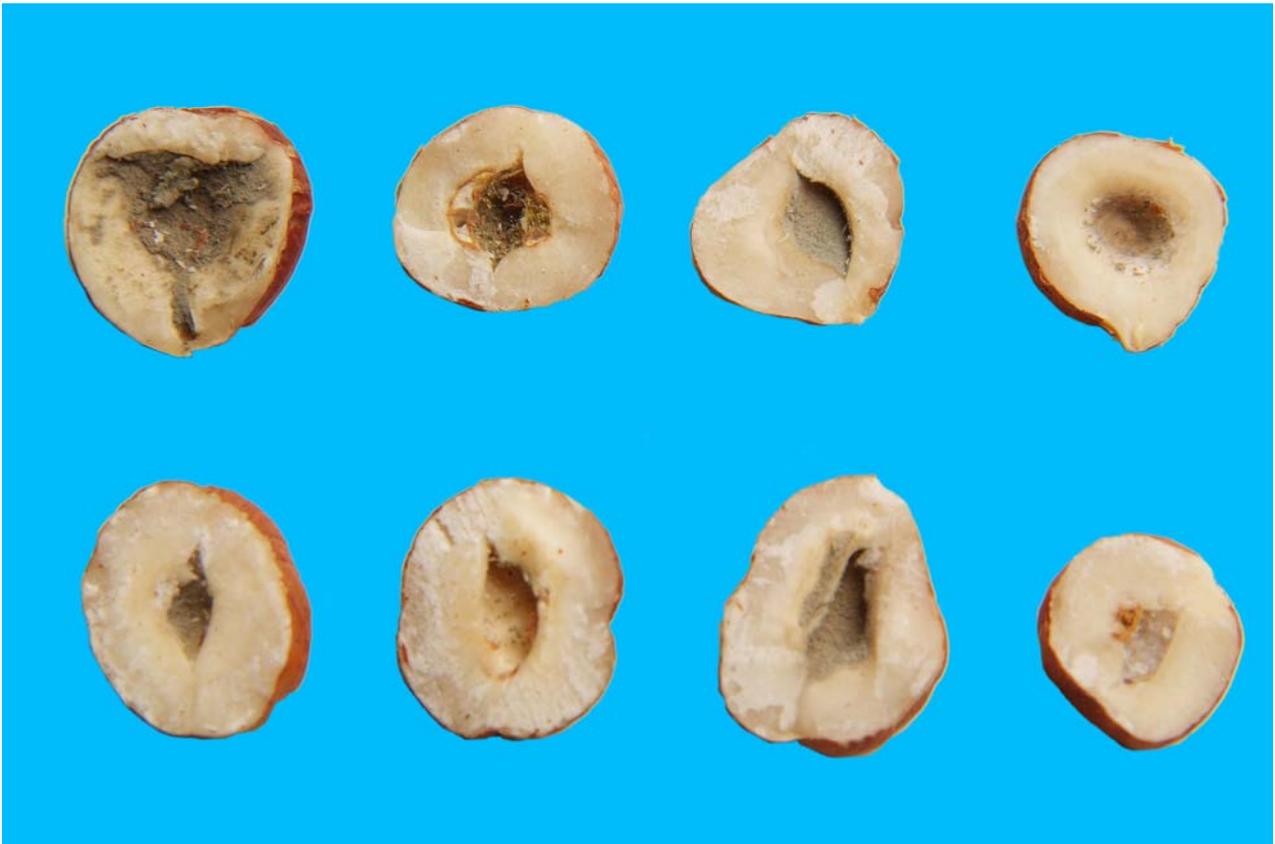
**Photo 36**  
*Kernel showing mould filaments, external aspect*  
**Not allowed**



**Photo 37**  
*Kernel showing mould filaments, internal aspect*  
**Not allowed**



**Photo 38**  
*Kernel showing mould filaments, internal aspect*  
**Not allowed**



**Photo 39**  
*Kernel showing mould filaments, internal aspect*  
**Not allowed**



**a-Normal**  
**Photo 40**  
*Kernel showing mould filaments, internal aspect*

**b-Not Allowed**

**c-Not Allowed**



**Photo 41**  
***Kernel showing mould filaments, internal aspect***  
**Not allowed**

- free from living or dead insects whatever their stage of development;

The inshell hazelnuts must be practically free of insects or other pests. The presence of pests can detract from the commercial presentation and acceptance of the inshell hazelnuts

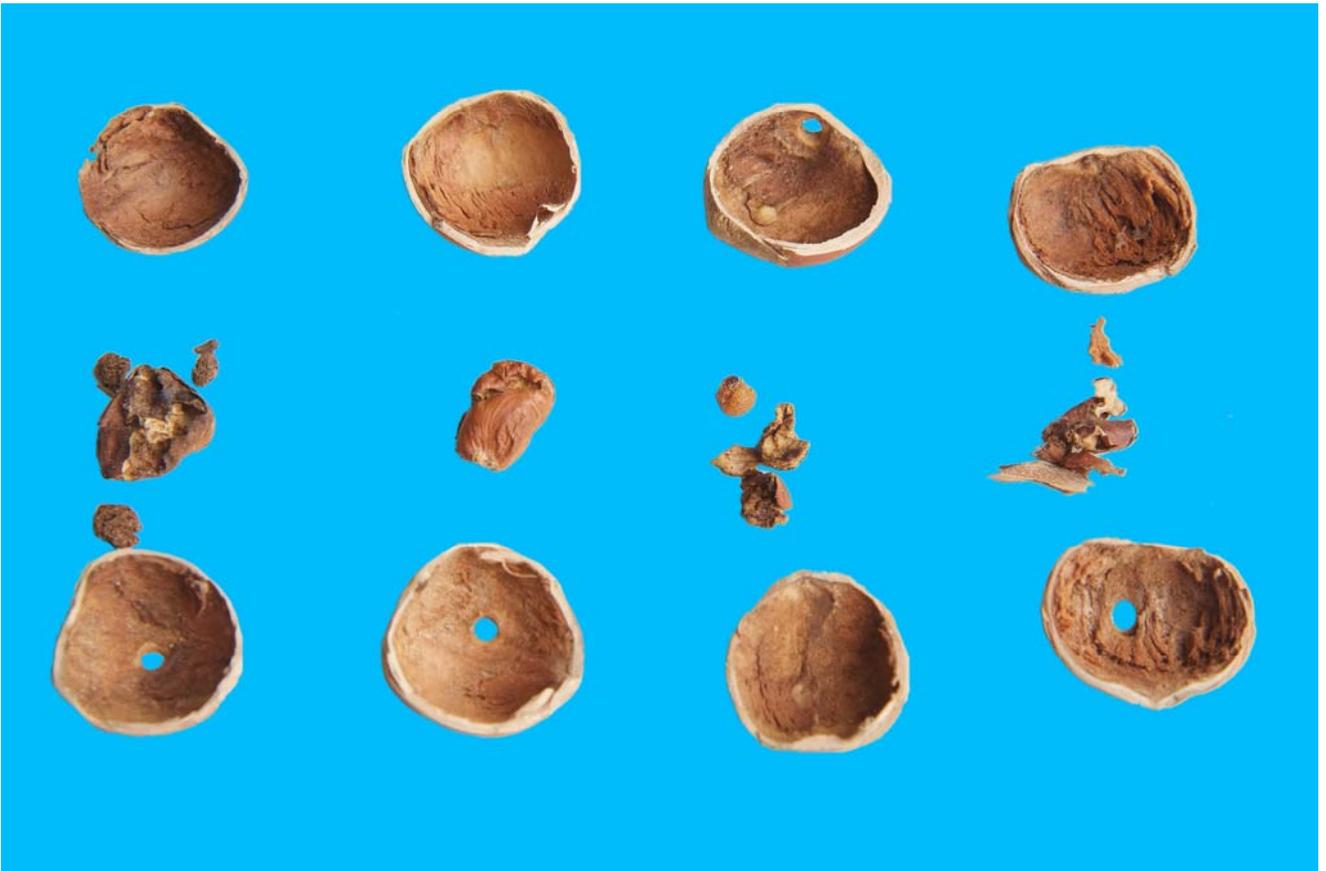
- free from damage caused by pests; including the presence of dead insects and/or mites, insect debris or excreta photo

..... to .....

Pest damage can detract from the general appearance, keeping quality and edibility of inshell hazelnuts.



**Photo 42**  
***Damage caused by hazelnut weevil (curculio mucum L.)***  
**Not allowed**

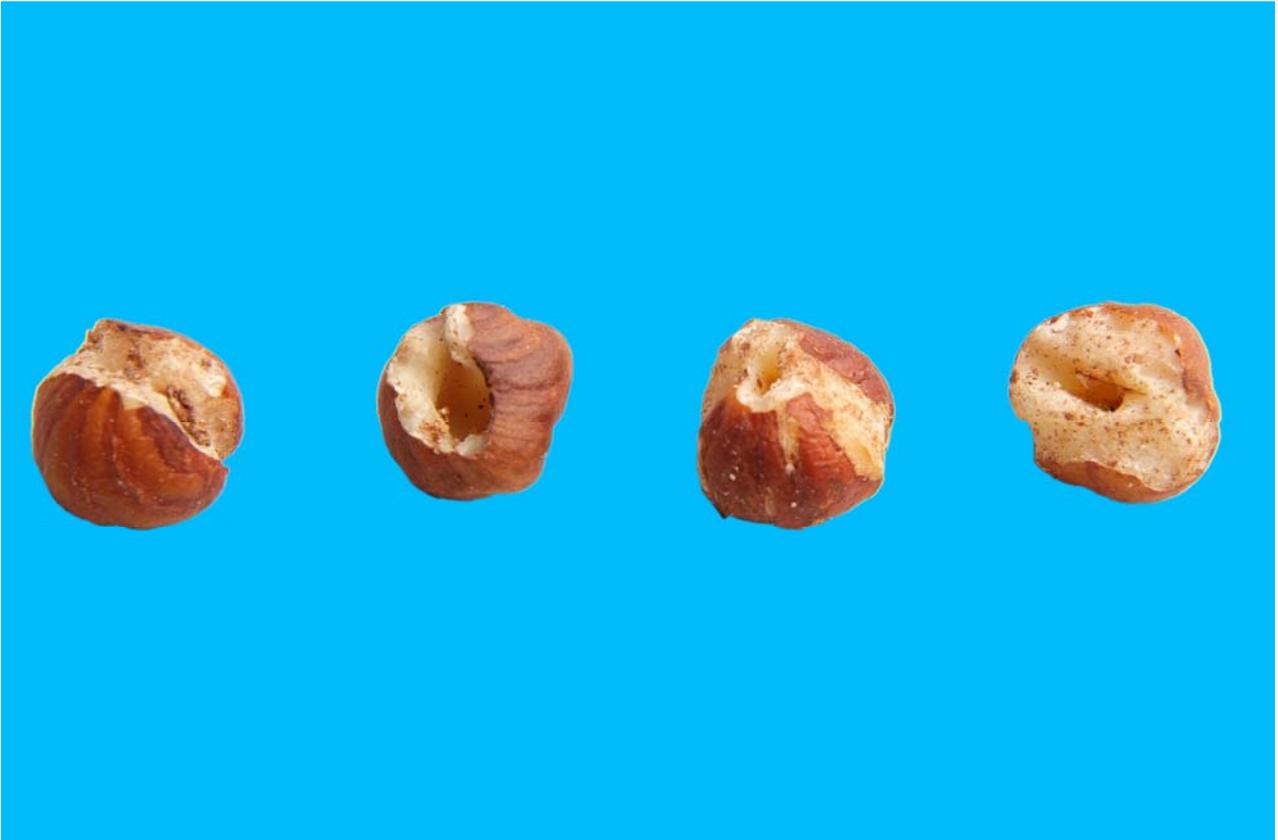


**Photo 43**  
*Damage caused by hazelnut weevil (curculio mucum L.)*  
**Not allowed**



**a-Normal**                      **b-Not Allowed**                      **c-Not Allowed**

**Photo 44**  
*Damage caused by hazelnut weevil (curculio mucum L.)*



**Photo 45**

*Damage caused by hazelnut weevil (Curculio mucum L.)*

**Not allowed**

- free of abnormal external moisture;

This provision applies to excessive moisture, for example, free water lying inside the package but does not include condensation on produce following release from cool storage or refrigerated vehicle.

- free of foreign smell and/or taste;

This refers particularly to inshell hazelnuts which have been stored on badly kept premises or have travelled in a badly maintained vehicle, especially inshell hazelnuts

which have acquired a strong smell from other produce stored on the same premises or travelling in the same vehicle. Therefore, care should be taken to use only non-smelling materials as protection in packaging.

The condition of the hazelnuts must be such as to enable them

- to withstand normal transport and handling, and
- to arrive in a satisfactory condition at the place of destination.

(ii) Moisture content

Inshell hazelnuts shall have a moisture content not exceeding 12.0 per cent for the whole hazelnut and 7.0 per cent for the kernel.<sup>2</sup>

In any case the inshell hazelnuts must be free from surface moisture, and the shells and kernels combined must not contain more than 12% moisture. The moisture content may be determined by a rapid method, but in case the maximum values mentioned above are exceeded, the values must be verified by the laboratory method.

## B. Classification

In accordance with the defects allowed in section "IV Provisions concerning tolerances" inshell hazelnuts are classified into the following classes:

"Extra" Class, Class I, Class II

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<sup>2</sup> The moisture content is determined by one of the methods given in Annex II of the Standard Layout - Determination of Moisture content for dry produce (nuts)  
<[http://www.unece.org/trade/agr/standard/dry/StandardLayout/StandardLayout\\_DDP\\_e.doc](http://www.unece.org/trade/agr/standard/dry/StandardLayout/StandardLayout_DDP_e.doc)>.

. The laboratory reference method shall be used in cases of dispute.

The defects allowed must not affect the general appearance of the produce, the quality and presentation in the package.

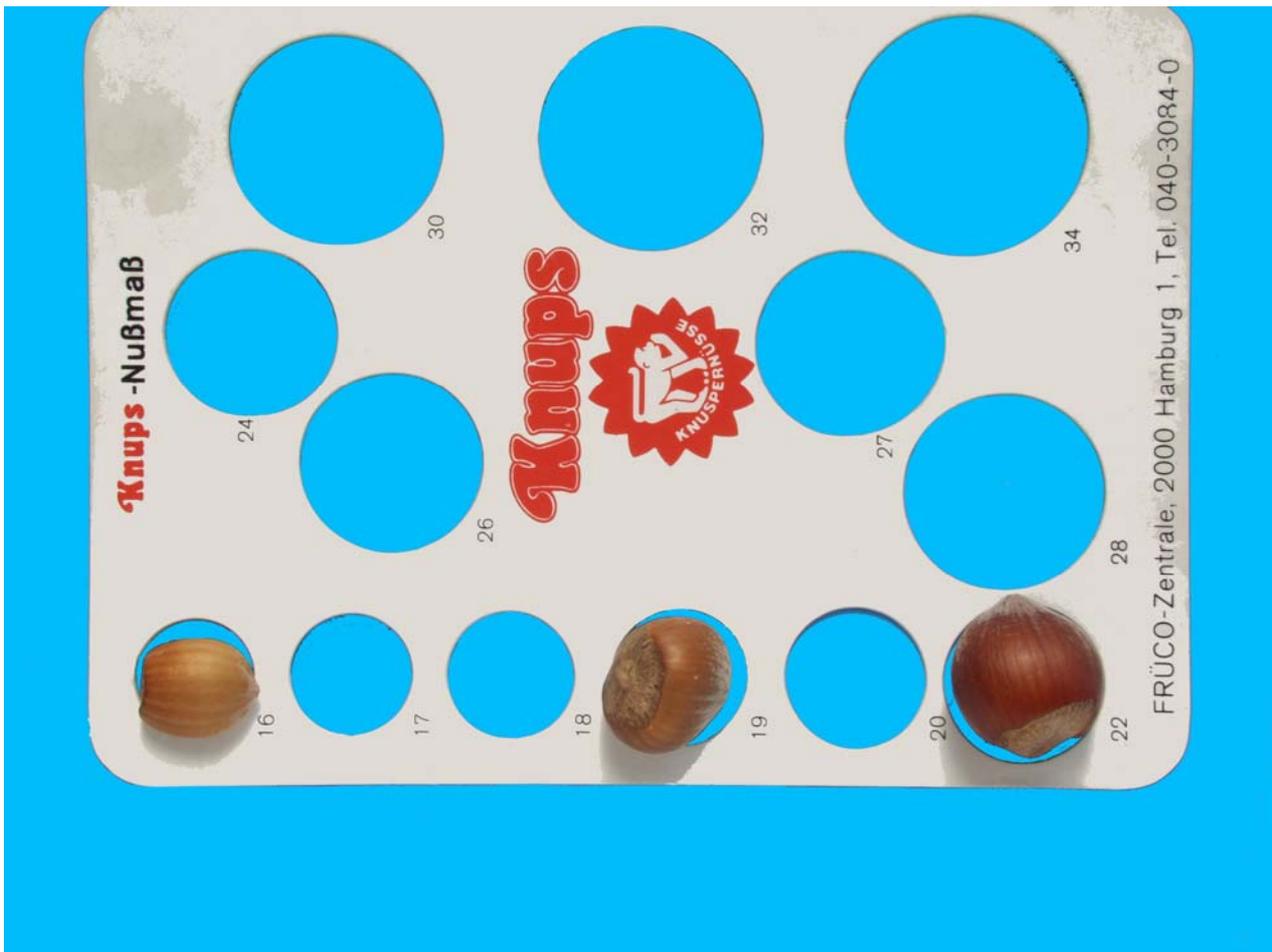
### III. PROVISIONS CONCERNING SIZING

Sizing of inshell hazelnuts is mandatory for Extra Class and Class I but optional for Class II.

The minimum size is 12 mm.

Uniformity in size is expressed by:

- a size range defined by a minimum size which must not exceed 3 mm of difference or,
- screening defined as a minimum size in diameter.



**Photo 46**  
**Sizing Circles**

#### IV. PROVISIONS CONCERNING TOLERANCES

Tolerances in respect of quality and size are allowed in each lot for produce not satisfying the minimum requirements of the class indicated.

Tolerances are provided to allow for human error during the grading and packing process. During grading and sizing it is not permitted to deliberately include out of grade produce, i.e. to exploit the tolerances deliberately.

The tolerances are determined after examining each sample package and taking the average of all samples examined. The tolerances are stated in terms of percentage, by number or weight of produce in the total sample not conforming to the class (or to the size) indicated on the package.

##### A. Quality tolerances

Defects Allowed	Tolerances Allowed percentage of defective inshell hazelnuts by count/number or weight (with regard to the total inshell weight basis)		
	Extra	Class I	Class II
<b>(a) Tolerances for shells and kernels not satisfying the minimum requirements, Of which no more than</b>	<b>10</b>	<b>15</b>	<b>20</b>
- Not sufficiently developed or empty shells (by number)	6	9	12
- Mouldy, rancid, damaged by pests, rotting or deterioration	3	5	6
- Living pests	0	0	0
<b>(b) Size tolerances</b>			
- For produce not conforming to the provisions concerning sizing and the size indicated	10	10	10
<b>(c) Tolerances for other defects</b>			
- Foreign matter, loose shells, shell fragments, fragments of hull, dust	1	1	2
- Inshell hazelnuts belonging to varieties or commercial types other than that indicated	10	10	10

Annex II of the Council Decision Revising The OECD “Scheme” For The Application Of International Standards For Fruit and Vegetables is given as a reference for sampling method in the Annex to this document.

## V. PROVISIONS CONCERNING PRESENTATION

### A. Uniformity

The contents of each package must be uniform and contain only inshell hazelnuts of the same origin, quality, crop year, size (if sized) and variety or commercial type (if indicated).

The visible part of the contents of the package must be representative of its entire contents.

A special effort should be made to suppress camouflage, i.e. concealing in the lower layers of the package produce inferior in quality and size to that displayed and marked.

Similarly prohibited is any packaging method or practice intended to give a deceptively superior appearance to the top layer of the consignment.

### B. Packaging

Inshell hazelnuts must be packed in such a way as to protect the produce properly.

Packages must be of a quality, strength and characteristics to protect the produce during transport and handling.

The materials used inside the package must be ~~new~~ clean and of a quality such as to avoid causing any external or internal damage to the produce. The use of materials, particularly of paper or stamps bearing trade specifications is allowed provided the printing or labelling has been done with non-toxic ink or glue.

This provision is designed to ensure suitable protection of the produce by means of materials inside the package which are new and clean and also to prevent foreign bodies such as leaves, sand or soil from spoiling its good presentation.

Packages must be free of all foreign matter in accordance with the table of tolerances in Section "IV. Provisions Concerning Tolerances."

A visible lack of cleanliness in several packages could result in the goods being rejected.

### **C. Presentation**

Inshell hazelnuts must be presented in bags or solid containers. All pre-packages within each package must be of the same weight.

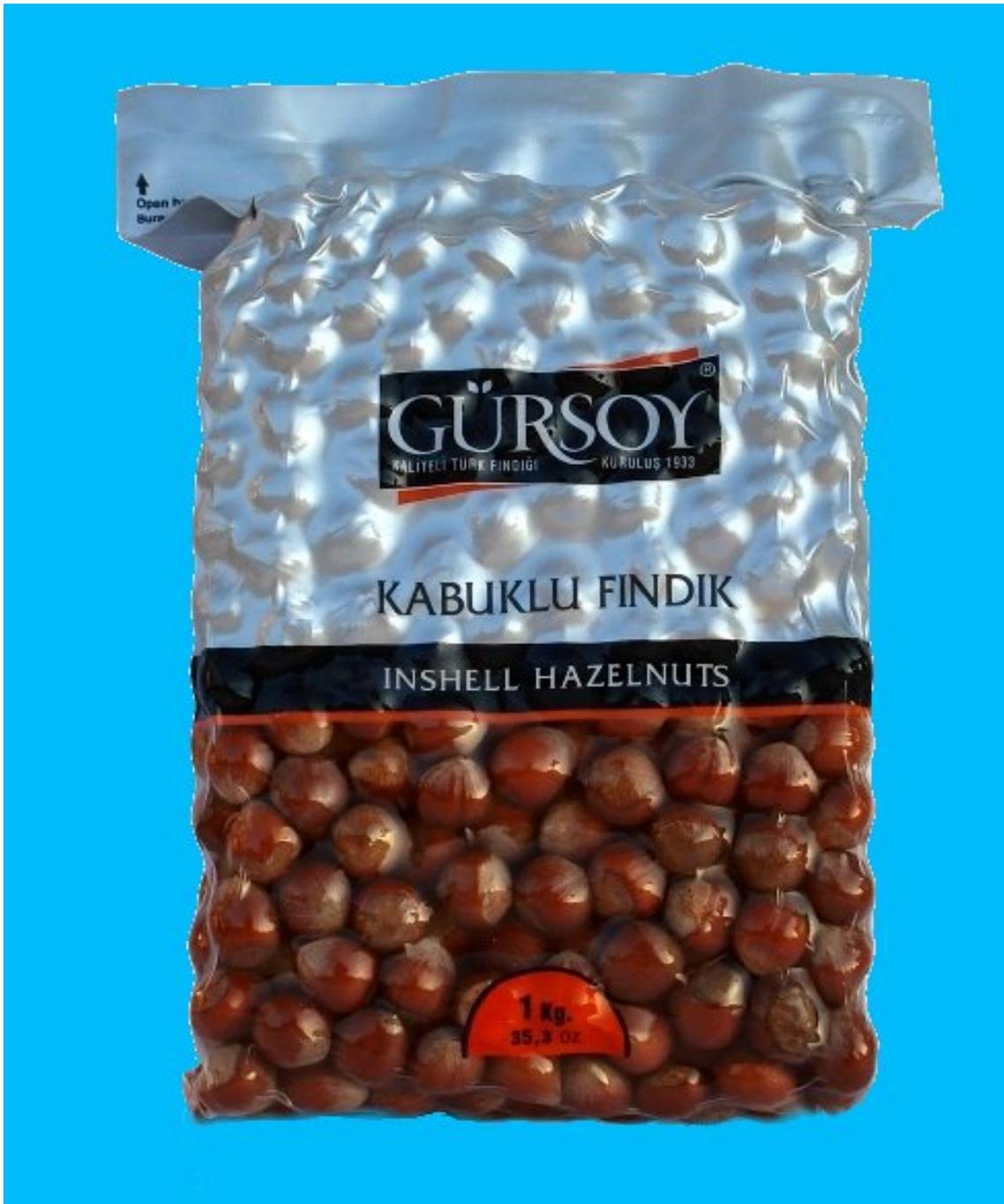
<The shell may be cleaned/treated with authorized agents, provided that they do not affect the quality of the kernel.>



**Photo 47**  
*Inshell hazelnuts in bag*



**Photo 48**  
*Inshell hazelnuts in aliminium packages on pallets*



**Photo 49**  
*Prepacked inshell hazelnuts*

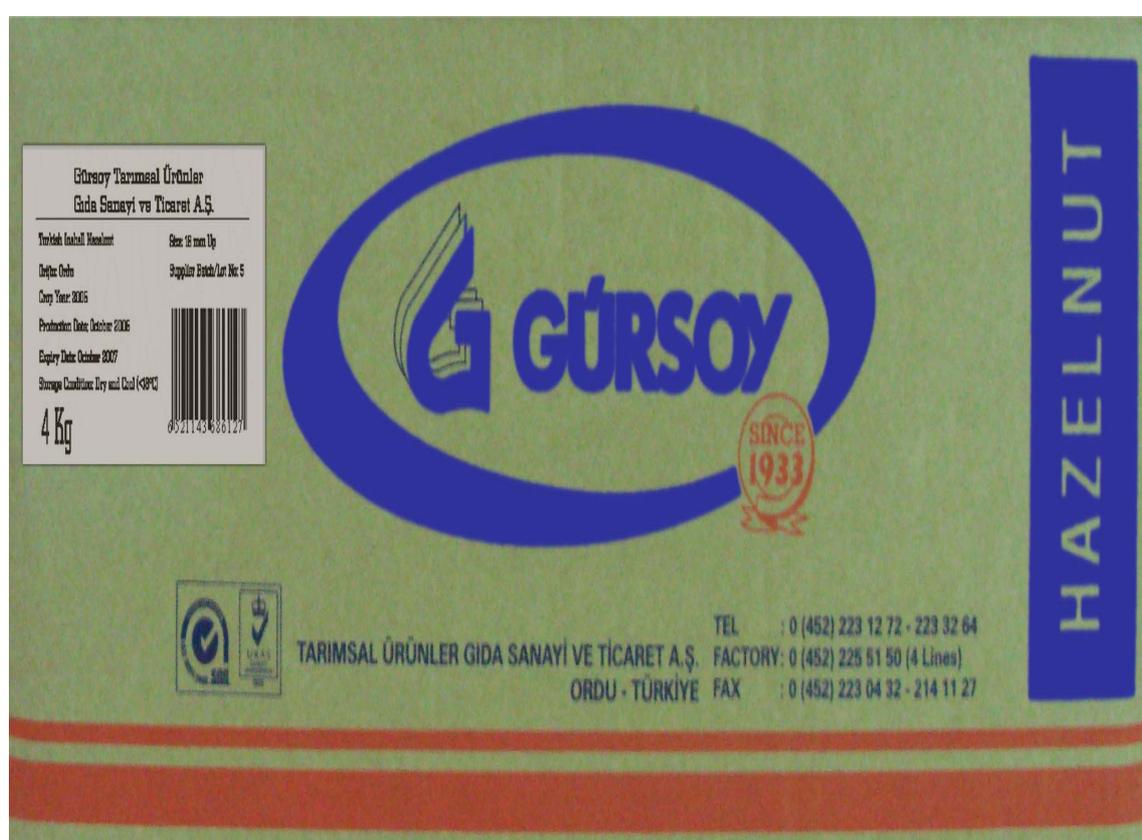


## VI. PROVISIONS CONCERNING MARKING

Each package<sup>3</sup> must bear the following particulars, in letters grouped on the same side, legibly and indelibly marked and visible from the outside:

In the case of packed produce, all particulars must be grouped on the same side of the package, either on a label attached to or printed on the package with water-insoluble ink.

photos .....to ...



**Photo 51**  
**Labelling printed on the package**

<sup>3</sup> Package units of produce prepacked for direct sale to the consumer shall not be subject to these marking provisions but shall conform to national requirements. However, the markings referred to shall in any event be shown on the transport packaging containing such package units.

## Turkish Inshell Hazelnut

**Origin** : Turkey  
**Class** : Class 1  
**Crop Year** : 2007  
**Production Date** : 02.06.2008  
**Expiry Date** : 02.06.2009  
**Storage Conditions** : Keep in a cool and dry place  
**Size** : 18 + mm  
**Supplier Batch/Lot Nr.** : 5-1005



**Photo 52**

*Labelling printed on a label*

In the case of reused packages, all previous labels must be carefully removed and previous indications deleted.

## A. Identification

Packer } Name and physical address (e.g. street/city/region/postal code and, if different from the country of origin, the country) or a code mark officially recognized by the national authority and/or }

Dispatcher } a code mark officially recognized by the national authority<sup>4</sup>

For inspection purposes, the “packer” is the person or firm responsible for the packaging of the produce (this does not mean the staff who actually carry out the work, who are responsible only to their employer). The code mark is not a trademark, but an official control system enabling the person or firm responsible for packaging to be readily identified. The shipper may, however, voluntarily or compulsorily, assume sole responsibility for inspection purposes, in which case identification of the "packer" as defined above is no longer necessary.

To prevent indistinctness in the case where a code mark is used, the reference “packer”, “dispatcher” and/or “exporter” (or equivalent abbreviations, i.e. “pack.” “exp.”) has to be indicated in close connection with the code mark.

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<sup>4</sup> The national legislation of a number of countries requires the explicit declaration of the name and address. However, in the case where a code mark is used, the reference "packer and/or dispatcher (or equivalent abbreviations)" has to be indicated in close connection with the code mark, and the code mark should be preceded with the ISO 3166 alpha country code of the recognizing country, if not the country of origin.

## B. Nature of produce

- "Inshell hazelnuts" or, if visible from the outside, "Hazelnuts"

The name of the produce must be stated on the packages, whether the contents are not visible from the outside.

- Name of the variety and/or commercial type (optional).

## C. Origin of produce

Country of origin and, optionally, district where grown or national, regional or local place name.

Marking must include the country of origin, i.e. the country in which the inshell hazelnuts were grown (e.g. Turkey). Optionally, district of origin in national, regional or local terms may also be shown.

## D. Commercial specifications

- Class

Stating the class is compulsory.

- Size (if sized) expressed by:
  - the minimum and maximum diameters, or
  - the minimum diameter followed by the words "and above" or "and +" ;
- Crop year (optional).<sup>5</sup>

The crop year means the year when the produce has been harvested.(?)

- "Best before" followed by the date (optional).

## E. Official control mark (optional)

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<sup>5</sup> Mandatory, at the request of the importing country.

## ANNEX I

### CONFORMITY CHECK OPERATIONS FOR PRODUCE EXPORTED UNDER THE "SCHEME"

#### 1. DEFINITIONS

##### 1.1 Conformity check

Inspection carried out by an inspector to check the conformity of fresh, dry and dried fruit and vegetables with the standards.

This conformity check includes:

- an identity and documentary inspection: an inspection of the documents or certificates accompanying the lot and an inspection of the goods and the particulars in these documents, to check that they match.
- a physical inspection, by means of sampling of the goods in the lot to ensure that it satisfies all the conditions laid down by the standard, including the provisions on the presentation and marking of packages and packaging.

##### 1.2 Inspector

Person entrusted by the authorized control service who has appropriate and regular training enabling him or her to undertake conformity checks.

### 1.3 Consignment

Quantity of produce to be sold by a given trader found at the time of inspection and defined by a document. The consignment may consist of one or several types of produce: it may contain one or several lots of fresh, dry or dried fruit and vegetables.

### 1.4 Lot

Quantity of produce which, at the time of inspection at one place, has similar characteristics with regard to:

- packer and/or dispatcher
- country of origin
- nature of produce
- class of produce
- size (if the produce is graded according to size)
- variety or commercial type (according to the relevant provisions of the standard)
- type of packaging and presentation.

However, if during the conformity check of consignments (see 1.3), it is difficult to distinguish between different lots and/or presentation of individual lots is not possible, all lots of a specific consignment may be treated as one lot if they are similar in regard to type of produce, dispatcher, country of origin, class and variety or commercial type, if this is provided for in the standard.

### 1.5 Sampling

Collective sample taken temporarily from a lot during conformity check.

### 1.6 Primary sample

Package taken at random from the lot or, in the case of bulk produce (direct loading into a transport vehicle or compartment thereof), a quantity taken at random from a point in the lot.

### 1.7 Bulk sample

Several primary samples supposed to be representative for the lot and whose quantity should be sufficient to allow the assessment of the lot with regard to all criteria.

### 1.8 Secondary sample (dry and dried produce only)

A secondary sample is a quantity of produce taken at random from the primary sample, weighing between 300 g and 1 kilo. If the primary sample is made up of packages containing sales packages, the secondary sample shall be one or more sales packages that in aggregate are at least 300 g.

### 1.9 Composite sample (dry and dried produce only)

A composite sample is a mix, weighing at least 3 kg, of all the secondary samples taken from the bulk sample. Produce in the composite sample must be evenly mixed.

### 1.10 Reduced sample

Quantity of produce taken at random from the bulk or composite sample whose size is restricted to the minimum quantity necessary but sufficient to allow the assessment of certain individual criteria.

If the inspection method would destroy the produce, the size of the reduced sample shall not exceed 10 % of the bulk sample or, in the case of nuts in shell, 100 nuts taken from the composite sample. In the case of small dry or dried products (i.e. 100 g include more than 100 units) the reduced sample shall not exceed 300 g.

For the assessment of criteria on the degree of the development and/or ripeness, the constitution of the sampling shall be done according to the provisions of document AGR/CA/FVS(2005)3/REV1 – Guidance on objective tests to determine quality of fruit and vegetables and dry and dried produce.

Several reduced samples may be taken from a bulk or composite sample in order to check the conformity of the lot against different criteria.

Fresh Produce		
Sample	Packaged produce	Produce in bulk (in the transport vehicle or compartment thereof)
Primary sample	One package	A quantity taken from a point in the lot
Bulk sample	Several primary samples supposed to be representative for the lot. The total quantity must be sufficient to allow the assessment of the lot with regard to all criteria.	
Reduced sample	A quantity not exceeding 10 % of the bulk sample. Several reduced samples can be taken if necessary.	

Dry and dried produce		
Sample	Packaged produce	Produce in bulk (in the transport vehicle or compartment thereof)
Primary sample	One package	A quantity taken from a point in the lot
Bulk sample	Several primary samples supposed to be representative for the lot. The total quantity must be sufficient to allow the assessment of the lot with regard to all criteria	
Secondary sample	An equal quantity of produce taken from each primary sample and put together making a sample of 300 g – 1 kg or one or more sales packages out of each primary sample that in aggregate are at least 300 g	An equal quantity of produce taken from each primary sample and put together making a sample of 300 g – 1 kg
Composite sample	A mix of at least 3 kg of all the secondary samples taken. All produce must be evenly mixed (produce in sales packages must be taken out of their packages).	
Reduced sample	100 nuts in case of nuts in shell or 300 g in case of small dry or dried produce taken from the composite sample. Several reduced samples can be taken if necessary.	

### 1.11 Package

Individually packaged part of a lot, including contents. The packaging is conceived so as to facilitate handling and transport of a number of sales units or of products loose or arranged, in order to prevent damage by physical handling and transport. Road, rail, ship and air containers are not considered as packages. In some cases, the package constitutes a sales package.

### 1.12 Sales package

Individually packaged part of a lot, including contents. The packaging of sales packages is conceived so as to constitute a sales unit to the final user or consumer at the point of purchase. Among sales packages, prepackages are such as the packaging encloses the foodstuff completely or only partially, but in such a way that the contents cannot be altered without opening or changing the packaging.

## 2. Implementation of conformity check

### 2.1 General remark

A conformity check shall be made by assessing the bulk/composite sample. It is based on the principle of presumption that the quality of the bulk/composite sample is representative of the quality of the lot.

### 2.2 Place of control

A conformity check may be carried out during the packing operation or at the point of dispatch or during transport.

### 2.3 Identification of lots and/or getting a general impression of the consignment:

The identification of lots shall be carried out on the basis of their marking or other criteria. In the case of consignments which are made up of several lots it is necessary for the inspector to get a general

impression of the consignment with the aid of accompanying documents or declarations concerning the consignments. The inspector then determines how far the lots presented comply with the information in these documents. If the produce is to be, or has been, loaded onto a means of transport, the registration number of the latter shall also be used for identification of the consignment.

#### 2.4 Presentation of produce:

The exporter or their representative is to inform the authorized control service whenever a consignment is to be exported. The inspector decides which lot is to be inspected. The presentation is made by the operator and includes the presentation of the bulk sample (see 2.5.3) as well as the supply of all information necessary for the identification of the consignment or lot.

#### 2.5 Physical check

##### *2.5.1 Assessment of packaging and presentation on the basis of primary samples:*

The packaging, including the material used within the package, shall be tested for suitability and cleanness according to the provisions of the relevant standard. If only certain types of packaging or presentation are permitted, the inspector checks whether these are being used.

##### *2.5.2 Verification of marking on the basis of primary samples:*

The inspector checks whether the produce is marked according to the relevant standard. This includes a check on the accuracy of marking and/or the extent of amendment required.

Unless legal provisions so specify, fruit and vegetables individually wrapped in plastic are not considered as pre-packed foodstuff and do not necessarily need to be marked in accordance with the standards. In

such cases, the plastic wrapping can be considered a simple protection for fragile products.

### *2.5.3 Verification of conformity of the produce using bulk sampling or composite and/or reduced sampling*

The inspector shall determine the size of the bulk sample in such a way as to be able to assess the lot. The inspector selects at random the packages to be inspected or in the case of bulk produce the points of the lot from which individual samples shall be taken.

Care should be taken to ensure that the removal of samples does not adversely affect the quality of the produce.

Damaged packages should not be used as part of the bulk sample. They should be set aside and may, if necessary, be subject to a separate examination and report.

The bulk sample shall comprise the following minimum quantities whenever a lot is declared unsatisfactory:

Packed produce *)	
Number of packages in the lot	Number of packages to be taken (primary samples)
up to 100	5
101 to 300	7
301 to 500	9
501 to 1000	10
over 1000	minimum 15
*) In case of packages containing sales packages, at least five sales packages have to be taken at random from each primary sample to carry out the inspection of the produce.	
Produce in bulk (excluding nuts) 1) (direct loading into a transport vehicle or compartment thereof)	
Quantity of lot	Quantity of primary samples to be taken 2)
up to 200 kg	10 kg
201 to 500 kg	20 kg
501 to 1000 kg	30 kg
1001 to 5000 kg	60 kg
over 5000 kg	minimum 100 kg
1) Nuts in bulk: if the produce is presented in bulk, a minimum of 15 secondary samples must be taken.	
2) In the case of bulky fresh fruit and vegetables (over 2 kg. per unit), the primary samples shall be made up of at least five units.	

If reduced or secondary samples are required, these are selected by the inspector from the bulk sample.

If the inspector discovers after an inspection that a decision cannot be reached, another physical check is to be undertaken and the overall result reported as an average of the two checks.

## 2.6 Control of produce

The produce has to be removed entirely from its packaging for the conformity check. The inspector may only dispense with this in the case of nuts and other small produce (dry and dried produce) where the sampling is based on secondary samples. The inspection of uniformity, minimum requirements, classes and size shall be carried out on the basis of the bulk/composite sample. In the case where defects are detected, the inspector shall ascertain the respective percentage of the produce not in conformity with the standard by number or weight.

For nuts, the criteria on the degree of development and/or moisture content can be checked using the instruments and methods laid down to this end in the standards.

The criteria on the degree of development and/or ripeness should be checked using the instruments and methods laid down to this end in the relevant standard or in accordance with document AGR/CA/FVS(2005)3/REV1 – Guidance on objective tests to determine quality of fruit and vegetables and dry and dried produce.

## 2.7 Report of control results:

According to the respective legal provisions of the individual countries and depending on the results of control, a report on the findings may be made in the form of a statement, a control certificate, a complaint, etc. For the report on the results of control several lots may be taken together if these are uniform with respect to the key criteria.

The authorized control service may issue a certificate of conformity as set out in Appendix I, if the produce is in conformity with the relevant standard.

If defects are found leading to non conformity, the trader or his representative must be informed about these defects and the percentage found as well as the reasons of complaint. This information must be made according to the legal provisions of the individual

countries. If the compliance of produce with the standard is possible by a change in marking, the operator or their representative must be informed.

The control services shall develop and maintain a system of recording their inspection results.

#### 2.8 Non-conforming produce:

The operator or his representative, shall ensure that there is no shipment of the non-conforming produce.

#### 2.9 Decline in value by quality control:

After the conformity check, the bulk/composite sample is put at the disposal of the operator or his representative.

Unless legal provisions so specify, the control service is not bound to hand back the elements of the bulk/composite sample destroyed during the conformity check.

Unless legal provisions so specify, no compensation can be claimed from the authorised control service if the commercial value of the produce has suffered a loss.

## ANNEX II

Recommended terms and definitions of defects  
for standards of dry (inshell nuts and nut kernels) and dried produce

### 1. Recommended terms

**Kernel:** Edible part of the inshell nuts, corresponding to the seed of the dry fruit, provided with an outer skin or integument (testa or episperm).

**Peeled kernel (blanched):** Nut kernel with its outer skin or integument removed.

**Hull:** Inedible fleshy part of the inshell nuts that covers the shell, and has to be removed before packing the produce.

**Shell:** Inedible woody part of the inshell nuts that protect the kernel, corresponding to the endocarp (drupes), the pericarp (nutlets) or the testa (strobilus or cone-like fruit).

**Stone (pit):** Inedible part of dried drupes corresponding to the endocarp and the seed of the fruit.

**Direct consumption:** Produce which will reach the consumer in its present state, without undergoing any treatment other than conditioning or packaging; operations such as sorting, selection, sizing and mixing shall not be considered as processing.

**Processing:** Operation distinct from conditioning or packaging which involves a substantial modification of the product or its form of presentation, such as decorticating (shelling), peeling (blanching), grilling or roasting, or the manufacture of sticks, pastes or flour, etc.

**Food industry:** Any other operation involving either the manufacture of derived food products (oils, flavourings, seasonings, etc.) or the use of the produce as an ingredient in the manufacture of various food products.

**Clean:** Produce which is practically free from any adhering foreign material and any visible adhering dirt.

**Sufficiently dry or dried:** Inshell nut, nut kernel or dried fruit which, as a result of its own development or of natural or artificial systems of drying, has attained a moisture content that ensures its keeping quality.

{the maximum moisture content should normally be indicated in relation with this subject}

**Natural drying:** Loss of moisture achieved solely by aeration and/or ambient heat, without the use of external heat sources, desiccants or dehydrating substances.

**Ripe:** Inshell nut, nut kernel or dried fruit which has reached sufficient maturity, account being taken of its nature and final use.

{where appropriate, information concerning minimum sugar content, acidity, minimum coloration, stage of development, etc., may be provided}

**Preservative:** Products which prolong the shelf-life of food products by protecting them against deterioration caused by micro-organisms or biological alterations. For a more detailed definition, see Codex General Standard for Food Additives" (GSFA) <<http://www.codexalimentarius.net/gsfaonline/index.html>>.

**Food additives:** In the context of these standards, food additives are substances intentionally added to food to improve organoleptics, appearance and/or characteristics. For a more detailed definition, see

Codex General Standard for Food Additives" (GSFA)  
<<http://www.codexalimentarius.net/gsfaonline/index.html>>.

**Sizing:** Action and result of grading inshell nuts, nut kernels or dried fruits with reference to their size, weight or volume; it is defined by a range of grades or intervals determined by a minimum size and a maximum size, which may be variously expressed in terms of the diameter of the equatorial section, the maximum diameter, the unit weight, the number of fruits per unit of weight, etc.

**Screening:** Action and result of grading inshell nuts, nut kernels or dried fruits with reference to a predetermined minimum or maximum size, which may be expressed by mentioning the minimum size followed by the words "or above" or the maximum size followed by the words "and less".

**Commercial type:** Inshell nuts, nut kernels or dried fruits which belong to different varieties that have similar technical characteristics and/or appearance, which belong to a similar varietal type.  
{when appropriate, select the more precise specification}

**Lot:** Quantity of a product which, at the time of control, presents uniform characteristics as regards the identity of the packer or dispatcher, the nature of the product and its origin, the commercial grade, type of packaging and presentation of the product and, where applicable, the variety and/or commercial type, size or screen, and colour.

## 2. Definition of defects

### (a) Generic definitions

**Slight defect or damage:** Defect or combination of defects which impairs the appearance of the product, including in particular slight superficial defects such as blemishes, staining, scars, bruises, areas of discolouration, torn skin, mechanical injuries, sun-scald, etc., provided that these do not significantly affect the edibility, keeping quality or commercial quality of the product.

**Serious defect or damage:** Defect or combination of defects which seriously impairs the appearance of the product, or which significantly affects its edibility, keeping quality or commercial quality, including in particular defects such as mould, decay, insect damage, rancidity, abnormal taste, very apparent dirt, crushing or serious mechanical injuries, excess of moisture.

**Intrinsic defect:** Abnormality with regard to the characteristics of mature and properly handled fruits, including immaturity, insufficient development, misshapeness, germination, aborted fruits, excessive dehydration or desiccation, etc.

**Blemish:** Noticeable and localized imperfection that significantly impairs the external appearance <of the shell, the kernel or the dried fruit>, from any cause or source, either intrinsic or extrinsic, including staining, dark spots, blotches, scars, hail marks, scabs, blisters, bruises and other similar defects, but excluding blemishes caused by a more serious defect such as mould, decay or damage by pests.

{where appropriate, add a definition of what is not considered as a defect and indicate the maximum total or aggregate area allowed per unit}

**Staining:** Apparent and localized alteration of the external colour which significantly impairs the external appearance <of the shell, the kernel or the fruit>, from any cause or source, including dark spots,

blotches, etc., but excluding staining caused by a more serious defect such as mould, decay or damage by pests.

{where appropriate, add a definition of what is not considered as a defect and indicate the maximum total or aggregate area allowed per unit}

Discolouration: Significant and widespread change of the typical external or internal colour, from any cause or source, either intrinsic or extrinsic, including in particular blackening and the appearance of very dark colours, but excluding discolouration caused by a more serious defect such as mould, decay or damage by pests.

{where appropriate, add a definition of what is not considered as a defect and indicate the maximal total area allowed per unit}

Mechanical injuries: Cracks, splits, tears, bruising or any injury affecting a significant part of either the skin, the integument or the shell, or the fruit flesh or the kernel flesh.

{where appropriate, add a definition of what is not considered as a defect and indicate the maximum total or aggregate area or length allowed per unit}

Damage caused by pests: Visible damage or contamination caused by insects, mites, rodents or other animal pests, including the presence of dead insects and/or mites and their debris or excreta.

Living pests: Presence of living pests (insects, mites or others) at any stage of development (adult, nymph, larva, egg, etc.).

Decay (rotten): Significant decomposition caused by the action of micro-organisms or other biological processes. This is normally accompanied by changes in texture (soft or watery appearance) and/or changes in colour (initial appearance of brownish hues and eventually blackening).

Mould: Mould filaments visible to the naked eye, either inside or outside of the fruit or of the kernel.

Foreign odour and/or taste: Any odour or taste that is not characteristic of the product.

Dirt: Very apparent adhering or embedded dirt, soil, mud or dust, producing a smudgy, smeared, flecked or coated effect, that seriously detracts from the appearance of the produce.

Foreign matter: Any visible and/or apparent matter or material not usually associated with the product.

{see definitions of extraneous vegetable material}

Abnormal external moisture: Presence of water, moisture or condensation, on the surface of the product.

(b) Specific definitions for nuts (inshell nuts and nut kernels)

Defects of the shell

Any defects which adversely affect the appearance or the quality of the shell, such as:

Broken shell: Broken, split or seriously mechanically damaged shell. The absence of a very small part of the shell or a slight crack shall not be considered as a defect provided that the kernel is still protected.

Mechanically damaged: Shells with very apparent mechanical injuries, even if superficial, such as pronounced marks caused by hulling equipment.

{where appropriate, add a definition of what is not considered as a defect and indicate the maximum total or aggregate area or length allowed per unit}

Extraneous vegetable material: Harmless vegetable matter associated with the product.

## Defects of the kernel

Any defect which adversely affects the appearance, edibility, keeping quality or quality of the kernel, such as:

Empty or hollow nut: Nut in which the kernel has aborted.

Mechanically damaged: Kernel which has superficial mechanical lesions (chipped or scratched) or which is incomplete (partially broken), plus halved, split or broken kernels. The absence of a small part of the integument and/or very superficial abrasions or lesions <less than ... mm in diameter or length, and/or up to ... mm deep> shall not be considered as a defect.

{where appropriate, insert specific definitions and tolerances for incomplete, halved, split and broken kernels, and exclude them from the mechanically damaged definition}

Chipped: Incomplete, partially split or broken kernel, with less than one third of the whole kernel missing.

{where appropriate, indicate a different proportion or reference and/or add a definition of what is not considered as a defect}  
{chipped is an optional definition, as chipped or incomplete kernels can be grouped into the mechanically damaged definition}

Broken: Portion of the kernel which is bigger than a piece <but smaller than an incomplete kernel> (<more than one third of the whole kernel is missing but> it does not pass through a ... mm round {or square} meshed sieve).

{where appropriate, indicate a different proportion or reference}

Piece: Kernel fragment or small kernel portion of irregular shape that passes through a ... mm round {or square} meshed sieve <but does not pass through a ... mm round {or square} meshed sieve>.

{where appropriate, indicate or replace with a different reference}

Half: Longitudinally split kernel from which the two cotyledons are separated.

{where appropriate, insert specific tolerances for halved or split kernels}

Twin or double: Kernel of characteristic shape as a consequence of the development of two kernels in the same shell.

{where appropriate, insert specific tolerances for twins or doubles}

Insufficiently developed: Kernel which is misshapen, abnormally small or partially aborted, including shrivelled and shrunken kernels.

{the shape and size of the kernel may change according to the growing conditions, but not to the extent that the kernel becomes misshapen, shrivelled or shrunken}

{where appropriate, insert specific definitions and tolerances for shrivelled or shrunken kernels, and exclude them from the insufficiently developed definition}

{for inshell nuts, where appropriate, a reference or specification can be inserted regarding the minimal edible content (edible kernel weight /inshell weight) or the minimal filling of the shell cavity}

Shrivelled and shrunken: Kernel which is abnormally wrinkled or flat, and/or desiccated, dried out or tough.

Callus: Scar or deformity due to mechanical lesions, viral or bacterial diseases, or physiological causes.

Heat damage: Damage caused by excessive heat during drying or processing, which significantly affects the flavour, appearance or edibility of the product.

Fermentation: Fruit in which there has been a breakdown of the sugars into alcohol and acetic acid by the action of yeast and bacteria. Detected by a characteristic sour/bitter taste. Fruit with

incipient fermentation but with only a very slight sour/bitter taste is not considered as defective.

Rancidity: Oxidation of lipids or free fatty acid production giving a characteristic disagreeable flavour; an oily appearance of the flesh does not necessarily indicate a rancid condition.

Germination: Apparent development of the germ, even if not visible from the outside.

Extraneous vegetable material: Harmless vegetable matter associated with the product, such as residues of shell, integument, etc.

(c) Specific definitions for dried fruit

Mechanically damaged: Dried fruit with very apparent mechanical injuries that affect a significant part of the skin or the pulp, such as very noticeable tears or bruises, smashing, crushing, and other similar defects; superficial abrasions or injuries <less than ... mm in diameter or length, up to ... mm deep> shall not be considered as a defect.

{in the case of dried fruits from which the stone, pips, peduncle or pedicel have been removed, or cutting into slices, wedges, dices, slabs or pieces, normal mechanical lesions resulting from these operations shall not be considered as defects}

Heat damage: Damage caused by solar radiation or excessive heat during drying, which significantly affects the appearance, flavour or edibility of the product.

Defect of texture: Dried fruit with non-fleshy parts (hardened, shrivelled or hollow) affecting more than ... of the fruit.

Callus: Scar or deformity due to mechanical injuries (hail, bruising, abrasion, etc.), viral or bacterial diseases, or physiological causes.

**Fermentation:** Fruit in which there has been a breakdown of the sugars into alcohol and acetic acid by the action of yeast and bacteria. Detected by a characteristic sour/bitter taste. Fruit with incipient fermentation but with only a very slight sour taste is not considered as defective.

**Piece:** Fragment or small portion of dried fruit of irregular shape <which passes through a ... mm round meshed sieve> <which is less than ... of the whole dried fruit>  
{where appropriate, indicate or replace with a different proportion or reference}  
{where appropriate, standards can consider pieces, cuts, slabs, etc. as types of presentation, and include specifications on its size and shape}

**Extraneous vegetable material:** Harmless vegetable matter associated with the product, such as residues of peduncles, pedicels, leaves or seeds.