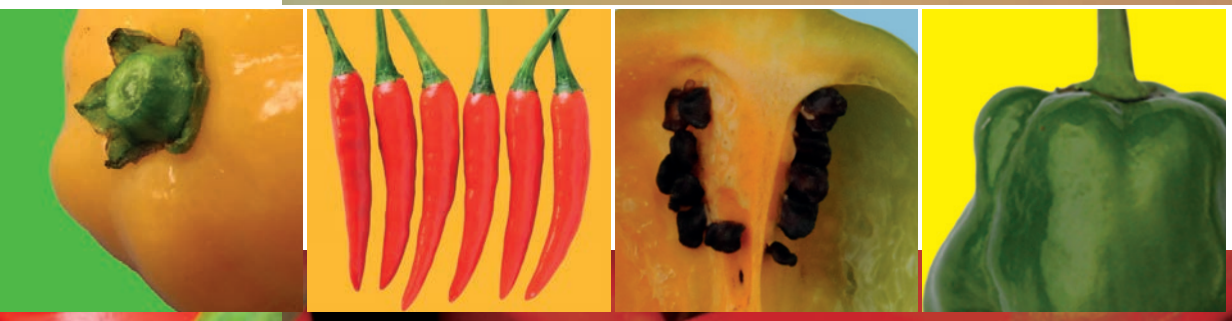
UNECE Standard on the marketing and commercial quality control of

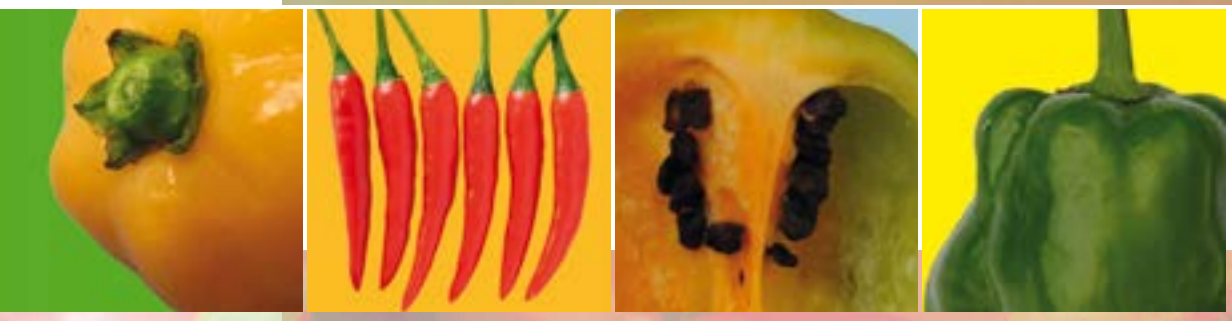


Chilli Peppers

Explanatory Brochure

UNITED NATIONS

UNECE Standard on the marketing and commercial quality control of



Chilli Peppers

Explanatory Brochure

UNITED NATIONS

New York and Geneva, 2013

Note

Commercial quality standards for agricultural produce are developed and approved by the United Nations Economic Commission for Europe through its Working Party on Agricultural Quality Standards. These international standards facilitate trade, encourage high-quality production, improve profitability and protect consumer interests. They are used by governments, producers, traders, importers and exporters, as well as international organizations. They cover a wide range of agricultural products, including fresh fruit and vegetables, dry and dried produce, seed potatoes, meat, cut flowers, eggs and egg products.

The Explanatory Brochure on the Standard for Chilli Peppers has been developed to harmonize the interpretation of the standard, thereby facilitating international as well as national trade. It addresses producers and traders, as well as inspection authorities. It corresponds to the latest edition of the UNECE Standard for Chilli Peppers (FFV-61), which was officially adopted in November 2013. Subsequent revisions to the standard will be placed on the website at: www.unece.org/trade/agr/standard/fresh/ffv-standardse.html

All members of the United Nations can participate on an equal footing in the activities of the Working Party on Agricultural Quality Standards.

For more information, please visit our website: www.unece.org/trade/agr/welcome.html

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UNECE Standard FFV-61 concerning the marketing and commercial quality control of chilli peppers 64

The official text of the standard is indicated in blue bold type; the interpretative text of the standard is indicated in black. References to photos representing the visual interpretation are printed in black bold. The entire text of the standard without the interpretative text appears in the annex.

Definition of Produce

I. Definition of Produce

This standard applies to chilli peppers[2] of varieties (cultivars) grown from *Capsicum annuum*, *C. baccatum*, *C. chinense*, *C. frutescens* and *C. pubescens*, to be supplied fresh to the consumer, chilli peppers for industrial processing being excluded.

Interpretation: This standard applies to fresh chilli peppers with a hot taste exceeding 900 on the Scoville Index. Fresh peppers grown from *C. annuum*, including varieties and/or commercial types which have a hot taste, but present a pungency of less than 900 on the Scoville Index, are covered by the UNECE Standard for Sweet Peppers (FFV-28).

Chilli peppers come in a range of colours, sizes and shapes. They also contain a variable level of capsaicinoids, the chemical compounds responsible for hotness or pungency.

Examples relating to the definition of produce are shown in **Photos 1-7**.

[2] **Chilli peppers with a minimum pungency of 900 on the Scoville Index. For levels of pungency see the annex [to the standard].**

Photo 1
Definition of produce – examples of shapes, sizes and colours of chilli peppers

Photo 2
Definition of produce – *Capsicum annuum*, commercial type Jalapeño

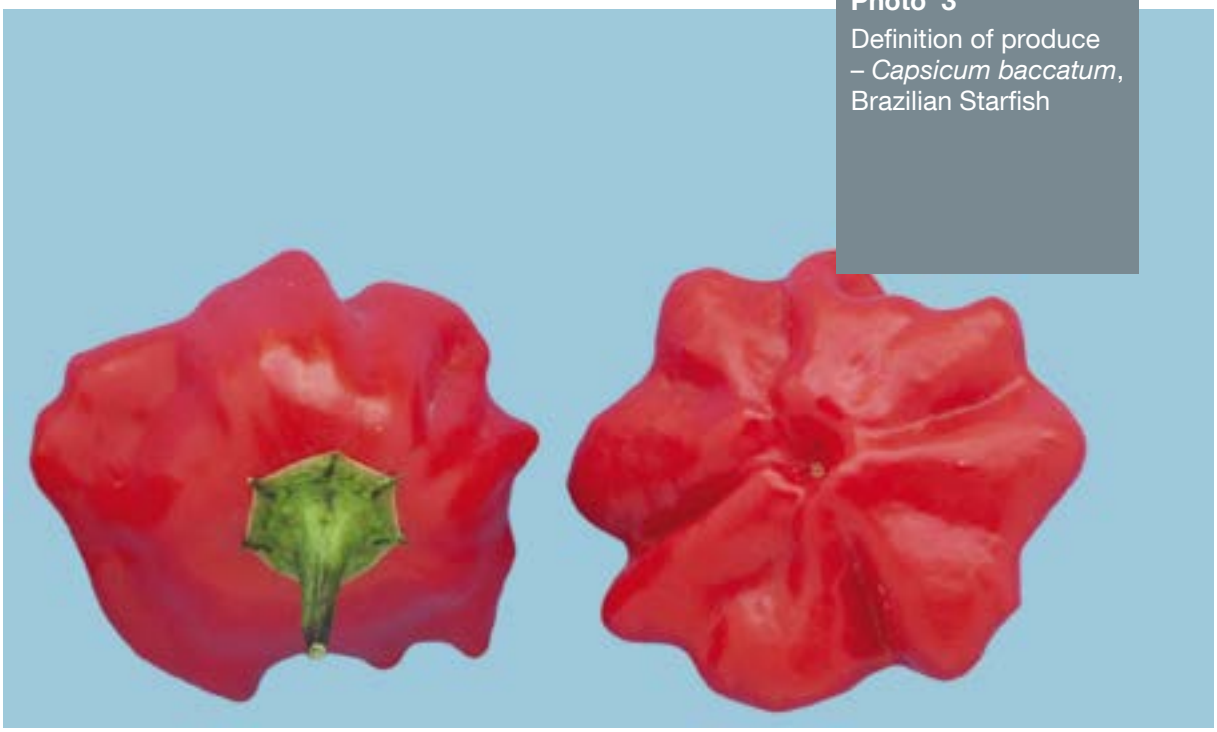

Photo 3
Definition of produce – *Capsicum baccatum*, Brazilian Starfish

Photo 4
Definition of produce – *Capsicum chinense*, commercial type Habanero

Photo 5
Definition of produce – *Capsicum chinense*, commercial type Scotch Bonnet

Photo 6
Definition of produce – *Capsicum frutescens*, commercial type Tabasco

Photo 7
Definition of produce – *Capsicum pubescens*, commercial type Manzano

Provisions concerning Quality

II. Provisions concerning Quality

The purpose of the standard is to define the quality requirements for chilli peppers at the export-control stage after preparation and packaging.

However, if applied at stages following export, products may show in relation to the requirements of the standard:

- **a slight lack of freshness and turgidity**
- **for products graded in classes other than the "Extra" Class, a slight deterioration due to their development and their tendency to perish.**

The holder/seller of products may not display such products or offer them for sale, or deliver or market them in any manner other than in conformity with this standard. The holder/seller shall be responsible for observing such conformity.

Advice: At the packing stage, special attention should be paid to ensuring that the minimum requirements have been met. Produce with any progressive defects will deteriorate during transportation and distribution.

A. Minimum requirements

In all classes, subject to the special provisions for each class and the tolerances allowed, the chilli peppers must be:

- **intact, the stalk and calyx may be missing, provided that the break is clean and the adjacent skin is not damaged**

Interpretation: Chilli peppers must not have any damage or injury affecting the integrity of the produce. Chilli peppers with unhealed injuries, damaged skin, or holes that expose the interior or flesh of the produce are not allowed. The stalk may be cut off, the calyx may be missing, provided the flesh is not damaged.

Examples relating to the minimum requirement "intact" are shown in **Photos 8-11.**

Photo 8
Minimum requirement: "intact". Missing stalk (middle), missing calyx and stalk (right) – limit allowed in all classes

Photo 9
Minimum requirement: “intact”. Missing stalk and calyx, adjacent flesh damaged – not allowed

Photo 10
Minimum requirement: “intact”. Open cracks – not allowed

Photo 11
Minimum requirement: “intact”. Fresh cut or crack – not allowed

- sound; produce affected by rotting or deterioration such as to make it unfit for consumption is excluded

Interpretation: Chilli peppers must be free from disease or serious deterioration which appreciably affects their appearance, edibility or keeping quality. Chilli peppers showing the following defects are therefore excluded:

- rotting, even if the signs are very slight or the rot affects the stalk and/or calyx only
- mould growth
- virus infection
- serious bruising
- serious sunburn.

Advice: It is recommended that at the packing stage grading be restrictive for progressive defects such as rotting and mould.

Interpretation: Examples relating to the minimum requirement “sound” are shown in **Photos 12-16**.

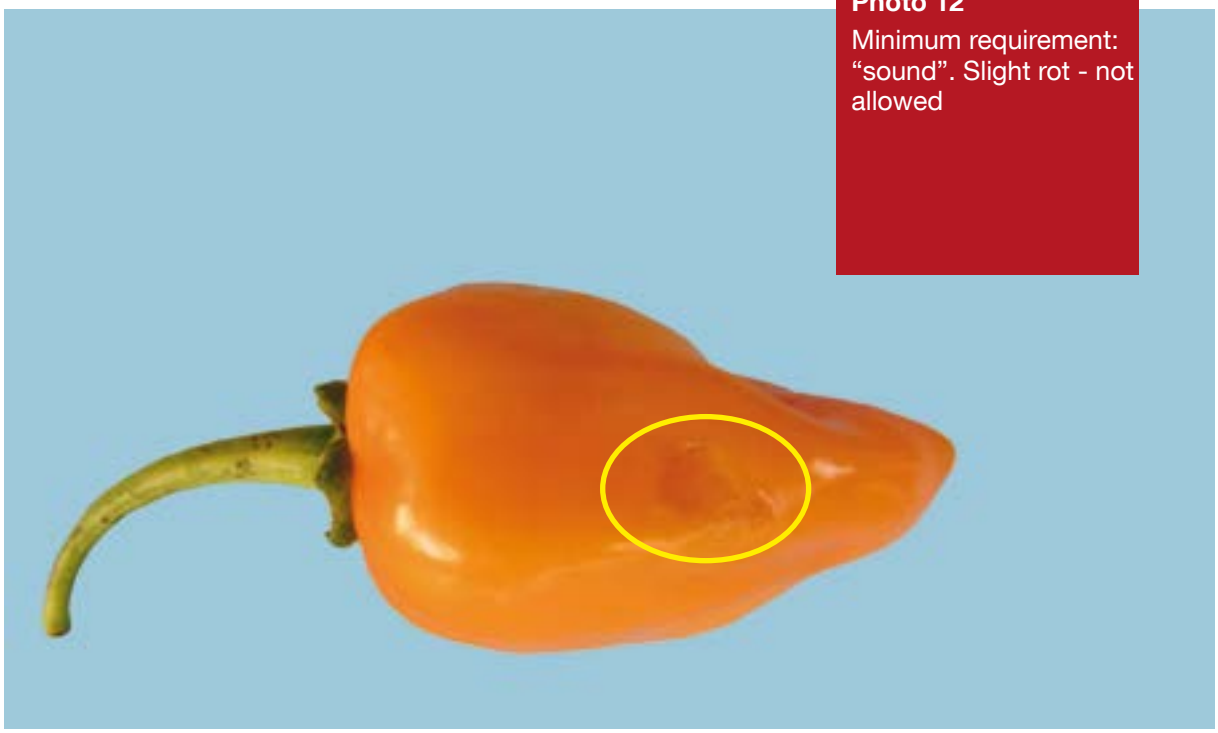

Photo 12
Minimum requirement: “sound”. Slight rot - not allowed

Photo 13
Minimum requirement: “sound”. Mould on skin (left) and on calyx (right) – not allowed

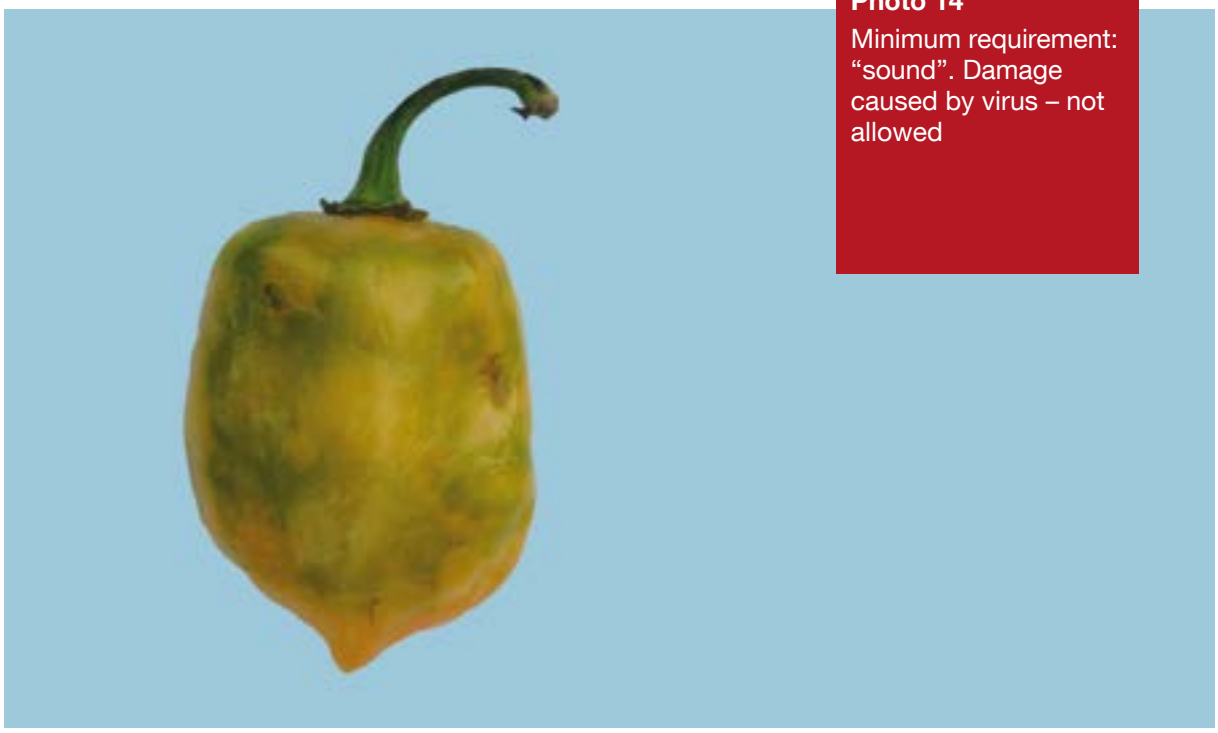

Photo 14
Minimum requirement: “sound”. Damage caused by virus – not allowed

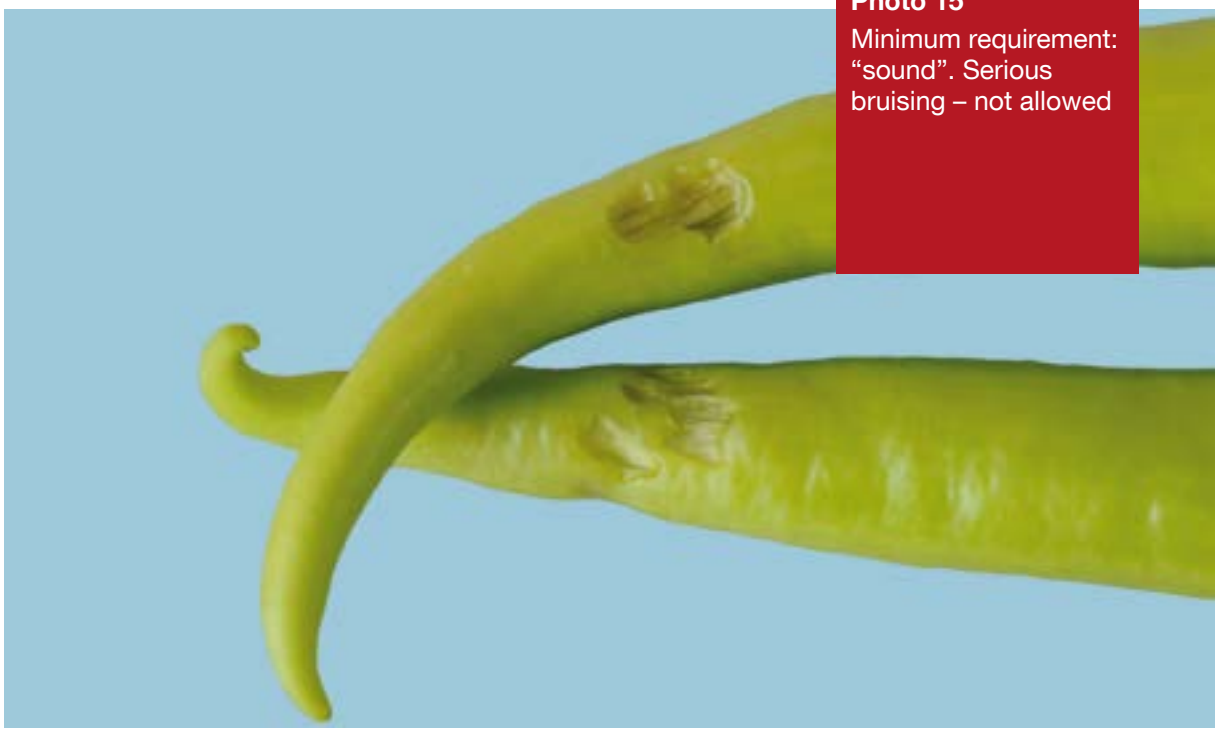

Photo 15
Minimum requirement: “sound”. Serious bruising – not allowed

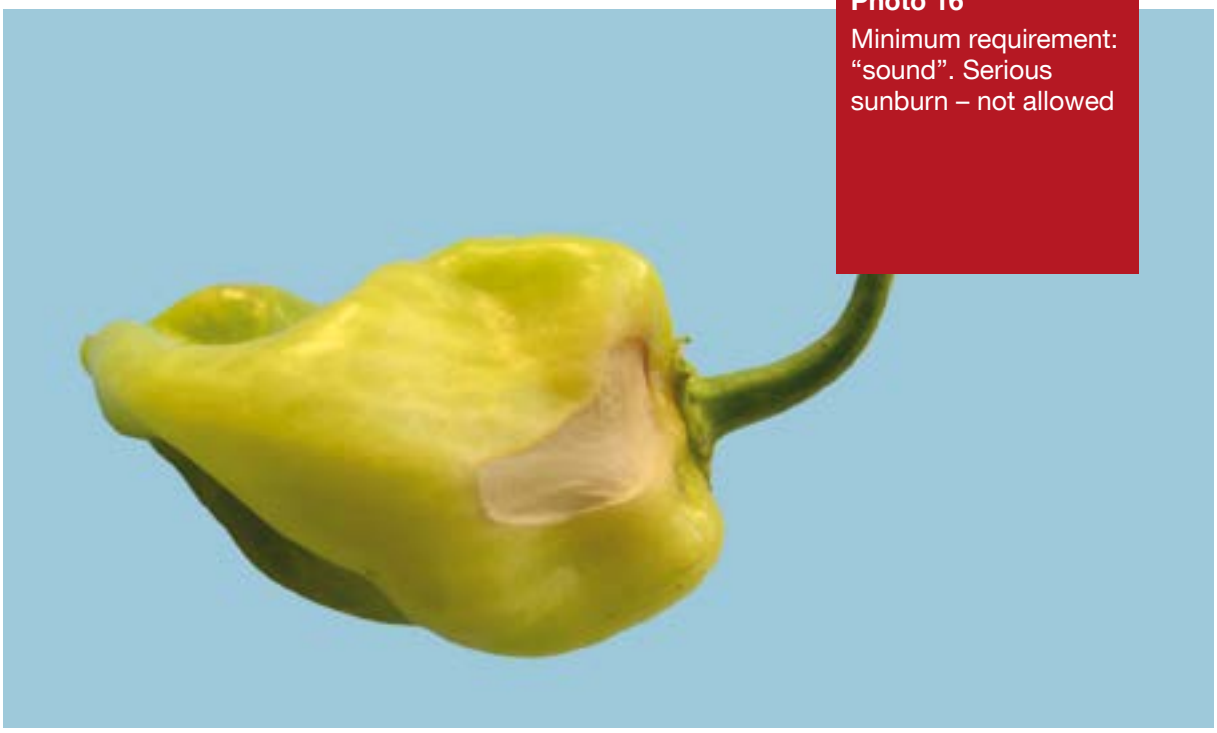

Photo 16
Minimum requirement: “sound”. Serious sunburn – not allowed

- clean, practically free of any visible foreign matter

Interpretation: Chilli peppers must be practically free of visible soil, dust, chemical residue or other foreign matter.

The acceptable limit for “practically free” would be very slight traces of foreign matter restricted to a small area of the produce. Produce with very slight traces of dust not affecting the general appearance is regarded as “practically free of visible foreign matter” and is allowed in all classes. Extensive soiling or traces of deposits are not allowed.

Examples relating to the minimum requirement “clean” are shown in **Photos 17-20**.

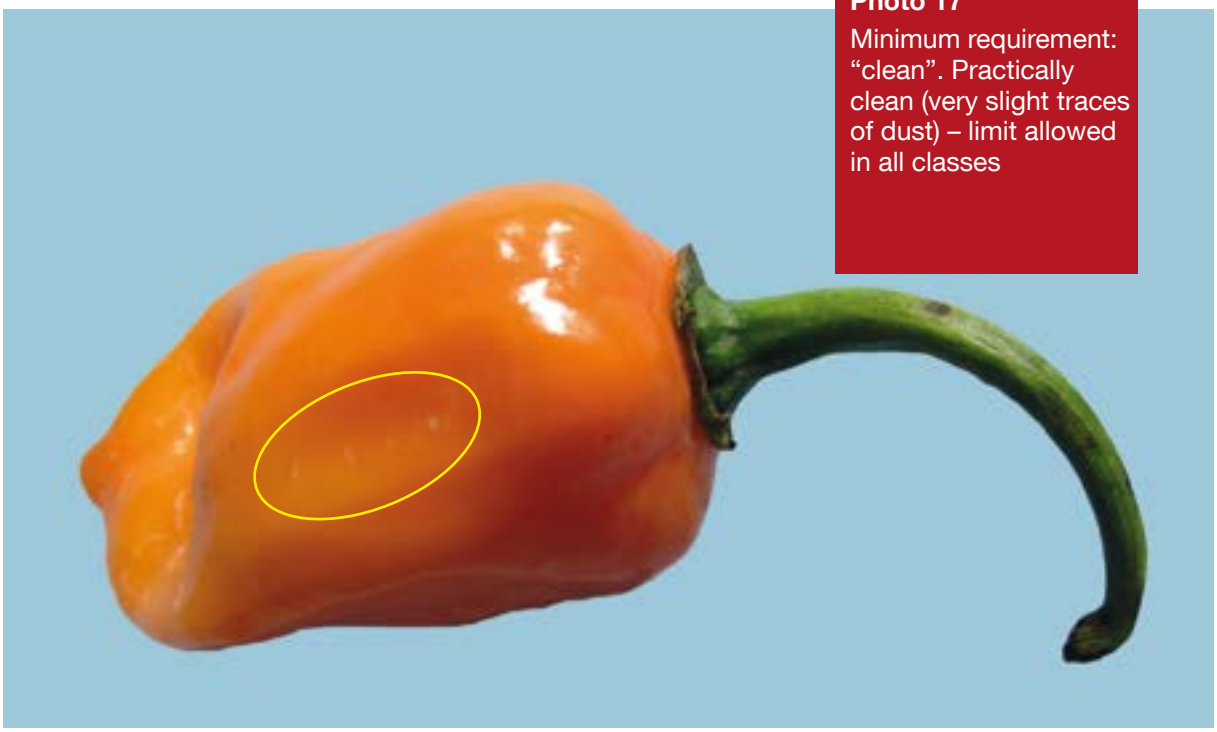

Photo 17
Minimum requirement: “clean”. Practically clean (very slight traces of dust) – limit allowed in all classes

Photo 18
Minimum requirement: “clean”. Practically clean (very slight traces of dust in the calyx area) – limit allowed in all classes

Photo 19
Minimum requirement: “clean”. Extensive soiling – not allowed

Photo 20
Minimum requirement: “clean”. Extensive deposits – not allowed

- practically free from pests

Interpretation: The presence of pests can detract from the commercial presentation and acceptance of chilli peppers. Therefore, the acceptable limit would be the odd insect, mite or other pest in the package or sample; any colonies would lead to the rejection of the produce.

An example relating to the minimum requirement “practically free from pests” is shown in **Photo 21**.

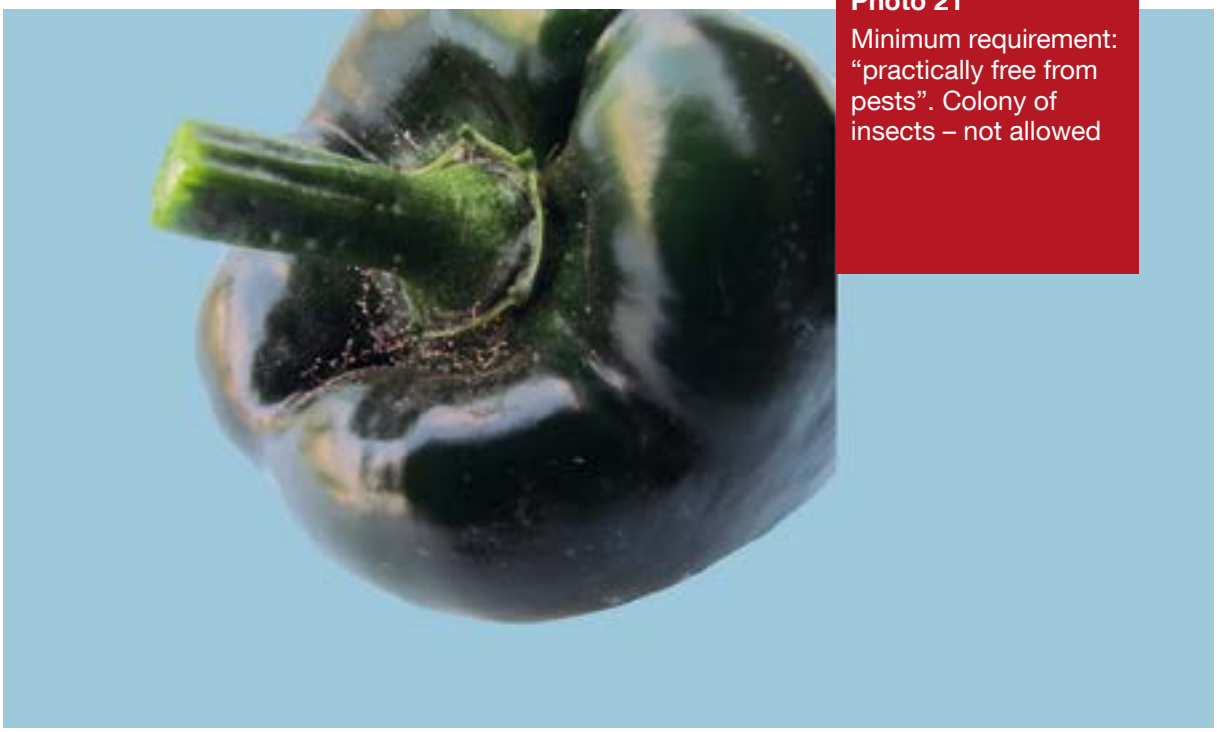

Photo 21
Minimum requirement: “practically free from pests”. Colony of insects – not allowed

- practically free from damage caused by pests

Interpretation: Pest damage can detract from the general appearance and affect the keeping quality. Therefore, chilli peppers must be free of internal and external damage caused by pests. Pest damage affecting the flesh makes the produce unfit for consumption.

Examples relating to the minimum requirement “practically free from damage caused by pests” are shown in **Photos 22-24**.

Photo 22
Minimum requirement: “practically free from damage caused by pests”. Holes caused by pests – not allowed

Photo 23
Minimum requirement: “practically free from damage caused by pests”. Feeding damage – not allowed

Photo 24
Minimum requirement: “practically free from damage caused by pests”. Feeding damage – not allowed

- fresh in appearance, including stalk and calyx

Interpretation: Chilli peppers must be of an acceptable freshness depending on the commercial type and the marketing stage. A slight lack of freshness is allowed in all classes at stages following export and/or dispatch. Freshly harvested chilli peppers or those from storage should not be shrivelled.

Examples relating to the minimum requirement “fresh in appearance” are shown in **Photos 25 and 26**.

Photo 25
Minimum requirement: “fresh in appearance”. Serious shrivelling and dry stalk – not allowed

Photo 26
Minimum requirement: “fresh in appearance”. Dry and dark calyx and/ or stalk – not allowed

- firm

Interpretation: Chilli peppers must be of acceptable firmness depending on the commercial type and the marketing stage. Freshly harvested chilli peppers or those from storage may be a little soft.

- free from damage caused by low and/or high temperatures

Interpretation: Storage temperatures below the critical temperature of about 7° C may cause chilling injury such as sunken glassy spots coalescing and deteriorating once the produce is transferred to ambient temperatures.

High storage temperatures and high humidity may cause heat damage such as the skin detaching from the flesh and deterioration of the flesh.

Examples relating to the minimum requirement “free from damage caused by low and/or high temperatures” are shown in **Photos 27 and 28**.

Photo 27
Minimum requirement: "free from damage caused by low and/ or high temperatures". Chilling injury – not allowed

Photo 28
Minimum requirement: "free from damage caused by low and/ or high temperatures". Heat damage – not allowed

- free of abnormal external moisture

Interpretation: 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 a refrigerated vehicle.

- free of any foreign smell and/or taste.

Interpretation: This provision applies to chilli peppers stored or transported under poor conditions, which have consequently resulted in their absorbing abnormal smells and/or tastes, in particular through the proximity of other products which give off volatile odours.

The development and condition of the chilli peppers must be such as to enable them:

- to withstand transportation and handling

- to arrive in satisfactory condition at the place of destination.

B. Classification

Chilli peppers are classified in three classes as defined below:

(i) ***"Extra" Class***

Chilli peppers in this class must be of superior quality. They must be characteristic of the variety and/or commercial type.

They must be free from defects, with the exception of very slight superficial defects, provided these do not affect the general appearance of the produce, the quality, the keeping quality and presentation in the package. Colour change due to ripening is not considered a defect.

Interpretation: Examples relating to "Extra" Class chilli peppers are shown in **Photos 29-36**.

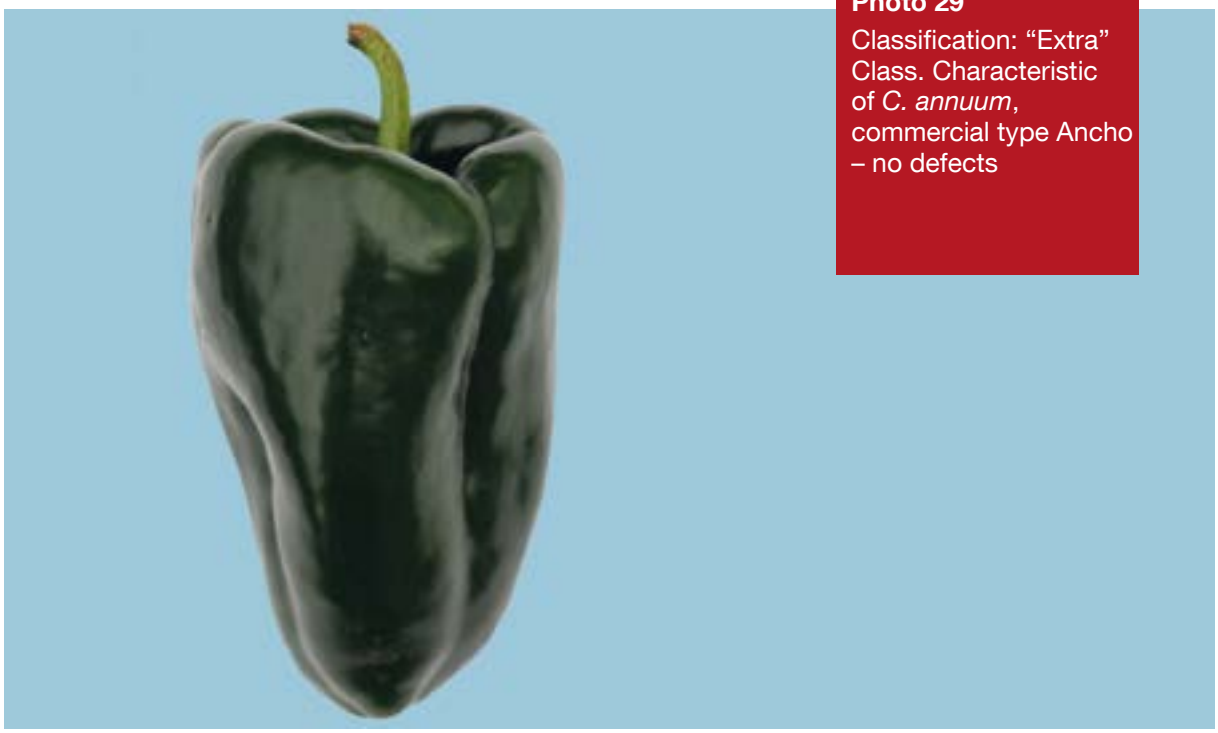

Photo 29
Classification: “Extra” Class. Characteristic of *C. annuum*, commercial type Ancho – no defects

Photo 30
Classification: “Extra” Class. Characteristic of *C. annuum*, commercial type Jalapeño – no defects

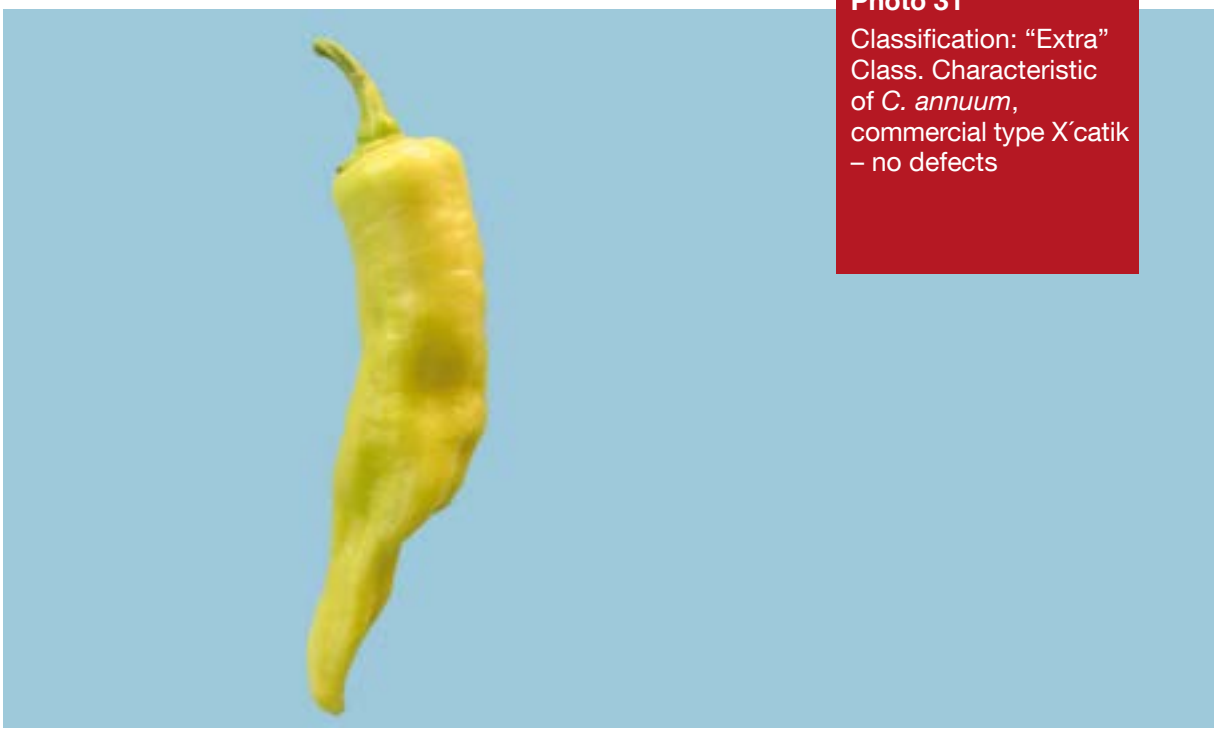

Photo 31
Classification: “Extra” Class. Characteristic of *C. annuum*, commercial type X´catik – no defects

Photo 32
Classification: “Extra” Class. Characteristic of *C. chinense* – commercial type Habanero - right: typical shape of a 3-locule fruit, left: wide variation in shapes (2-, 3- or 4-locule types) is typical for this commercial type – no defects

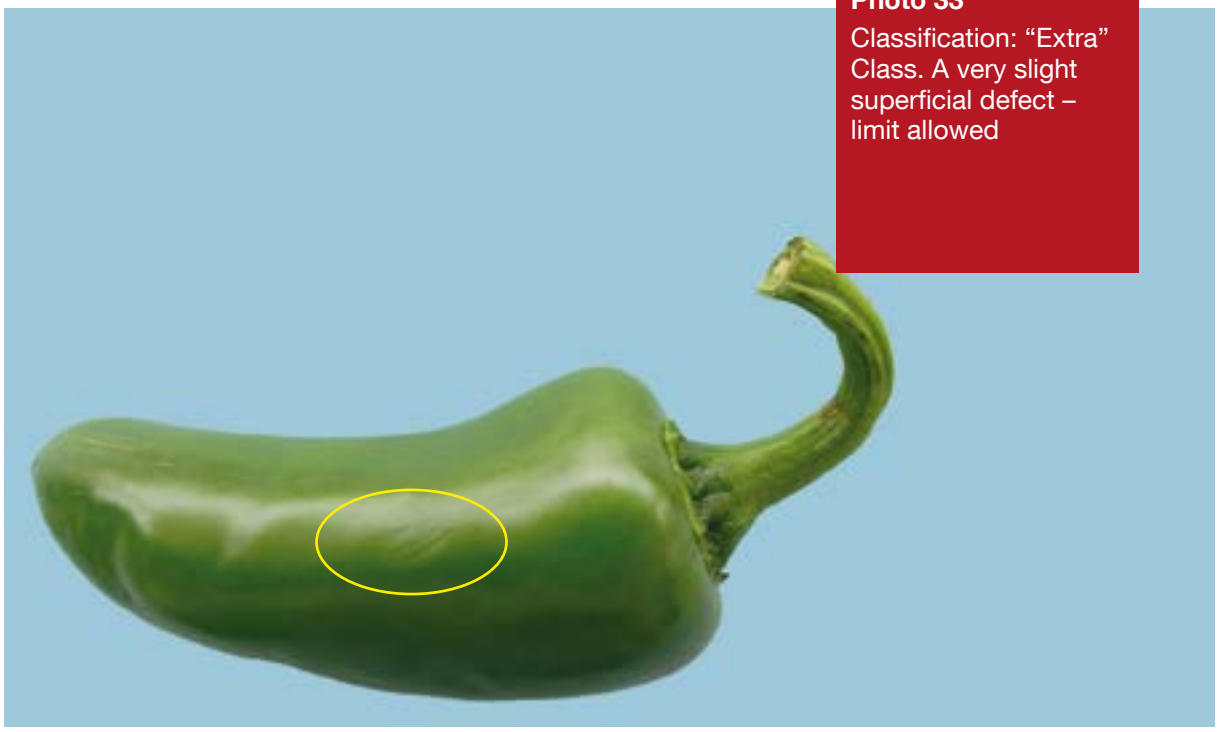

Photo 33
Classification: “Extra” Class. A very slight superficial defect – limit allowed

Photo 34
Classification: “Extra” Class. A very slight superficial defect – limit allowed

Photo 35
Classification: “Extra” Class. Colour change as produce ripens – allowed in all classes

Photo 36
Classification: “Extra” Class. Colour change as produce ripens – allowed in all classes

(ii) Class I

Chilli peppers in this class must be of good quality. They must be characteristic of the variety and/or commercial type.

The following slight defects, however, may be allowed, provided these do not affect the general appearance of the produce, the quality, the keeping quality and presentation in the package:

- a slight defect in shape

Interpretation: Examples relating to Class I "shape defects" are shown in **Photos 37-40.**

Photo 37
Classification: "Class I, a slight defect in shape". *C. annuum*, commercial type Ancho: typical shape (left), limit allowed (centre and right)

Photo 38
Classification: “Class I, a slight defect in shape”. *C. annuum*, commercial type Jalapeño: typical shape (left), limit allowed (right)

Photo 39
Classification: “Class I, a slight defect in shape”. *C. annuum*, commercial type X’catik: typical shape (left), limit allowed (right)

Photo 40
Classification: “Class I, a slight defect in shape”. *C. annuum*, commercial type Prik-Chee-Fah: typical shape (left), limit allowed (right)

- slight defects in colouring; colour change due to ripening is not considered a defect

Interpretation: Chilli peppers may show a slight discolouration caused by the sun, provided the flesh is not affected.

An example relating to Class I “slight defects in colouring” is shown in **Photo 41**.

Photo 41
Classification: “Class I, slight defects in colouring” caused by the sun – limit allowed

- **slight skin defects**

Interpretation: Chilli peppers may show slight scratching or scarring, dry superficial cracks or slight pressure marks. Any cracks should be shallow and not discoloured.

Examples relating to Class I “slight skin defects” are shown in **Photos 42-44**.

Photo 42
Classification: “Class I, slight skin defects”. Slight surface scratching – limit allowed

Photo 43
Classification: “Class I, slight skin defects”. Fine surface cracking – limit allowed

Photo 44
Classification: “Class I, slight skin defects”. A slight pressure mark – limit allowed

- a slightly damaged stalk, if present.

Interpretation: The stalk may be cut off but the calyx should remain undamaged. If present, the stalk may be damaged or torn.

Advice: It is recommended that at the packing stage grading be restrictive for this defect, as a damaged stalk is likely to be the entry for rotting and mould.

An example relating to Class I “slightly damaged stalk” is shown in **Photo 45**.

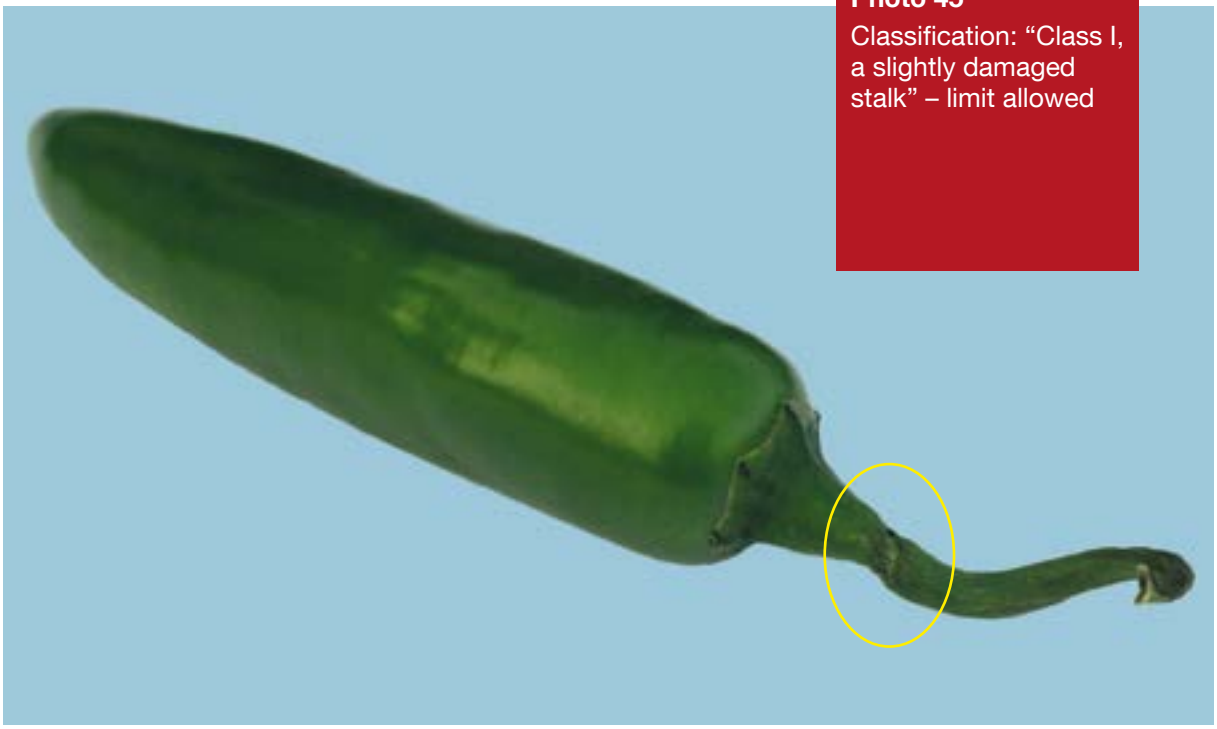

Photo 45
Classification: “Class I, a slightly damaged stalk” – limit allowed

(iii) Class II

This class includes chilli peppers that do not qualify for inclusion in the higher classes, but satisfy the minimum requirements specified above.

Interpretation: Chilli peppers in this class must be of reasonable quality and suitable for human consumption and meet the minimum requirements (explained from page 9 onwards).

The following defects may be allowed, provided the chilli peppers retain their essential characteristics as regards the quality, the keeping quality and presentation:

- defects in shape

Interpretation: Shape defects are allowed except for those affecting edibility.

Examples relating to Class II "defects in shape" are shown in **Photos 46-50**.

Photo 46
Classification: "Class II, defects in shape".
C. annuum, commercial type Ancho: typical shape (left), limit allowed (right)

Photo 47
Classification: “Class II, defects in shape”.
C. annuum, commercial type Jalapeño: typical shape (left), limit allowed (right)

Photo 48
Classification: “Class II, defects in shape”.
C. annuum, commercial type X’catik: typical shape (left), limit allowed (right)

Photo 49
Classification: "Class II, defects in shape".
C. annuum, commercial type Prik-Chee-Fah: typical shape (left), limit allowed (right)

Photo 50
Classification: "Class II, defects in shape".
C. chinense, commercial type Habanero: typical shape (left), limit allowed (right)

- defects in colouring; colour change due to ripening is not considered a defect

Interpretation: Chilli peppers may show a slight discolouration caused by the sun, provided the flesh is not affected.

An example relating to Class II “defects in colouring” is shown in **Photo 51**.

Photo 51
Classification: “Class II, defects in colouring” caused by the sun - limit allowed

- skin defects

Interpretation: Chilli peppers may show scarring or scratching, dry superficial cracks, bruising or healed injuries affecting the skin only.

Examples relating to Class II “skin defects” are shown in **Photos 52-56**.

Photo 52
Classification: “Class II, skin defects”. Scarring or scratching - limit allowed

Photo 53
Classification: “Class II, skin defects”. Dry superficial cracks - limit allowed

Photo 54
Classification: “Class II, skin defects”. Fine surface cracking - limit allowed

Photo 55
Classification: “Class II, skin defects”. Bruising – limit allowed

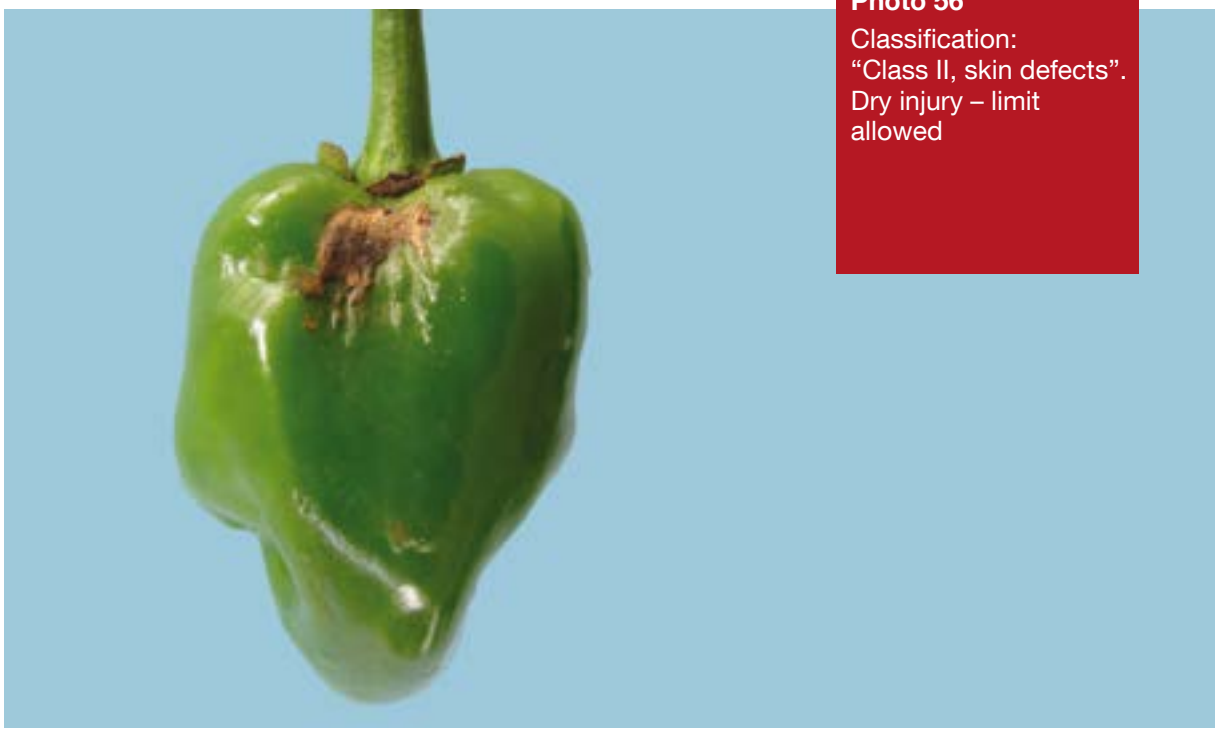

Photo 56
Classification: “Class II, skin defects”. Dry injury – limit allowed

- damaged stalk and calyx, if present

Interpretation: The stalk may be damaged, cut or torn, but the base must remain. Parts of the calyx may be missing, due to pest or handling damage, but the flesh and skin of the produce must not be damaged. Decay on the non-edible calyx is only allowed in the tolerances of Class II.

Examples relating to Class II “damaged stalk and calyx” are shown in **Photos 57** and **58**.

Photo 57
Classification: “Class II, damaged stalk and calyx”. Damage to stalk – limit allowed

Photo 58
Classification: “Class II, damaged stalk and calyx”. Damage to calyx – limit allowed

- slight lack of freshness of the stalk and calyx.

Interpretation: Chilli peppers may show a slight lack of freshness of the stalk and calyx.

An example relating to Class II “slight lack of freshness of the stalk and calyx” is shown in **Photo 59**.

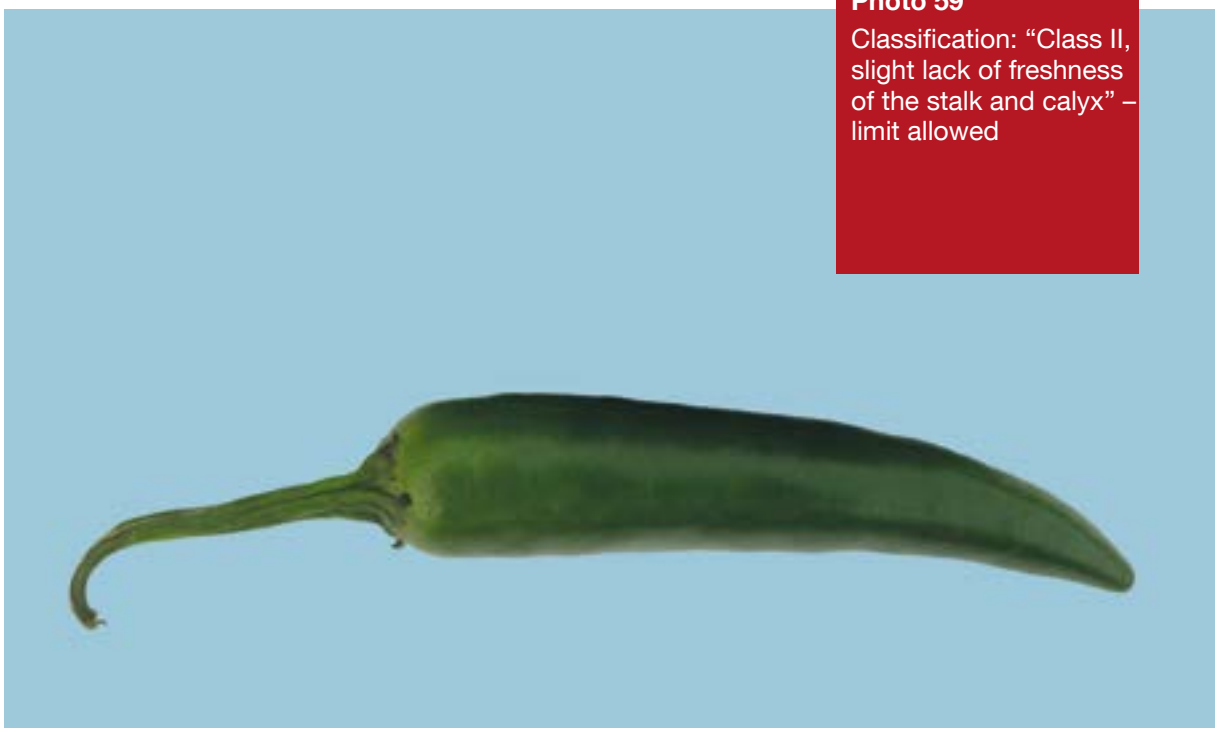

Photo 59
Classification: “Class II, slight lack of freshness of the stalk and calyx” – limit allowed

Provisions concerning Sizing

III. Provisions concerning Sizing

Size is determined by length or by maximum diameter.

The following provisions are optional for chilli peppers in Class II.

To ensure uniformity in size, the range between produce in the same package shall be in accordance with the following:

(a) For chilli peppers sized by length:

Size code	Size range (in centimetres)
1	< 4
2	4 to < 8
3	8 to < 12
4	12 to < 16
5	≥ 16

(b) For chilli peppers sized by diameter:

The range between produce in the same package shall not exceed 20 mm.

Interpretation: Although sizing is optional for Class II, it is possible to use the grading by size to improve the uniformity within the package.

An example of "sizing" chilli peppers is shown in **Photo 60**.

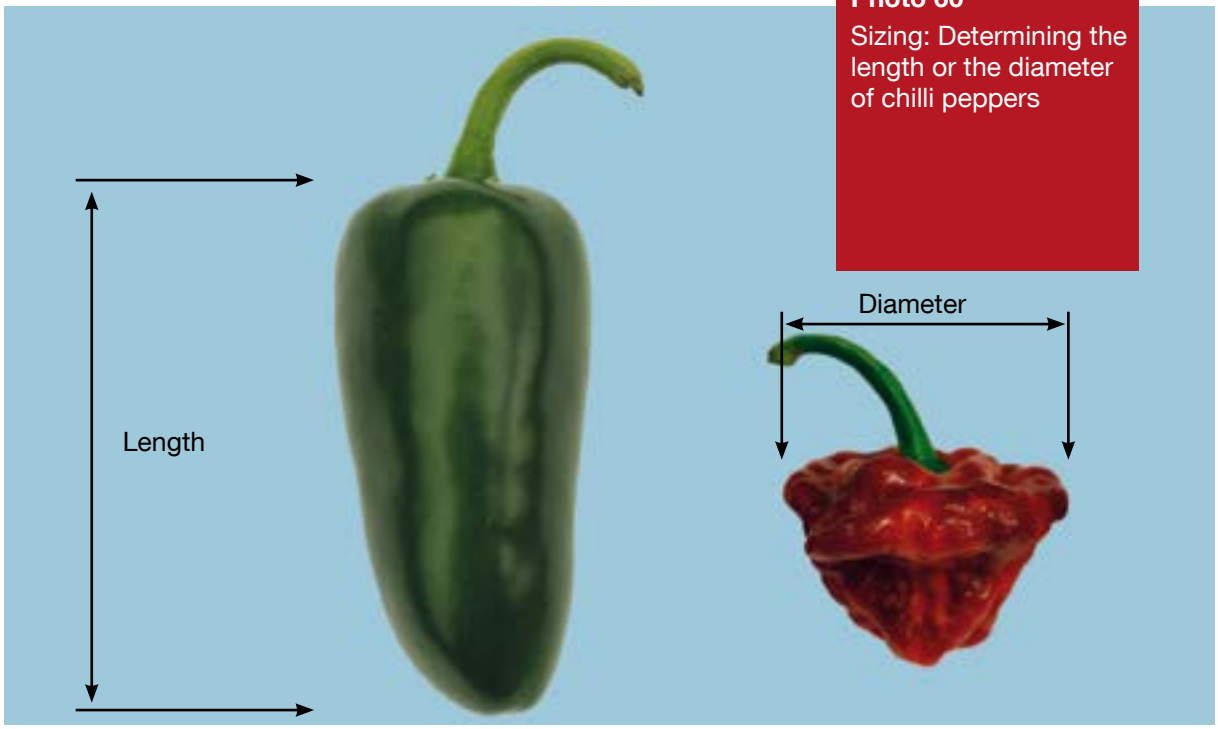

Photo 60
Sizing: Determining the length or the diameter of chilli peppers

Provisions concerning Tolerances

IV. Provisions concerning Tolerances

At all marketing stages, tolerances in respect of quality and size shall be allowed in each lot for produce not satisfying the requirements of the class indicated.

Interpretation: Tolerances are provided to allow for deviation in handling due to natural deterioration of fresh produce over time.

To determine conformity with the tolerances, samples are taken according to Annex II of the OECD Council Decision [(C(2006)95] (www.oecd.org/dataoecd/33/0/19517729.PDF). The decision on the conformity of the lot is taken depending on the percentage of non-conforming produce in the total sample.

A. Quality tolerances

(i) *"Extra" Class*

A total tolerance of 5 per cent, by number or weight, of chilli peppers not satisfying the requirements of the class but meeting those of Class I is allowed. Within this tolerance not more than 0.5 per cent in total may consist of produce satisfying the requirements of Class II quality.

Interpretation: The 5 per cent tolerance covers all shape, skin and colour defects allowed in Class I. The 0.5 per cent tolerance covers all shape, skin and colour defects, as well as bruises allowed in Class II.

(ii) *Class I*

A total tolerance of 10 per cent, by number or weight, of chilli peppers not satisfying the requirements of the class but meeting those of Class II is allowed. Within this tolerance not more than 1 per cent in total may consist of produce satisfying neither the requirements of Class II quality nor the minimum requirements, or of produce affected by decay.

Interpretation: The 10 per cent tolerance covers all shape, skin and colour defects, as well as bruising, allowed in Class II. The 1 per cent tolerance covers all defects not meeting the minimum requirements, including those rendering the produce unfit for consumption.

(iii) *Class II*

A total tolerance of 10 per cent, by number or weight, of chilli peppers satisfying neither the requirements of the class nor the minimum requirements is allowed. Within this tolerance not more than 2 per cent in total may consist of produce affected by decay.

Interpretation: The 10 per cent tolerance covers all malformations, serious skin and colour defects, as well as defects not meeting the minimum requirements but not affecting edibility, such as slight damage, soiling, lack of freshness. The 2 per cent tolerance covers all defects not meeting the minimum requirements, rendering the produce unfit for consumption.

B. Size tolerances

For all classes (if sized): a total tolerance of 10 per cent, by number or weight, of chilli peppers not satisfying the requirements as regards sizing is allowed.

Provisions concerning Presentation

V. Provisions concerning Presentation

A. Uniformity

The contents of each package must be uniform and contain only chilli peppers of the same origin, variety or commercial type, quality and size (if sized).

Interpretation: Examples relating to “Uniformity” are shown in **Photos 61-64**.

Photo 61
Presentation: “Uniformity” - Habanero chilli peppers in accordance with “Extra” Class

Photo 62
Presentation: "Uniformity" - Manzano chilli peppers in accordance with "Extra" Class

Photo 63
Presentation: "Uniformity" - Jalapeño chilli peppers in accordance with Class I

Photo 64
Presentation: "Uniformity" - Habanero chilli peppers in accordance with Class II

However, a mixture of chilli peppers of distinctly different colours and/or commercial types may be packed together in a sales package, provided they are uniform in quality and, for each colour and/or commercial type concerned, in origin.

Interpretation: For mixtures of distinctly different colours and/or commercial types, the uniformity in size is not required in any class.

Examples relating to "mixtures" are shown in **Photos 65** and **66.**

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

Interpretation: Any attempt to deceive by concealing in the lower layers produce inferior in quality and size to that marked on the package and placed in the top layer is not allowed.

Photo 65
Presentation: "Uniformity" – mixture of distinctly different colours of the same commercial type (Habanero) in a sales package

Photo 66
Presentation: "Uniformity" – mixture of distinctly different commercial types in a sales package

B. Packaging

The chilli peppers must be packed in such a way as to protect the produce properly.

Interpretation: Packages must be of such quality and strength as to protect the chilli peppers during transportation and handling.

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

Interpretation: Clean materials should be used to protect the produce from foreign matter, such as leaves, sand or soil, which could cause a negative impact on the produce and its presentation.

Stickers individually affixed to the produce shall be such that, when removed, they neither leave visible traces of glue, nor lead to skin defects.

Packages must be free of all foreign matter.

Interpretation: A visible lack of cleanliness in several packages could result in the lot being rejected.

An example relating to “Packaging” is shown in **Photo 67**.

Photo 67
Presentation: “Packaging” – chilli peppers in a sales package

Provisions concerning Marking

VI. Provisions concerning Marking

Each package[2] must bear the following particulars, in letters grouped on the same side, legibly and indelibly marked, and visible from the outside:

Interpretation: 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.

In the case of re-used packages, all previous labels must be carefully removed and/or previous indications deleted.

A. Identification

Packer and/or dispatcher/shipper:

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[3].

Interpretation: For inspection purposes, the "packer" is the person or firm responsible for the packaging of the produce (this does not mean the staff that 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 dispatcher (shipper or exporter) may, however, assume sole responsibility, in which case identification of the "packer" as defined above is optional.

Examples of identification are shown in **Photos 68 and 69**.

[2] These marking provisions do not apply to sales packages presented in packages.

[3] 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 by the ISO 3166 (alpha) country/area code of the recognizing country, if not the country of origin.

Photo 68
Marking: Example of marking printed on a package

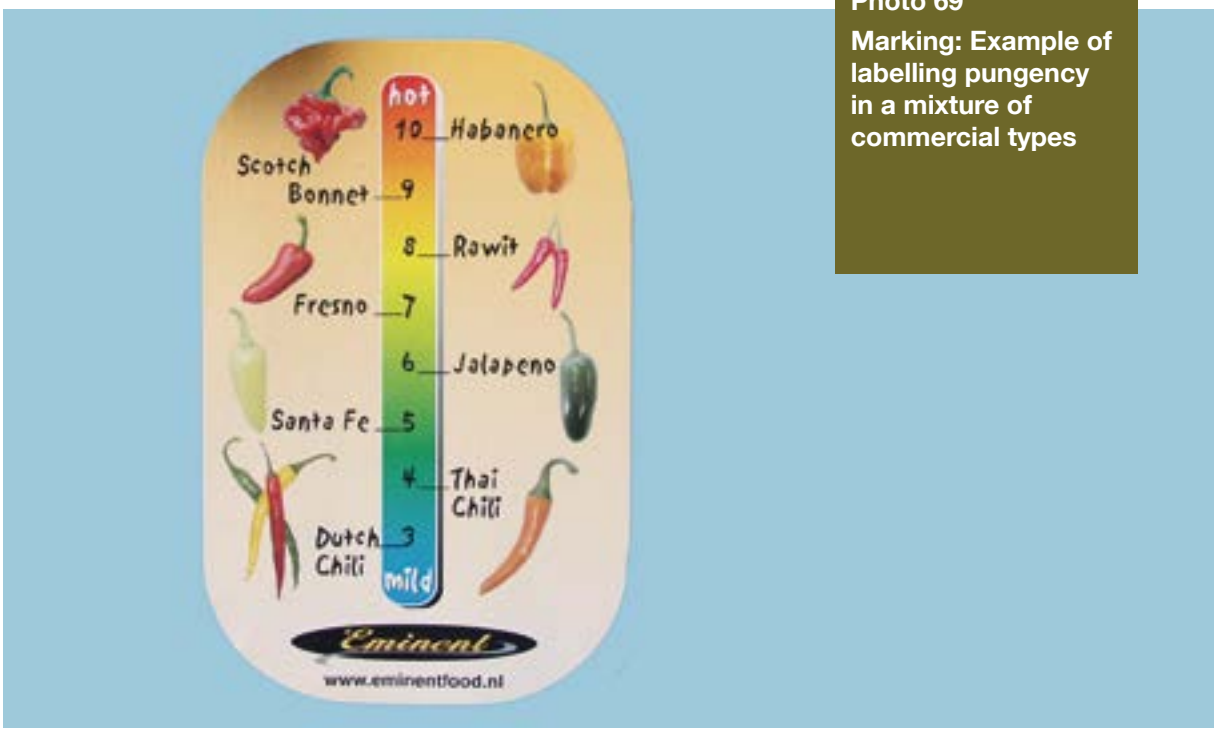

Photo 69
Marking: Example of labelling pungency in a mixture of commercial types

B. Nature of produce

- **"Chilli peppers" if the contents are not visible from the outside**
- **Name of the commercial type**
- **"Mixture of chilli peppers", or equivalent denomination, in the case of a mixture of distinctly different colours and/or commercial types of chilli peppers. If the produce is not visible from the outside, the colours and/or commercial types and the quantity of each in the package must be indicated**
- **Level of pungency indicated as "mild", "medium", "hot" or "extra hot", as appropriate.**

C. Origin of produce

Country of origin[4] and, optionally, district where grown, or national, regional or local place name.

In the case of packages containing a mixture of distinctly different colours and/or commercial types of chilli peppers of different origin, the indication of each country of origin shall appear next to the name of the colour and/or commercial type concerned.

Interpretation: Marking must include the country of origin, i.e. the country in which the chilli peppers were grown (e.g. "Produce of Mexico", "Produce of Thailand" or "Produce of Ghana"). Optionally, district of origin in national, regional or local terms may also be shown.

D. Commercial specifications

- **Class**

Interpretation: It is compulsory to indicate the class.

- **Size (if sized) expressed as minimum and maximum length (in cm) or as minimum and maximum diameter (in mm)**
- **Size code (optional)**

E. Official control mark (optional)

[4] **The full or a commonly used name should be indicated.**

Annex

Pungency

Level of pungency	Scoville units	Total capsaicinoids (microg/gm dry weight)	Examples of commercial types
Mild	900 – 1,999	60 – 133	Ancho, Poblano, Pasilla, X'catik
Medium	2,000 – 19,999	134 – 1,333	Fresno, Cherry, Jalapeño, Prik-Chee-Fah
Hot	20,000 – 100,000	1,334 – 6,600	Serrano, Tabasco, Cayenne, Piquin, Manzano, *C. Baccatum*
Extra hot	>100,000	>6,600	Birdseye, Fatalli, Scotch Bonnet, Habanero, Dorset Naga, Naga Jolokia, Naga Viper, Trinidad Scorpion

In case of dispute, the packer and/or dispatcher/shipper shall supply information regarding the level of pungency.

Adopted 2013

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Annex

UNECE STANDARD FFV-61

concerning the marketing and commercial quality control of

CHILLI PEPPERS

I. Definition of Produce

This standard applies to chilli peppers[1] of varieties (cultivars) grown from *Capsicum annuum, C. baccatum, C. chinense, C. frutescens and C. pubescens,* to be supplied fresh to the consumer, chilli peppers for industrial processing being excluded.

II. Provisions concerning Quality

The purpose of the standard is to define the quality requirements for chilli peppers at the export-control stage after preparation and packaging.

However, if applied at stages following export, products may show in relation to the requirements of the standard:

- a slight lack of freshness and turgidity
- for products graded in classes other than the "Extra" Class, a slight deterioration due to their development and their tendency to perish.

The holder/seller of products may not display such products or offer them for sale, or deliver or market them in any manner other than in conformity with this standard. The holder/seller shall be responsible for observing such conformity.

A. Minimum requirements

In all classes, subject to the special provisions for each class and the tolerances allowed, the chilli peppers must be:

- intact, the stalk and calyx may be missing, provided that the break is clean and the adjacent skin is not damaged
- sound; produce affected by rotting or deterioration such as to make it unfit for consumption is excluded
- clean, practically free of any visible foreign matter
- practically free from pests
- practically free from damage caused by pests
- fresh in appearance, including stalk and calyx
- firm
- free from damage caused by low and/or high temperatures
- free of abnormal external moisture
- free of any foreign smell and/or taste.

The development and condition of the chilli peppers must be such as to enable them:

- to withstand transportation and handling
- to arrive in satisfactory condition at the place of destination.

[1] Chilli peppers with a minimum pungency of 900 on the Scoville Index. For levels of pungency see the annex.

B. Classification

Chilli peppers are classified in three classes, as defined below:

(i) *"Extra" Class*

Chilli peppers in this class must be of superior quality. They must be characteristic of the variety and/or commercial type.

They must be free from defects, with the exception of very slight superficial defects, provided these do not affect the general appearance of the produce, the quality, the keeping quality and presentation in the package. Colour change due to ripening is not considered a defect.

(ii) *Class I*

Chilli peppers in this class must be of good quality. They must be characteristic of the variety and/or commercial type.

The following slight defects, however, may be allowed, provided these do not affect the general appearance of the produce, the quality, the keeping quality and presentation in the package:

- a slight defect in shape
- slight defects in colouring; colour change due to ripening is not considered a defect
- slight skin defects
- a slightly damaged stalk, if present.

(iii) *Class II*

This class includes chilli peppers that do not qualify for inclusion in higher classes but satisfy the minimum requirements specified above.

The following defects may be allowed, provided the chilli peppers retain their essential characteristics as regards the quality, the keeping quality and presentation:

- defects in shape
- defects in colouring; colour change due to ripening is not considered a defect
- skin defects
- damaged stalk and calyx, if present
- slight lack of freshness of the stalk and calyx.

III. Provisions concerning Sizing

Size is determined by length or by maximum diameter.

The following provisions are optional for chilli peppers in Class II.

To ensure uniformity in size, the range between produce in the same package shall be in accordance with the following:

(a) For chilli peppers sized by length:

Size code	Size range (in centimetres)
1	< 4
2	4 to < 8
3	8 to < 12
4	12 to < 16
5	≥ 16

(b) For chilli peppers sized by diameter:
The range between produce in the same package shall not exceed 20 mm.

IV. Provisions concerning Tolerances

At all marketing stages, tolerances in respect of quality and size shall be allowed in each lot for produce not satisfying the requirements of the class indicated.

A. Quality tolerances

(i) *"Extra" Class*

A total tolerance of 5 per cent, by number or weight, of chilli peppers not satisfying the requirements of the class but meeting those of Class I is allowed. Within this tolerance not more than 0.5 per cent in total may consist of produce satisfying the requirements of Class II quality.

(ii) *Class I*

A total tolerance of 10 per cent, by number or weight, of chilli peppers not satisfying the requirements of the class but meeting those of Class II is allowed. Within this tolerance not more than 1 per cent in total may consist of produce satisfying neither the requirements of Class II quality nor the minimum requirements, or of produce affected by decay.

(iii) *Class II*

A total tolerance of 10 per cent, by number or weight, of chilli peppers satisfying neither the requirements of the class nor the minimum requirements is allowed. Within this tolerance not more than 2 per cent in total may consist of produce affected by decay.

B. Size tolerances

For all classes (if sized): a total tolerance of 10 per cent, by number or weight, of chilli peppers not satisfying the requirements as regards sizing is allowed.

V. Provisions concerning Presentation

A. Uniformity

The contents of each package must be uniform and contain only chilli peppers of the same origin, variety or commercial type, quality and size (if sized).

However, a mixture of chilli peppers of distinctly different colours and/or commercial types may be packed together in a sales package, provided they are uniform in quality and, for each colour and/or commercial type concerned, in origin.

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

B. Packaging

The chilli peppers must be packed in such a way as to protect the produce properly.

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

Stickers individually affixed to the produce shall be such that, when removed, they neither leave visible traces of glue, nor lead to skin defects.

Packages must be free of all foreign matter.

VI. Provisions concerning Marking

Each package[2] must bear the following particulars, in letters grouped on the same side, legibly and indelibly marked, and visible from the outside:

A. Identification

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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[3].

B. Nature of produce

- "Chilli peppers" if the contents are not visible from the outside
- Name of the commercial type
- "Mixture of chilli peppers", or equivalent denomination, in the case of a mixture of distinctly different colours and/or commercial types of chilli peppers. If the produce is not visible from the outside, the colours and/or commercial types and the quantity of each in the package must be indicated
- Level of pungency indicated as "mild", "medium", "hot" or "extra hot", as appropriate.

C. Origin of produce

Country of origin[4] and, optionally, district where grown or national, regional or local place name.

In the case of packages containing a mixture of distinctly different colours and/or commercial types of chilli peppers of different origin, the indication of each country of origin shall appear next to the name of the colours and/or commercial type concerned.

D. Commercial specifications

- Class
- Size (if sized) expressed as minimum and maximum length (in cm) or as minimum and maximum diameter (in mm)
- Size code (optional).

E. Official control mark (optional)

[2] These marking provisions do not apply to sales packages presented in packages.

[3] 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 by the ISO 3166 (alpha) country/area code of the recognizing country, if not the country of origin.

[4] The full or a commonly used name should be indicated.

Annex

Pungency

Level of pungency	Scoville units	Total capsaicinoids (microg/gm dry weight)	Examples of commercial types
Mild	**900 – 1,999**	**60 – 133**	**Ancho, Poblano, Pasilla, X'catik**
Medium	**2,000 – 19,999**	**134 – 1,333**	**Fresno, Cherry, Jalapeño, Prik-Chee-Fah**
Hot	**20,000 – 100,000**	**1,334 – 6,600**	**Serrano, Tabasco, Cayenne, Piquin, Manzano, *C. Baccatum***
Extra hot	**>100,000**	**>6,600**	**Birdseye, Fatalli, Scotch Bonnet, Habanero, Dorset Naga, Naga Jolokia, Naga Viper, Trinidad Scorpion**

In case of dispute, the packer and/or dispatcher/shipper shall supply information regarding the level of pungency.

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