



International Workshop
(Dubrovnik 2011)
UNECE Standard FFV-14. CITRUS FRUIT



International Workshop on Commercial Quality Standards
for Fresh Fruit and Vegetables
(Dubrovnik 2011)

UNECE STANDARD FFV-14. CITRUS FRUIT

José Luis López Carmona

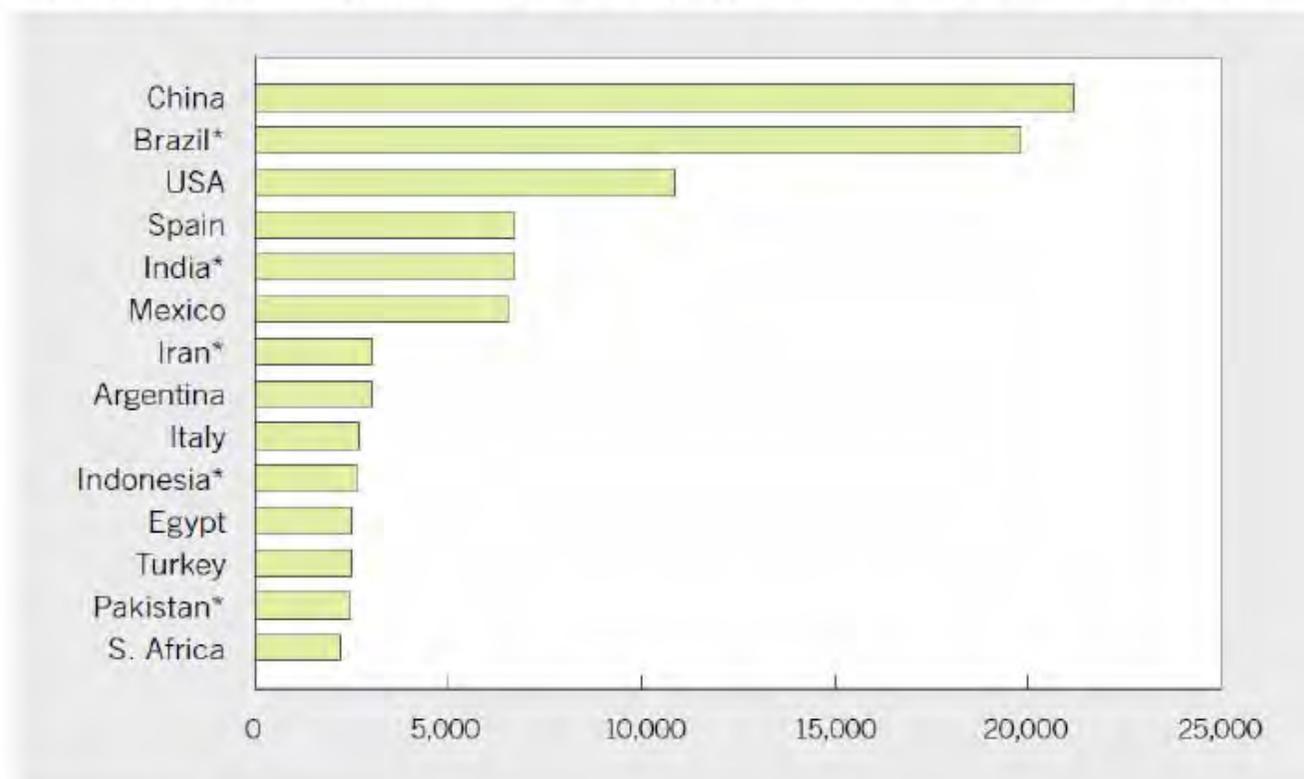


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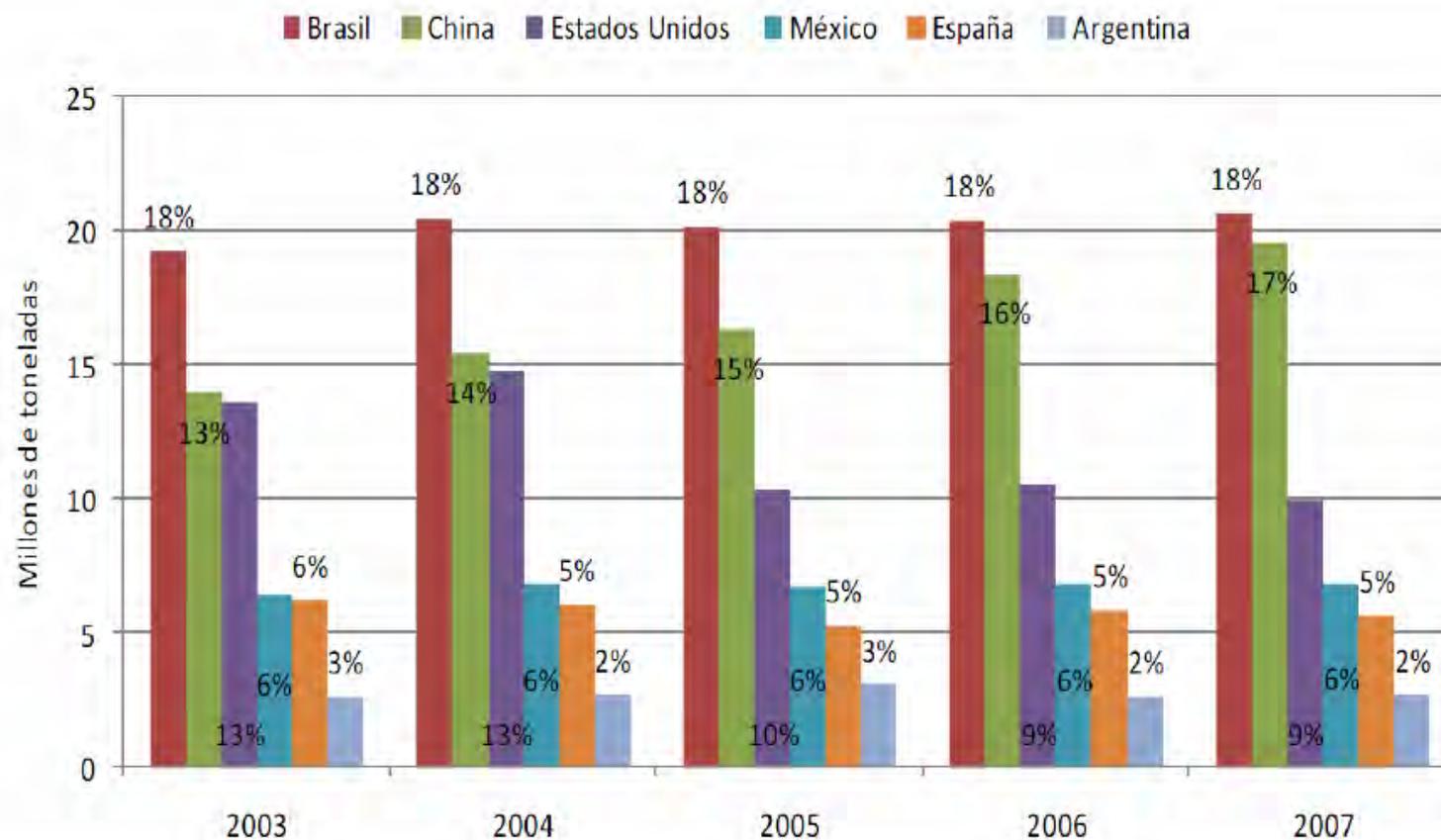


Production and Trade

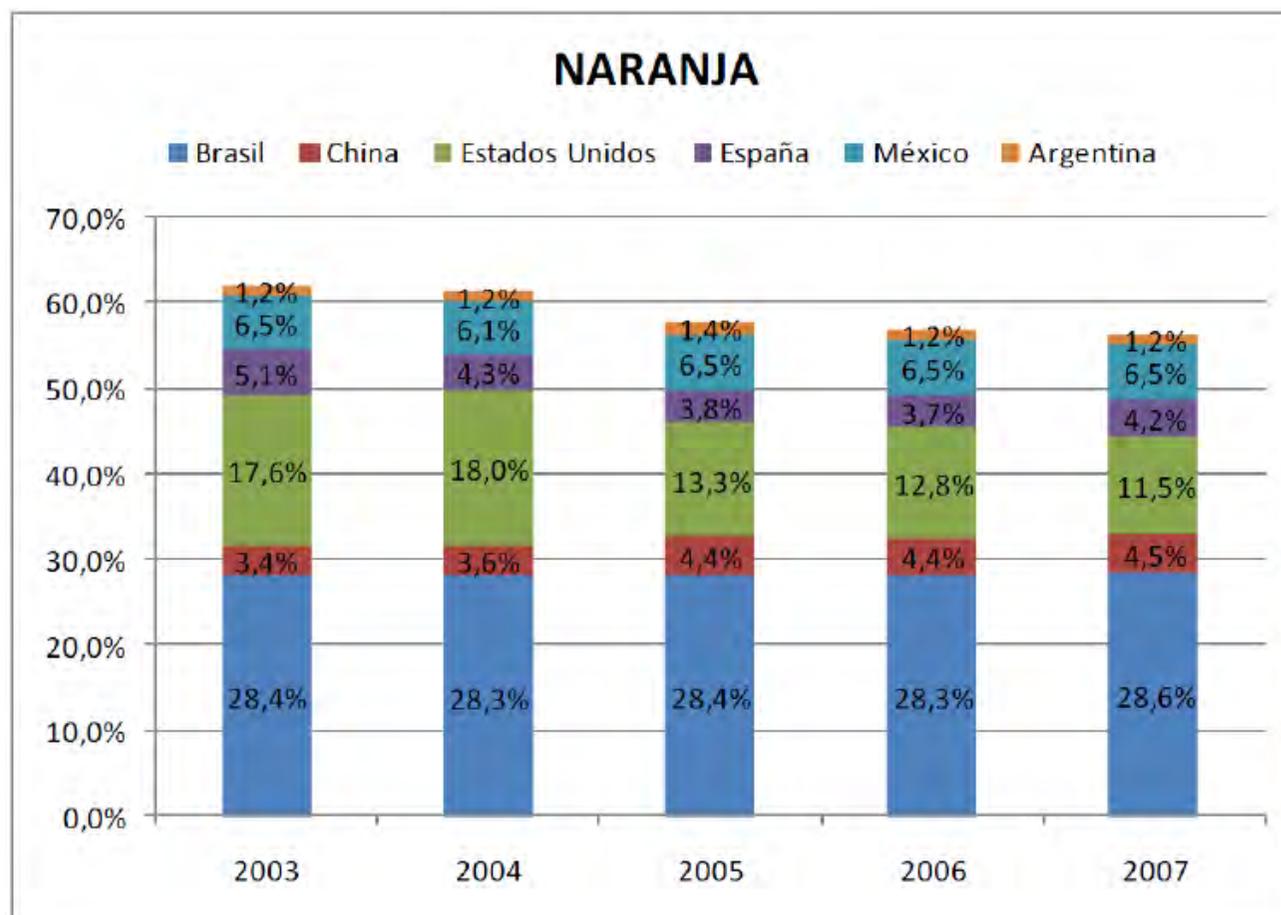
WORLD FRESH CITRUS PRODUCTION 2008/09 (thousand tons)



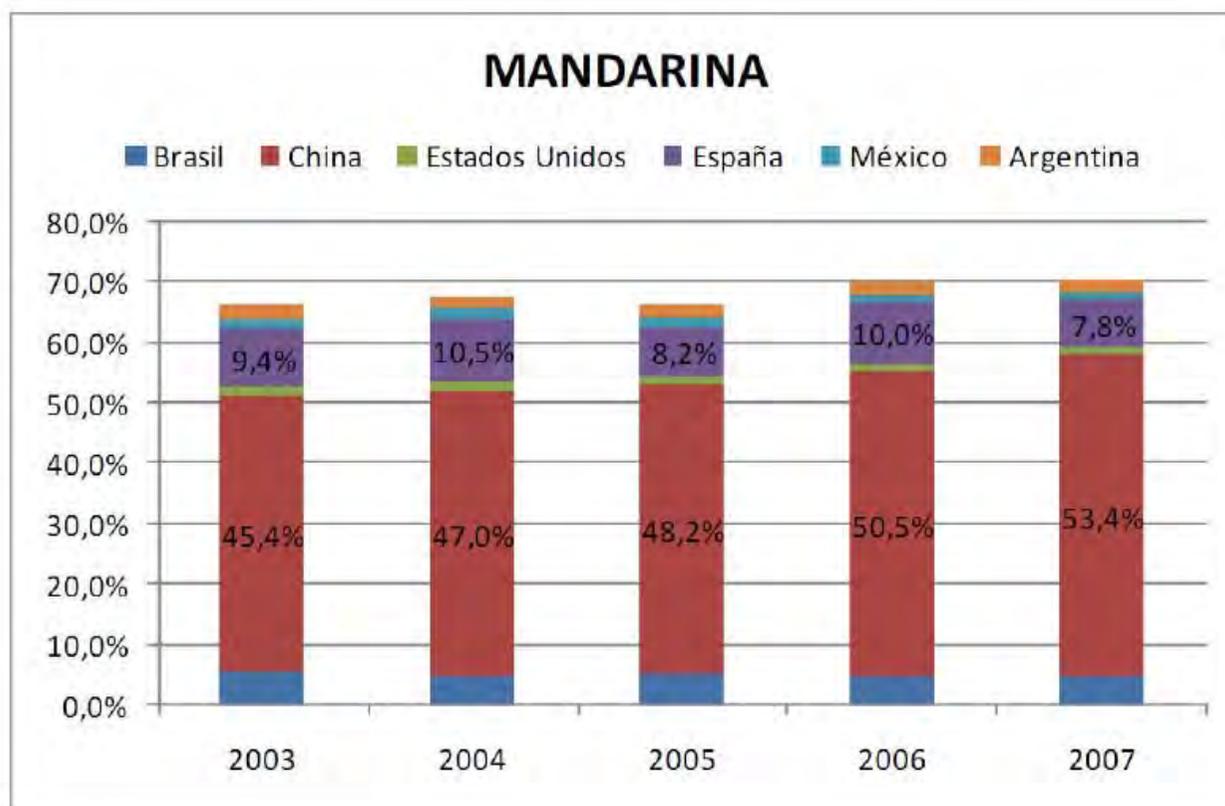
SOURCE: FAO, CLAM



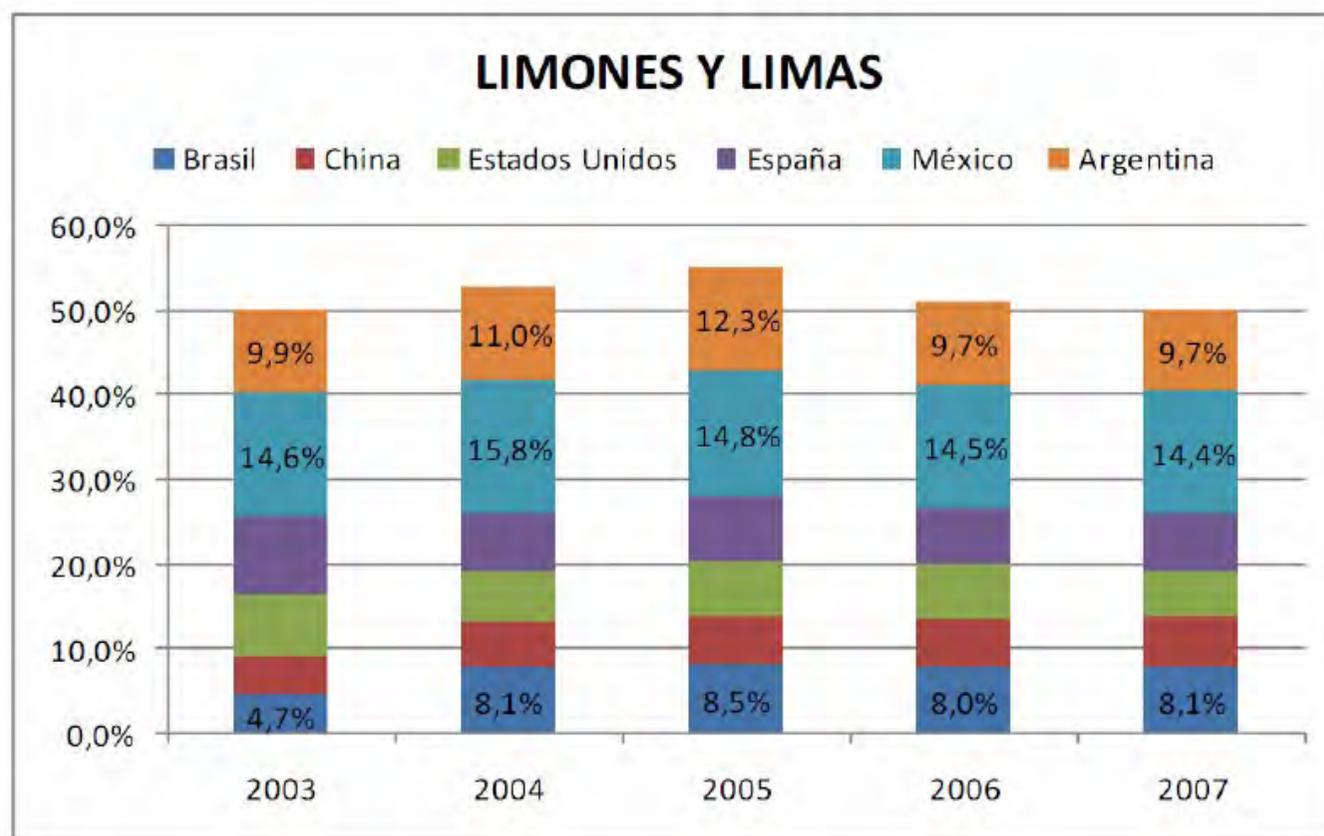
Top citrus world producers



Top citrus world producers. **Mandarins**



Top citrus world producers. Lemons and Limes



Source: FAOSTAT

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Citrus fruit production in Spain (Tons)

	2007/08	2008/09	2009/10	2010/11
Oranges	2.705.000	3.462.571	2.756.042	2.996.093
Mandarins	2.040.000	2.229.626	2.021.023	2.127.531
Lemons	552.192	945.562	673.075	807.000
Grapefruits	46.194	50.814	52.000	55.000
Total	5.343.386	6.688.573	5.502.140	5.985.624

Source: SHAFTE, AILIMPO, FRESHFEL





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¿How Fruit and Vegetable UNECE Standards work?

UNECE Standard

Target: **Uniformity, Transparency**

- I **Definition of produce**
- II **Quality**
 - Requirements (Minimum, Maturity,..)
 - Clasification
- III **Sizing**
 - Minimum size, Uniformity
- IV **Tolerances**
 - Quality tolerance, Size Tolerances
- V **Presentation**
 - Uniformity, Packaging
- VI **Marking**

(Identification, Nature and origen of product, commercial specifications, official control mark)



*** Citrus for industrial processing excluded**



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EU Specific Standard for tomatoes
Regulation EU 543/2011
(Oranges, Easy Peelers and Lemons)



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OECD Brochure Citrus Fruit

<http://www.oecd.org/dataoecd/44/33/43579800.pdf>

I. Definition of produce

This standard applies to the following varieties of fruit, classified as “citrus fruit, to be supplied **fresh** to the consumer.

Citrus fruits for industrial processing are excluded

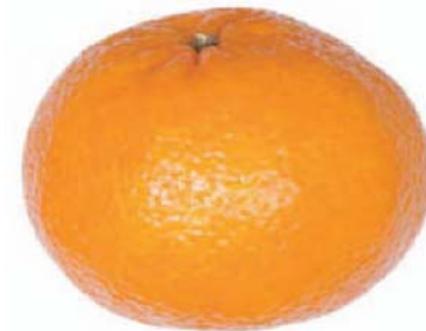
Lemons



Oranges



**Easy Peeler
(Mandarins)**



Indian sweet lime



Persian
Lime



Mexican Lime



Pummelos



Grape fruit





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II Provision concerning quality.

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

If it is applied at stages following export, products may show in relation to the requirements of the standard

- a slight lack of freshness and turgidity
- in classes I and II, a slight deterioration due to their development a their tendency to perish.
- the holder/seller of products may not display such products, 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 tolerances allowed, the citrus fruit must be:



Intact



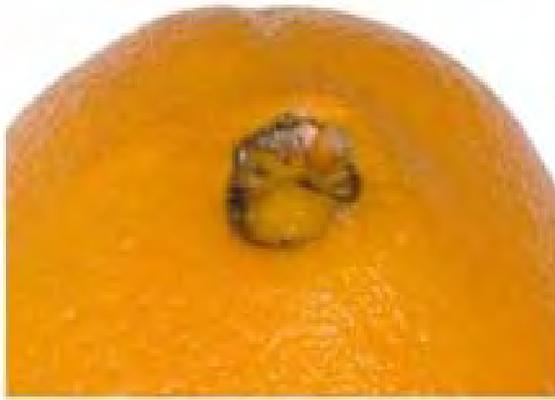
Free of bruising or healed
overcuts



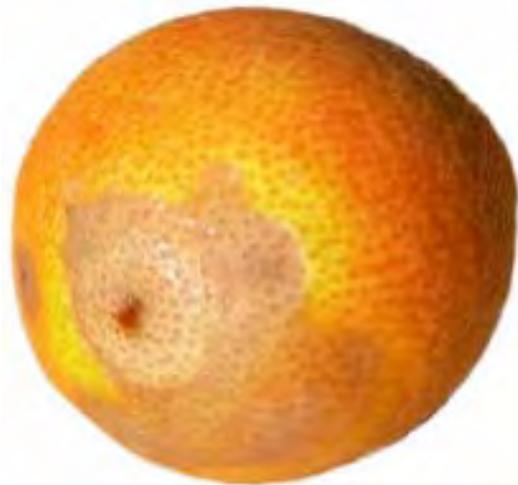
Sound, produce affected by rotting or deterioration such as to make it unfit for consumption is excluded



Clean, practically free of any visible foreign matter



Practicaly free from pest



Free from damage caused by
pest affecting the flesh

- Free of signs of shrivelling and dehydration
- Free of damage caused by low temperature or frost
- Free of abnormal external moisture
- Free of any foreign smell and/ or taste



Shrivelling



Frost damage

The development and condition of the citrus fruit must be such as to enable it:

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



Physiological maturity

vs.

Commercial maturity





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Pictures taken from
OECD
Citrus Fruits Standard Brochure

<http://www.oecd.org/dataoecd/44/33/43579800.pdf>

Presence of Foreign matter (copper/soiling) / Présence de matière étrangère (cuivre/terre)

Soiling / Terre



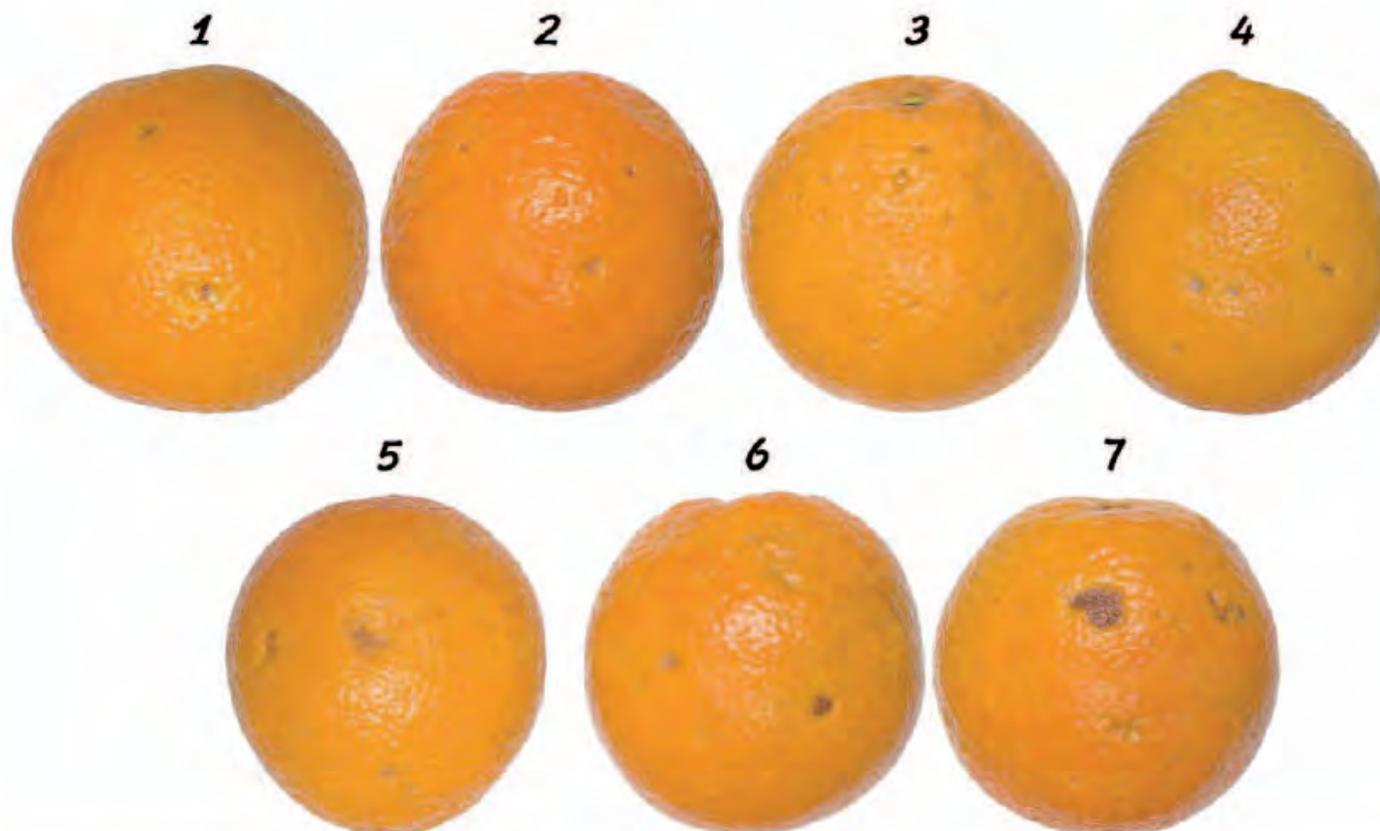
Copper / Cuivre



Oranges / Easy Peelers / Lemons -- Oranges/Petits agrumes/Citrons	Extra Class Cat. «Extra»	Class I Cat. I	Class II Cat. II	Out of Grade Non conforme	Notes
Presence of Foreign matter (copper/soiling) Présence de matière étrangère (cuivre/terre)		X		1 - 6	This illustration used for all product groups. Illustration utilisée pour tous les groupes de produits.

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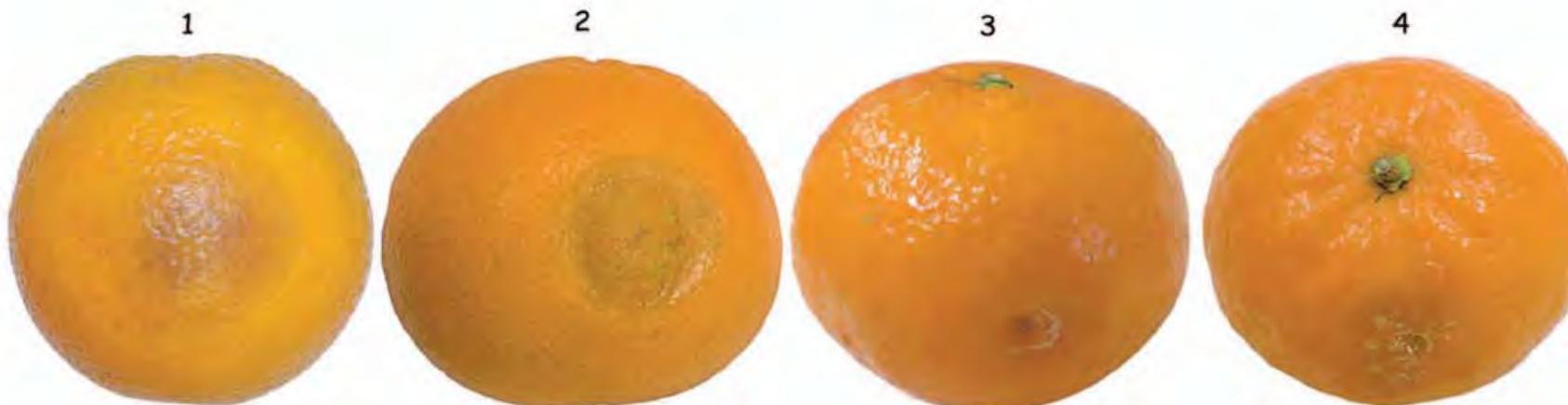
Pitting (Non-Superficial) / Pitting (non superficiel)



Oranges	Extra Class Cat. «Extra»	Class I Cat. I	Class II Cat. II	Out of Grade Non conforme	Notes
Pitting (Non-Superficial) Pitting (non superficiel)		x		1 - 7	This illustration used for both Oranges and Easy Peelers. Illustration utilisée pour les oranges et les petits agrumes.

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Brown rot / Pourriture brune



Oranges / Easy Peelers -- Oranges / Petits agrumes	Extra Class Cat. «Extra»	Class I Cat. I	Class II Cat. II	Out of Grade Non conforme	Notes
Brown rot Pourriture brune		X		1 - 4	<ul style="list-style-type: none"> •No tolerance •This illustration used for all product groups •Tolérance : aucune •Illustration utilisée pour tous les groupes de produits

Green Mould / Moisissure verte

1



2



Oranges / Easy Peelers -- Oranges / Petits agrumes	Extra Class Cat. «Extra»	Class I Cat. I	Class II Cat. II	Out of Grade Non conforme	Notes
Moulds Moisissures		X		1, 2	<ul style="list-style-type: none"> •No tolerance •This illustration used for all product groups •Tolérance : aucune •Illustration utilisée pour tous les groupes de produits

Canker (Xhantomonas) / Chancre (Xanthomonas)



Lemons Citrons	Extra Class Cat. «Extra»	Class I Cat. I	Class II Cat. II	Out of Grade Non conforme	Notes
Canker (Xhantomonas) Chancre (Xanthomonas)		x		1, 2, 3, 4, 5	

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Black pit / Black-pit des agrumes



Lemons Citrons	Extra Class Cat. «Extra»	Class I Cat. I	Class II Cat. II	Out of Grade Non conforme	Notes
Black pit Black-pit des agrumes		x		1, 2, 3, 4, 5, 6	



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B. Maturity requirements

- The citrus fruit must have reached an appropriate degree of development and ripeness, proper to the variety, the time of picking and growing area.

- Maturity of citrus fruit is defined by the following parameter specified for each species below:
 - minimum juice content
 - minimum soluble solids content
 - **minimum sugar/acid ratio**
 - Couloing

A reference method for calculating the juice content and the sugar/acid ratio is described in the Guidelines on Objective Test to Determine Quality of Fruit and Vegetables and Dry and Dried Produce (<http://www.oecd.org/tad/fv>)

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	<i>Minimum juice content (per cent)</i>	<i>Minimum sugar content (°Brix)</i>	<i>Minimum sugar/acid ratio</i>	<i>Colouring</i>
Lemons				
Lemons	20			Typical of the variety. Green colour is allowed.
Limes				
Persian lime	42			Yellow patches up to 30% of its surface
Mexican and Indian limes	40			Yellow patches up to 20% of its surface
Satsumas, clementines, other mandarin varieties and their hybrids				
Satsumas	33		6.5:1	Typical of the variety on at least 1/3 of the surface of the fruit
Clementines	40		7.0:1	
Other mandarins and hybrids	33		7.5:1	
Oranges				
Blood oranges	30		6.5:1	Typical of the variety. Fruit with light green colour < 1/5 of the total surface area is allowed.
Navels group	33		6.5:1	
Other varieties	35		6.5:1	
Mosambi, Sathgudi and Pacitan with more than one fifth green colour	33			
Other varieties with more than one fifth green colour	45			Oranges produced in areas with high temps and high humidity may have a green colour on > 1/5 of the surface.
Grapefruit and hybrids				
All varieties and hybrids	35			Typical of the variety. Fruit with a greenish colour (green in Oroblanco) is allowed.
Oroblanco	35	9		
Pummelos (Shaddock) and hybrids		8		Typical of the variety on at least 2/3 of the fruit

Colour

The degree of colouring shall be such that following normal development the citrus fruit reaches the colour typical of the variety at their destination point.



Grape fruit Star Ruby

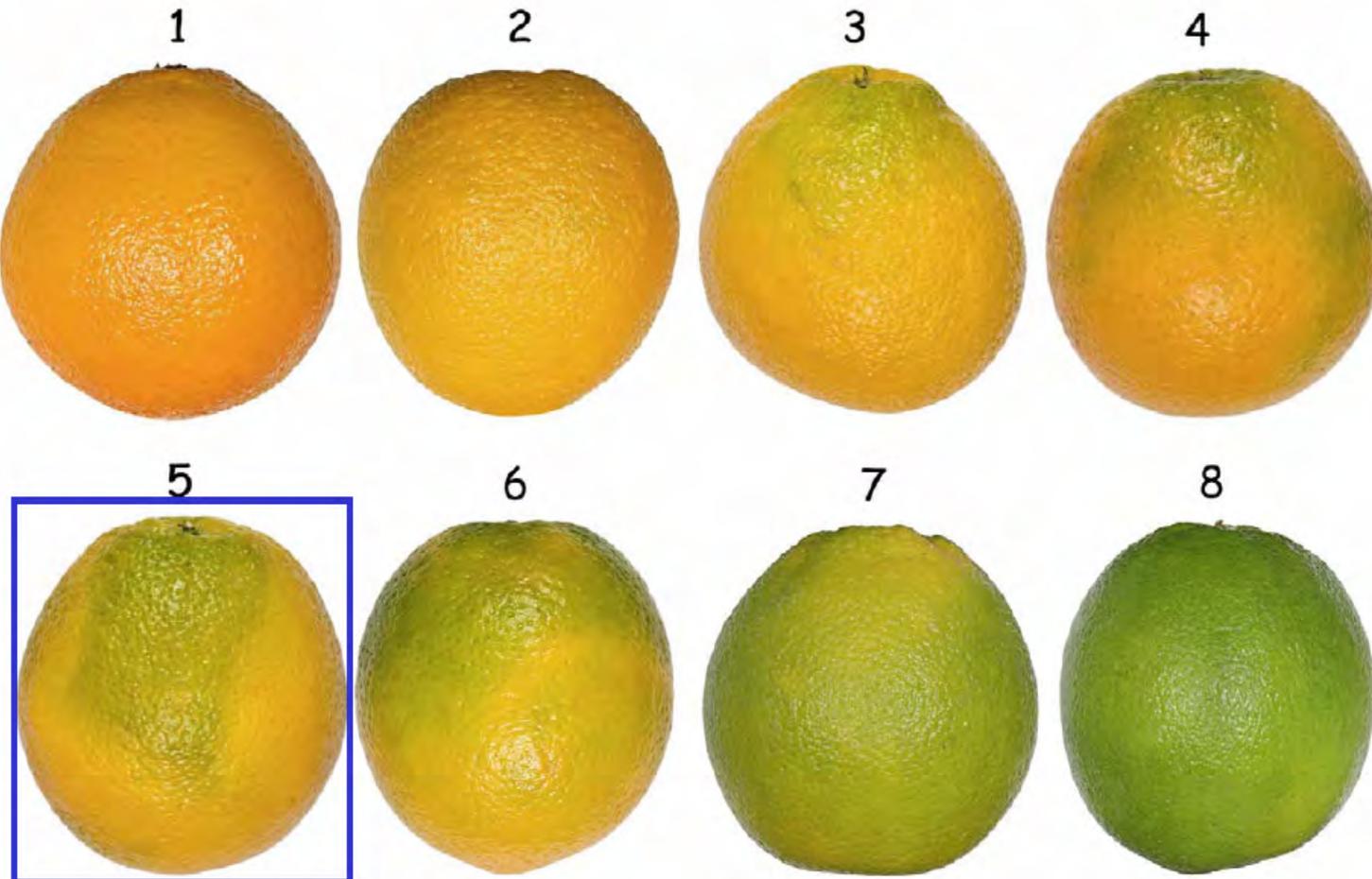


Pummelo Oroblanco

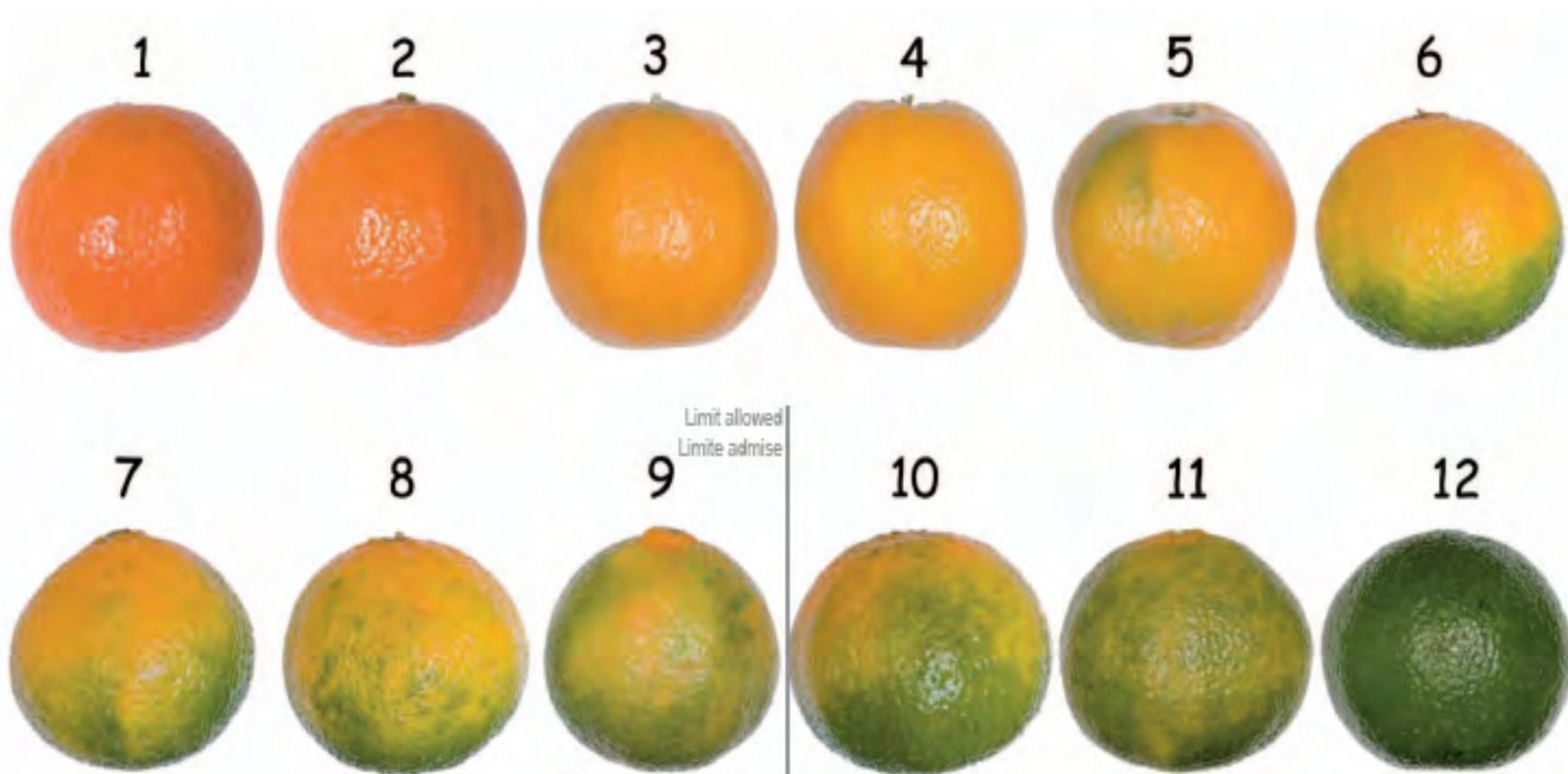


Pummelo Chandler

Oranges. Light green colour **not exceeding 1/5** of the fruit



Mandarins. Orange colour **at least 1/3** of surface of the fruit.



Lemons. Fruits with green colour (but **not dark green**) are allowed



- **Limes.** Fruits may show yellow patches up to 30% Persian limes and 20% Mexican limes

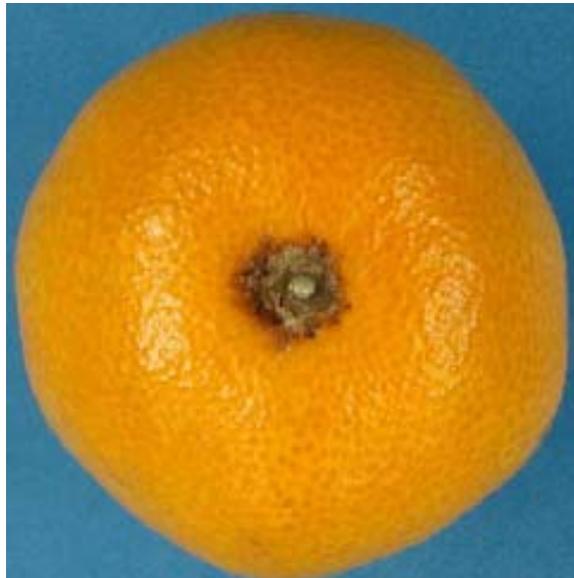


- **Grape fruit.** Fruit with a greenish colour are allowed.
- **Pummelos.** Colour must be **typical of variety** on at least 2/3 of the fruit.



Degreening

Citrus fruit meeting these maturity requirements may be “degreened”. This treatment is only permitted if the other natural organoleptic characteristics are not modified.



Degreening damages

QUALITY CLASSIFICATION			
Requeriments	Extra	I	II
<p>Minimum (intact, sound, free of damages...)</p> <p>Quality</p> <p>Appearance Shape Skin Appearance Development</p>	<p>Free from defects with the exception of a very slight superficial defects.</p>	<p>It must be characteristic of variety and commercial type.</p> <p>Slight defects are allowed provide do not affect the general appearance. (Healed due to mechanical cause, hail, rubbing, handling...)</p> <p>Partial detachment of peel or rind (for mandarin group)</p>	<p>Satisfies minimum requirements.</p> <p>It's allowed Skin defects occurring during the formation of the fruit, such as silver scurfs, russets or pest damage.</p> <p>Progressive skin defects provided they don't affect the flesh are allowed provided the citrus.</p> <p>Slight and partial detachment of the peel (or rind) for oranges and mandarin</p>
Maturity	Minimum juice content / Minimun sugar content / Minimum sugar/acid ratio / Couoloring		

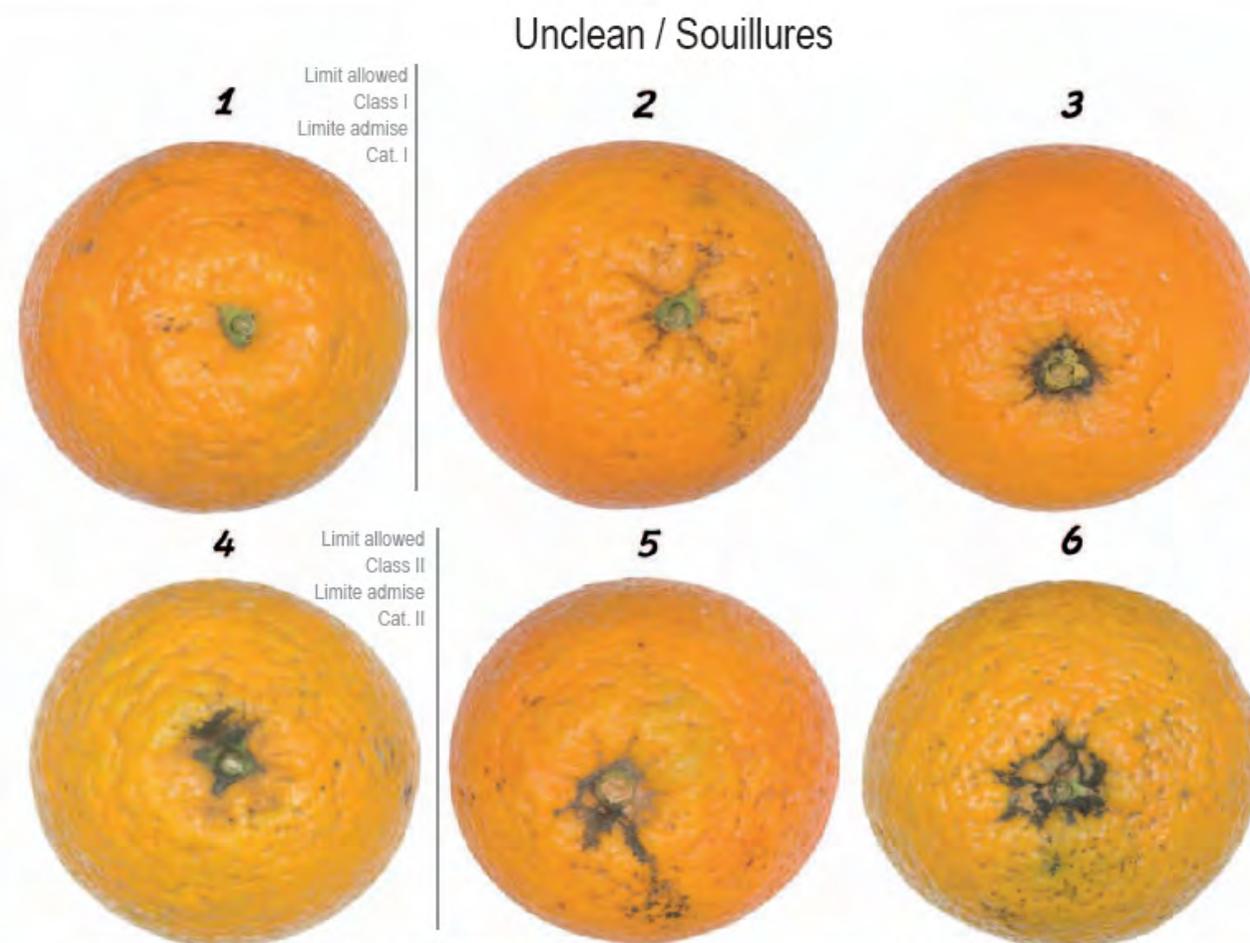


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Quality Class...
Where is the limit?

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Oranges	Extra Class Cat. «Extra»	Class I Cat. I	Class II Cat. II	Out of Grade Non conforme	Notes
Sooty Mould ("Unclean") Fumagine (« souillures »)	x	1	2, 3, 4	5, 6	

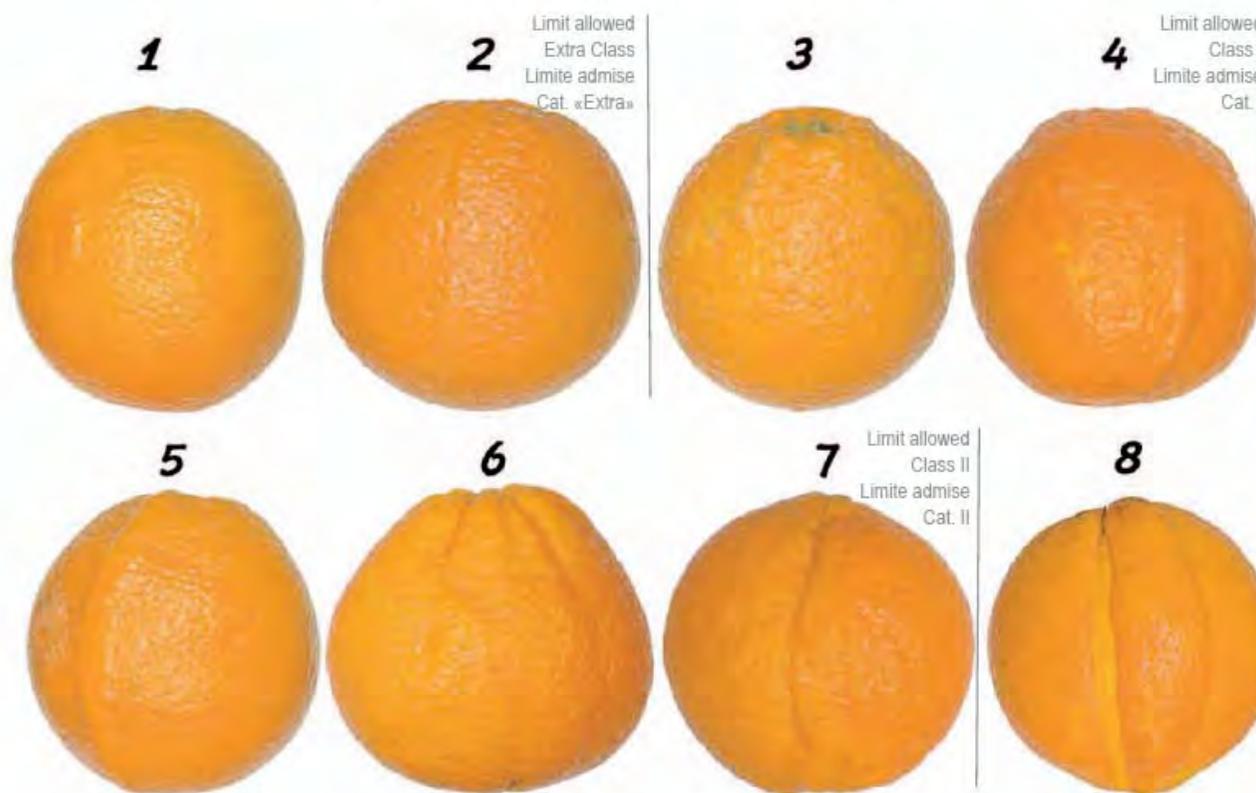


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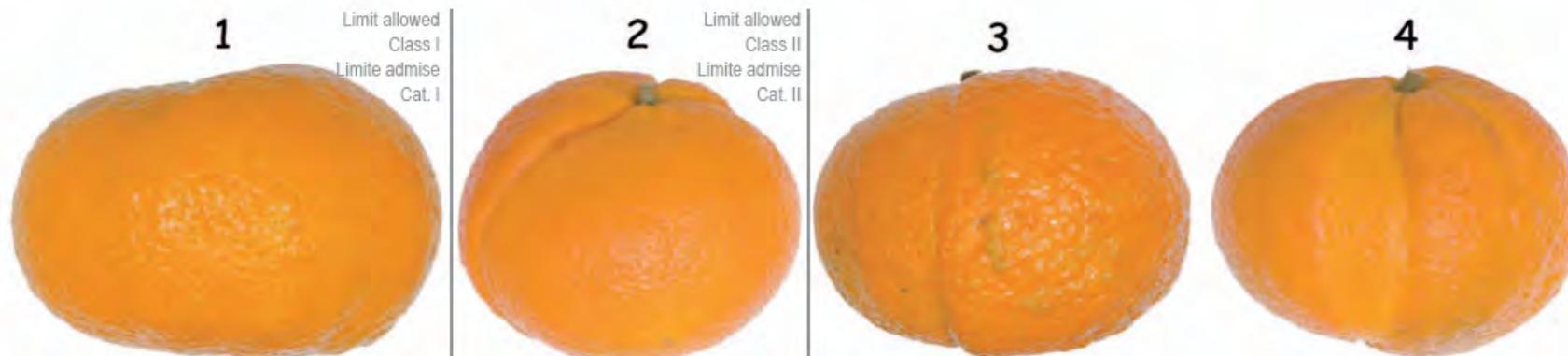
Shape

Defects in Shape / Défauts de forme



Oranges	Extra Class Cat. «Extra»	Class I Cat. I	Class II Cat. II	Out of Grade Non conforme	Notes
Defects in Shape Défauts de forme	1, 2	3, 4	5, 6, 7	8	

Defects in Shape / Défauts de forme



Easy Peelers Petits agrumes	Extra Class Cat. «Extra»	Class I Cat. I	Class II Cat. II	Out of Grade Non conforme	Notes
Defects in Shape Défauts de forme	X	1	2	3, 4	

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Defects in Shape / Défautes de forme



Lemons Citrons	Extra Class Cat. «Extra»	Class I Cat. I	Class II Cat. II	Out of Grade Non conforme	Notes
Defects in Shape Défautes de forme	x	1	2	3, 4, 5	

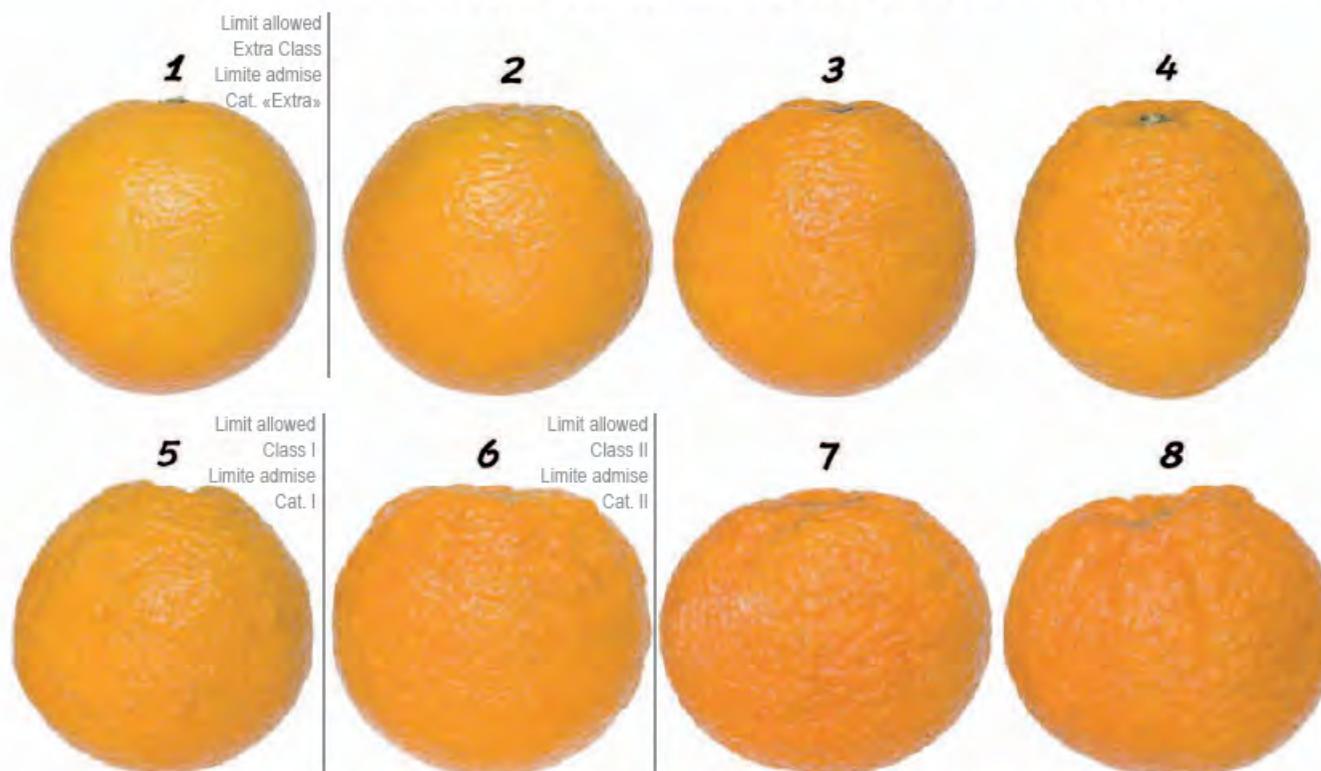


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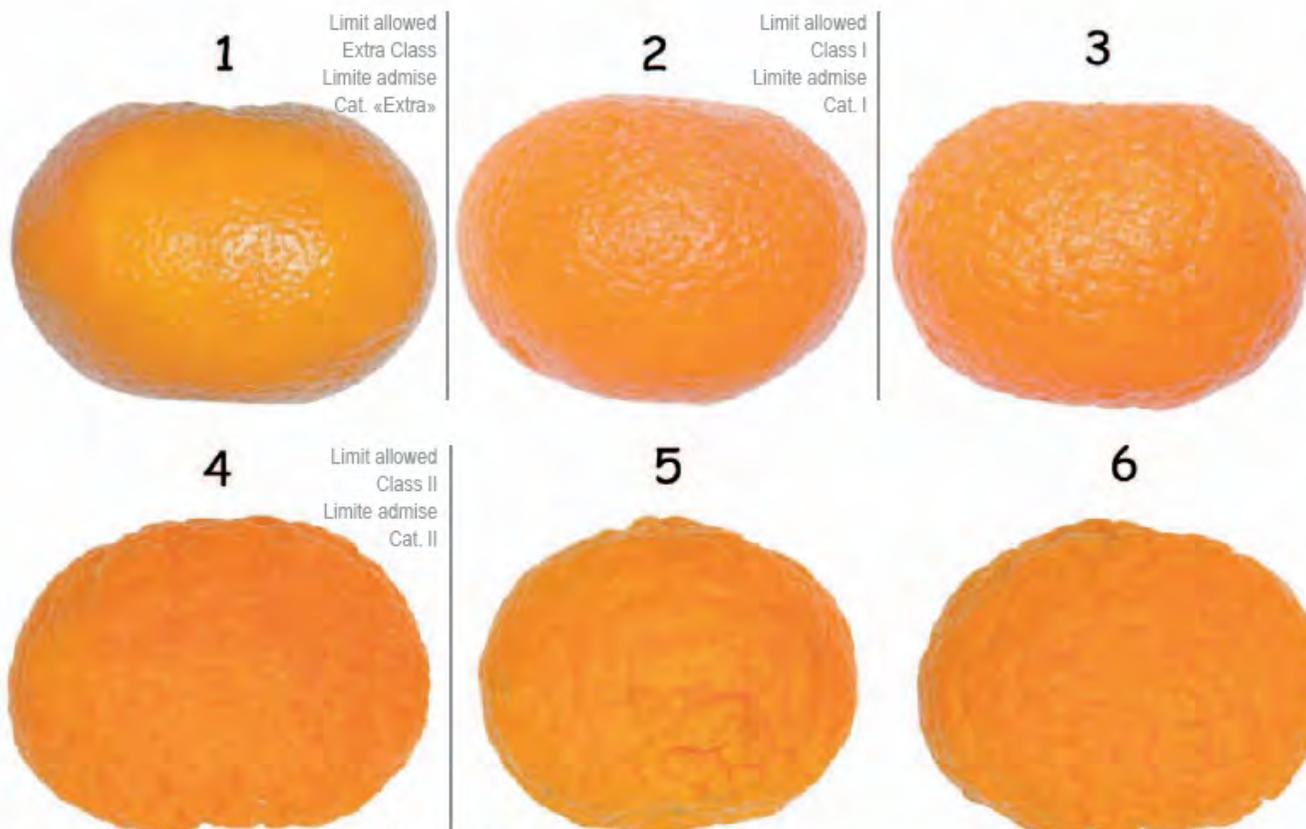
Skin

Skin texture-smooth/rough / Texture de l'écorce - lisse/rugueuse



Oranges	Extra Class Cat. «Extra»	Class I Cat. I	Class II Cat. II	Out of Grade Non conforme	Notes
Skin texture-smooth/rough Texture de l'écorce - lisse/rugueuse	1	2, 3, 4, 5	6	7, 8	Uniformity: only 3 adjacent fruit allowed within the same consignment. Homogénéité : limitation à 3 fruits adjacents dans un même colis.

Skin texture-smooth/rough / Texture de l'écorce - lisse/rugueuse



Easy Peelers Petits agrumes	Extra Class Cat. «Extra»	Class I Cat. I	Class II Cat. II	Out of Grade Non conforme	Notes
Skin texture-smooth/rough Texture de l'écorce - lisse/rugueuse	1	2	3, 4	5, 6	Uniformity: only 3 adjacent fruit allowed within the same consignment. Homogénéité : limitation à 3 fruits adjacents dans un même colis.

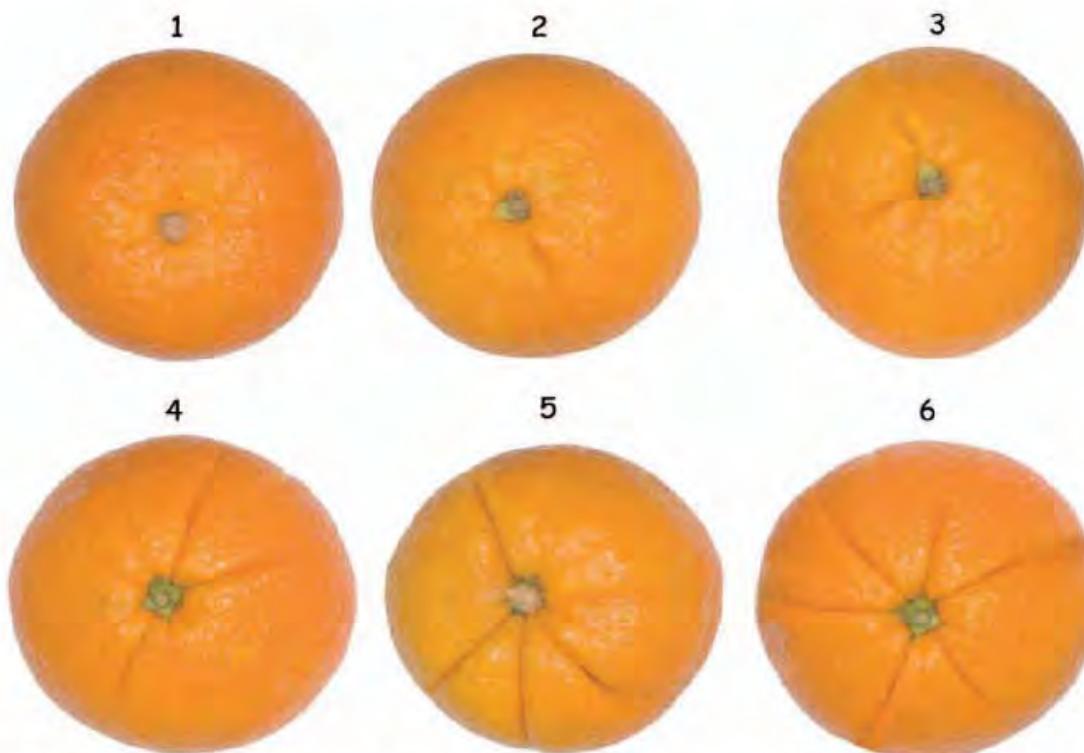
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Ribbing / Côtes



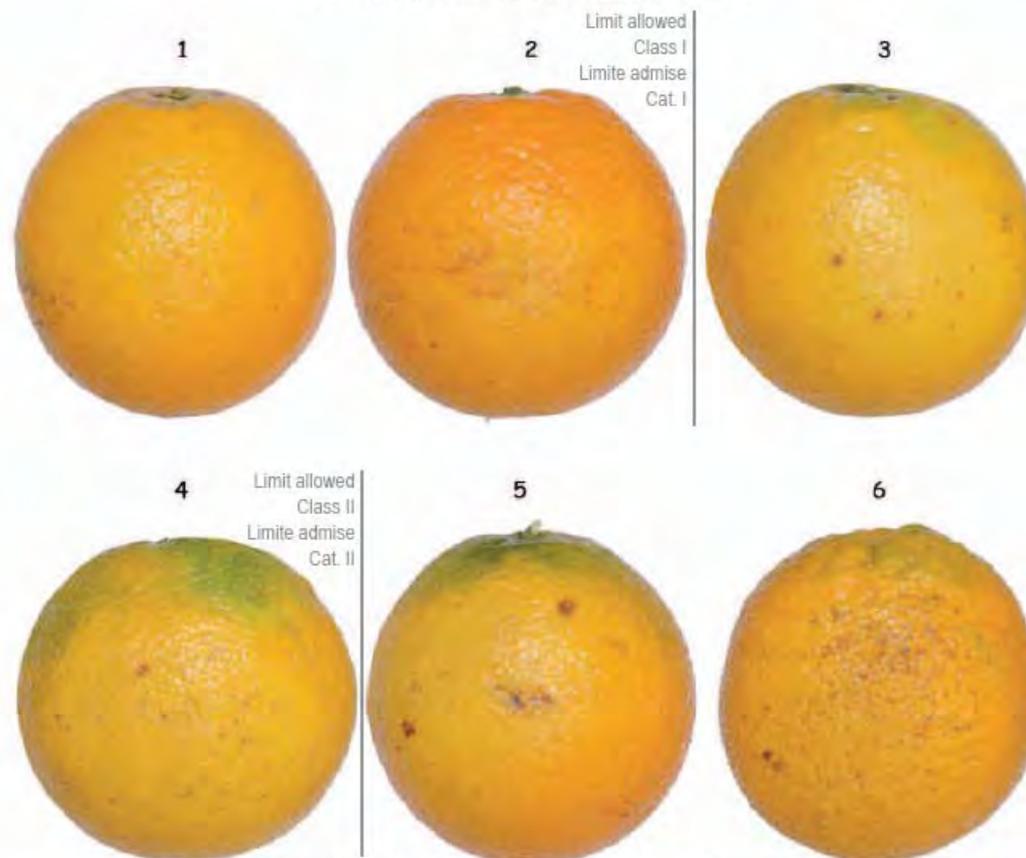
Easy Peelers Petits agrumes	Extra Class Cat. «Extra»	Class I Cat. I	Class II Cat. II	Out of Grade Non conforme	Notes
Ribbing Côtes		1, 2, 3, 4, 5, 6			Uniformity: only 3 adjacent fruit allowed within the same consignment. Homogénéité : limitation à 3 fruits adjacents dans un même colis.

Ribbed Navels / Ombilics à côtes



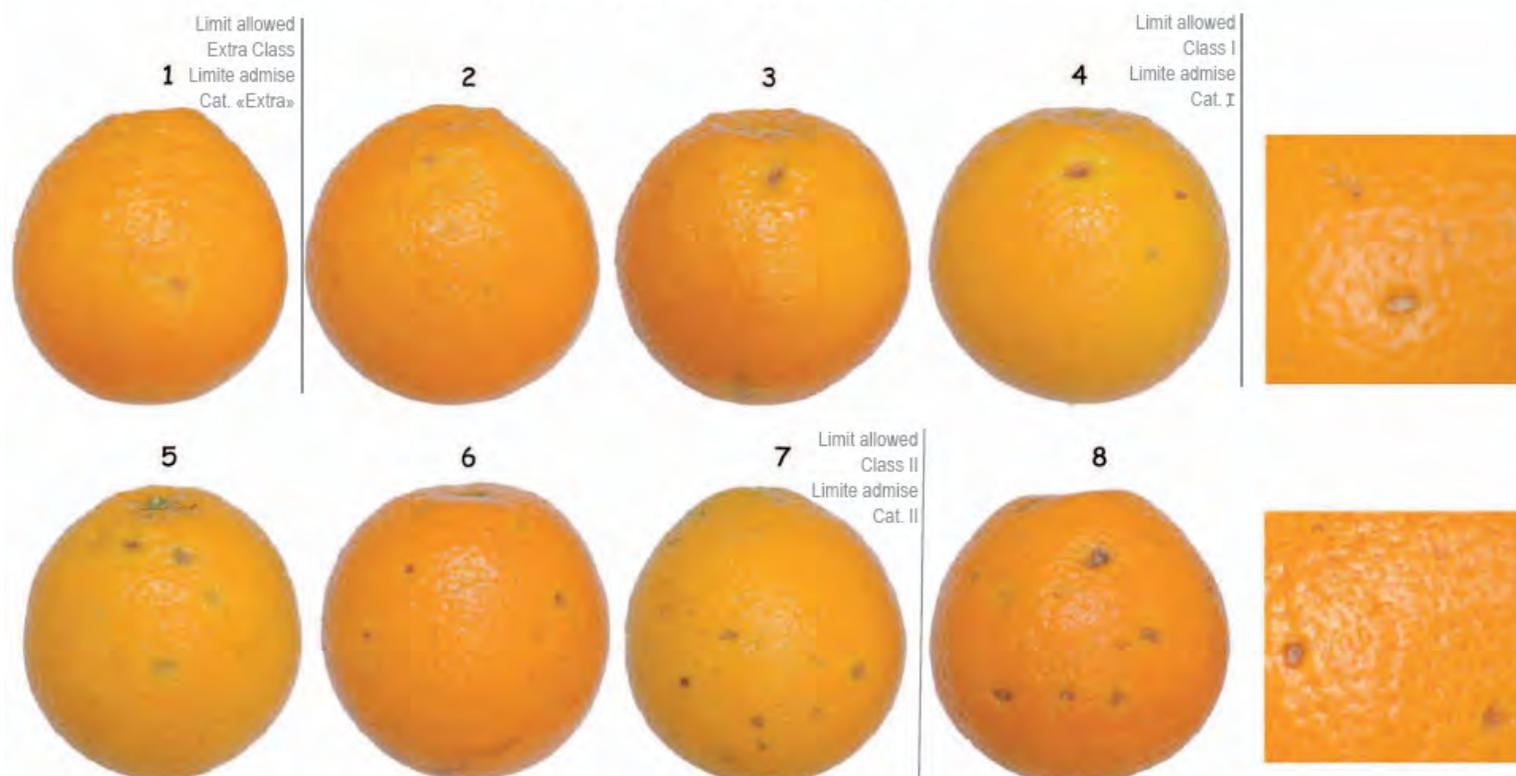
Oranges	Extra Class Cat. «Extra»	Class I Cat. I	Class II Cat. II	Out of Grade Non conforme	Notes
Ribbed Navels Ombilics à côtes	1, 2, 3, 4, 5, 6				Uniformity: only 3 adjacent fruit allowed within the same consignment. Homogénéité : limitation à 3 fruits adjacents dans un même colis.

Sunburn / Brûlures du soleil



Oranges	Extra Class Cat. «Extra»	Class I Cat. I	Class II Cat. II	Out of Grade Non conforme	Notes
Sunburn Brûlures du soleil	x	1, 2	3, 4	5, 6	

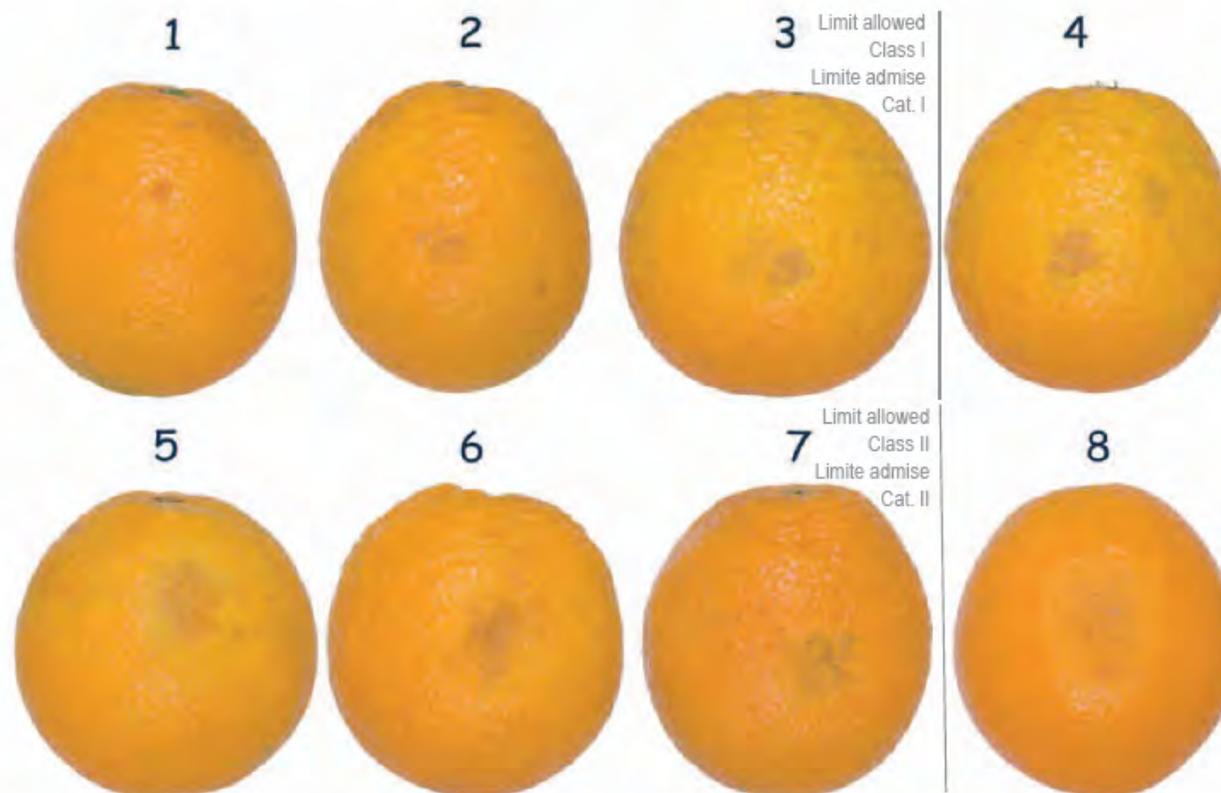
Hail damage / Marques de grêle



Oranges	Extra Class Cat. «Extra»	Class I Cat. I	Class II Cat. II	Out of Grade Non conforme	Notes
Hail damage Marques de grêle	1	2, 3, 4	5, 6, 7	8	<ul style="list-style-type: none"> •Superficial, flesh must not be affected •This illustration used for both Oranges and Easy Peelers •Superficiel ; la chair ne doit pas être touchée •Illustration utilisée pour les oranges et les petits agrumes

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Oil spotting (Oleocellosis) / Taches d'oléocellose



Oranges	Extra Class Cat. «Extra»	Class I Cat. I	Class II Cat. II	Out of Grade Non conforme	Notes
Oil spotting (Oleocellosis) Taches d'oléocellose	x	1, 2, 3	4, 5, 6, 7	8	Colour may change (light to dark) within a few days of packing. La couleur peut évoluer (de clair à foncé) dans les jours qui suivent le conditionnement.



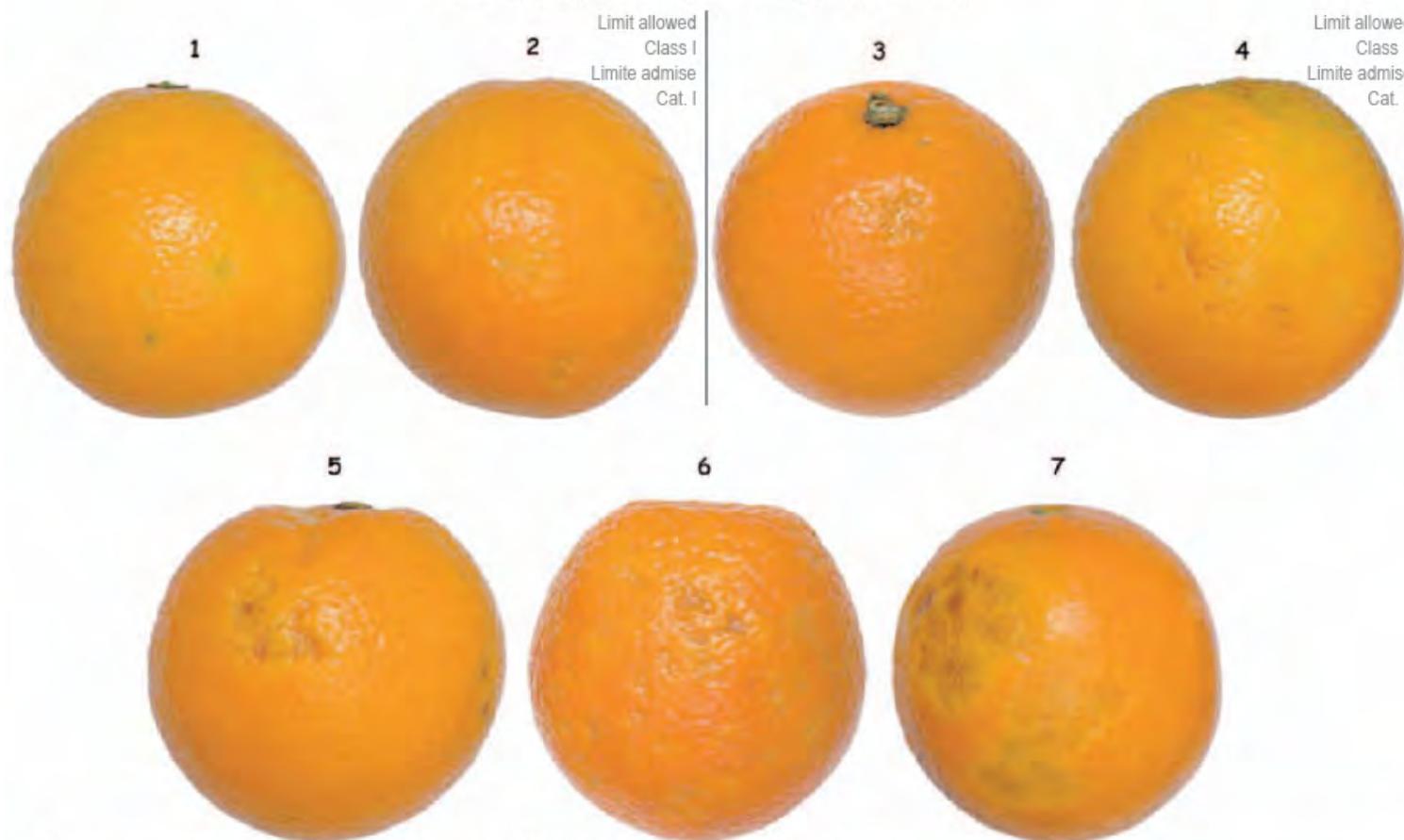
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Physiological

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Pitting (Superficial) / Pitting (superficiel)



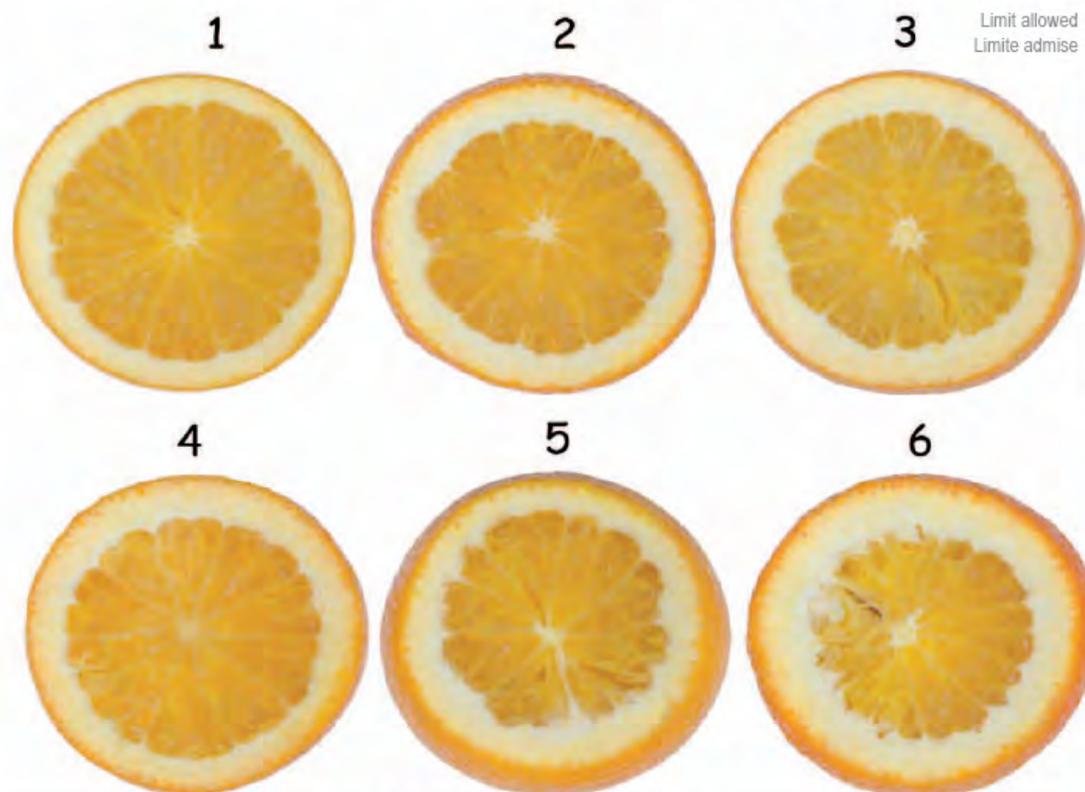
Limit allowed
Class I
Limite admise
Cat. I

Limit allowed
Class II
Limite admise
Cat. II

Oranges	Extra Class Cat. «Extra»	Class I Cat. I	Class II Cat. II	Out of Grade Non conforme	Notes
Pitting (Superficial) Pitting (superficiel)	x	1, 2	3, 4	5, 6, 7	This illustration used for both Oranges and Easy Peelers. Illustration utilisée pour les oranges et les petits agrumes.

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Internal frost damage / Dommages internes dus au gel



Oranges	Extra Class Cat. «Extra»	Class I Cat. I	Class II Cat. II	Out of Grade Non conforme	Notes
Internal frost damage Dommages internes dus au gel	X		1, 2, 3	4, 5, 6	

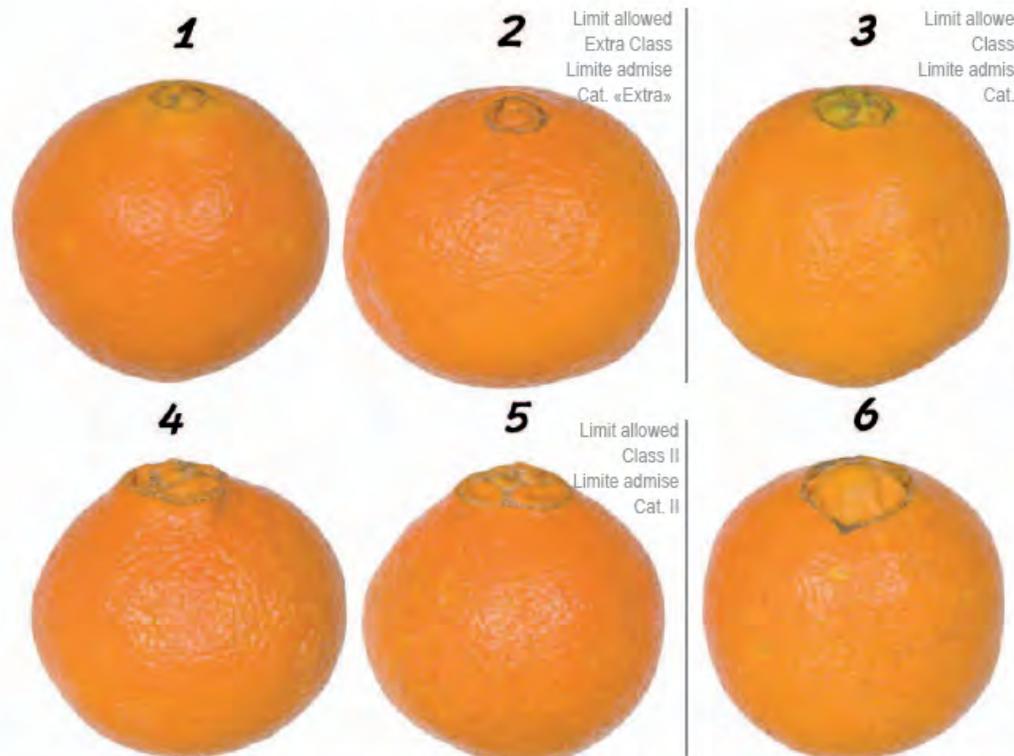


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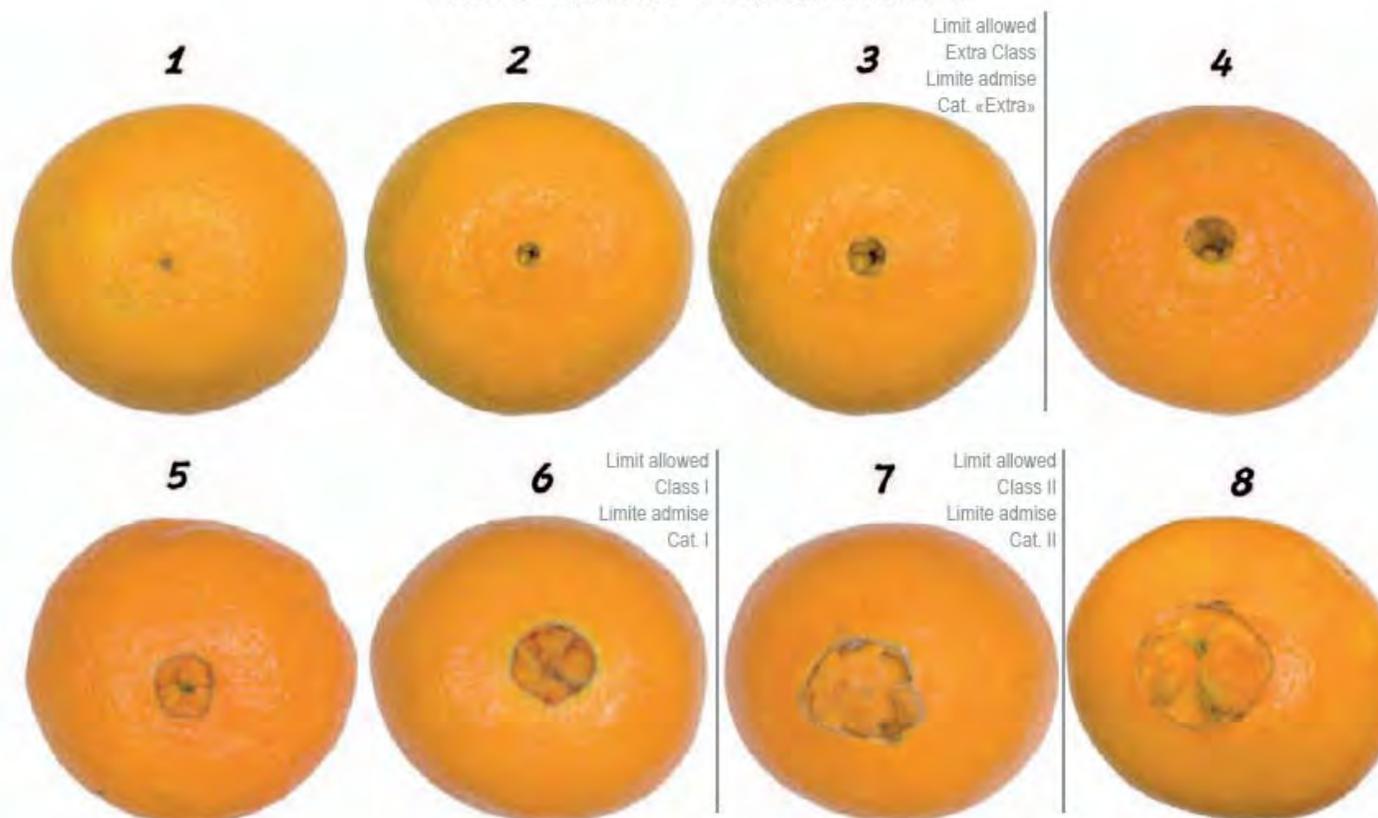
Development

Protruding Navels / Ombilics proéminents



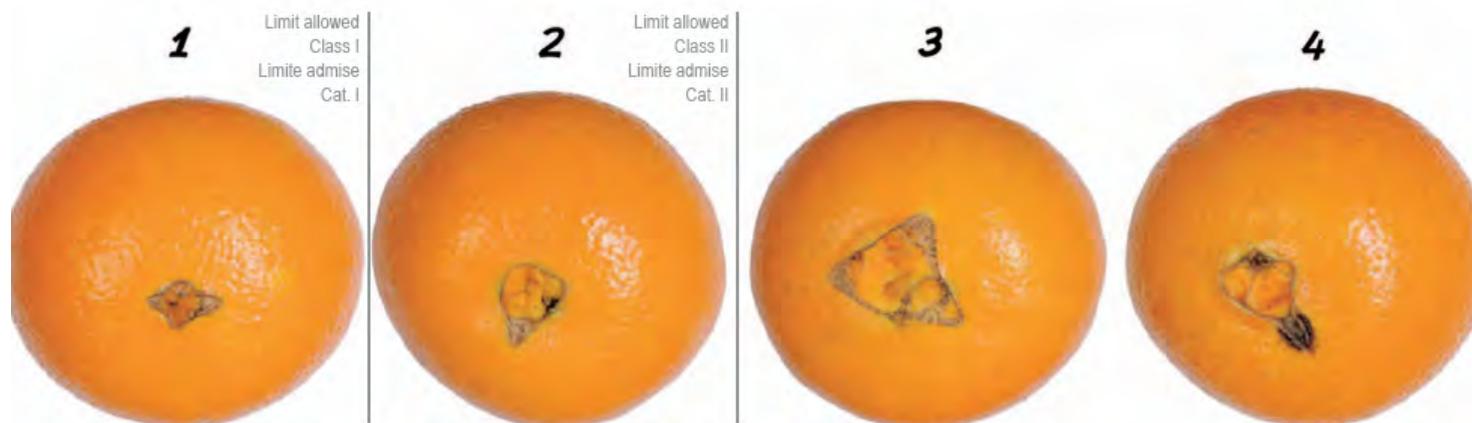
Oranges	Extra Class Cat. «Extra»	Class I Cat. I	Class II Cat. II	Out of Grade Non conforme	Notes
Protruding Navels Ombilics proéminents	1, 2	3	4, 5	6	

Internal Navels / Ombilics internes



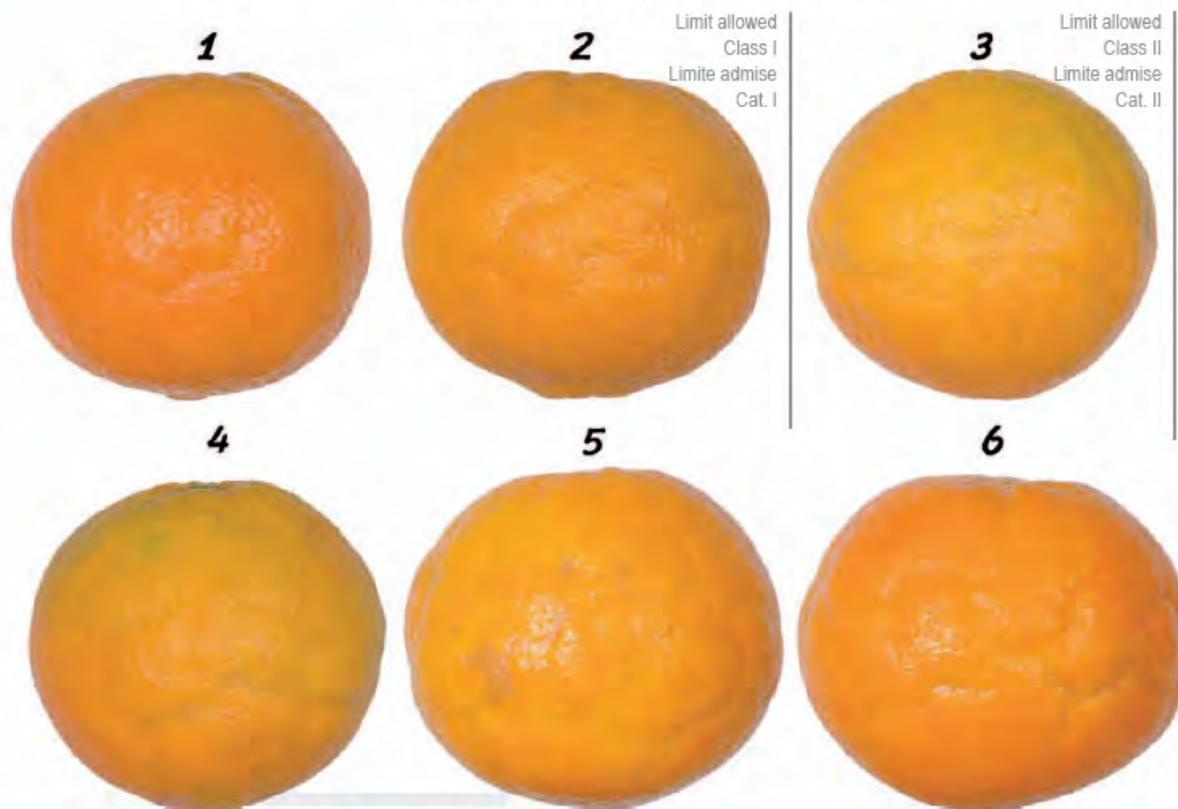
Oranges	Extra Class Cat. «Extra»	Class I Cat. I	Class II Cat. II	Out of Grade Non conforme	Notes
Internal Navels Ombilics internes	1, 2, 3	4, 5, 6	7	8	

Torn navels / Ombilics déchirés



Oranges	Extra Class Cat. «Extra»	Class I Cat. I	Class II Cat. II	Out of Grade Non conforme	Notes
Torn navels Ombilics déchirés	x	1	2	3, 4	This illustration used for both Oranges and Easy Peelers. Illustration utilisée pour les oranges et les petits agrumes.

Creasing / Aspect plissé



Oranges	Extra Class Cat. «Extra»	Class I Cat. I	Class II Cat. II	Out of Grade Non conforme	Notes
Creasing Aspect plissé	x	1, 2	3	4, 5, 6	<ul style="list-style-type: none"> •This may result in split peel during transport & handling •This illustration used for both Oranges and Easy Peelers •Peut provoquer la fissure de l'écorce en cours de transport ou de manutention •Illustration utilisée pour les oranges et les petits agrumes

Drying damage of the skin (Aging) / Altération de l'écorce due au séchage (sénescence)



Easy Peelers Petits agrumes	Extra Class Cat. «Extra»	Class I Cat. I	Class II Cat. II	Out of Grade Non conforme	Notes
Drying damage of the skin Altération de l'écorce due au séchage		x	1, 2, 3, 4	5	

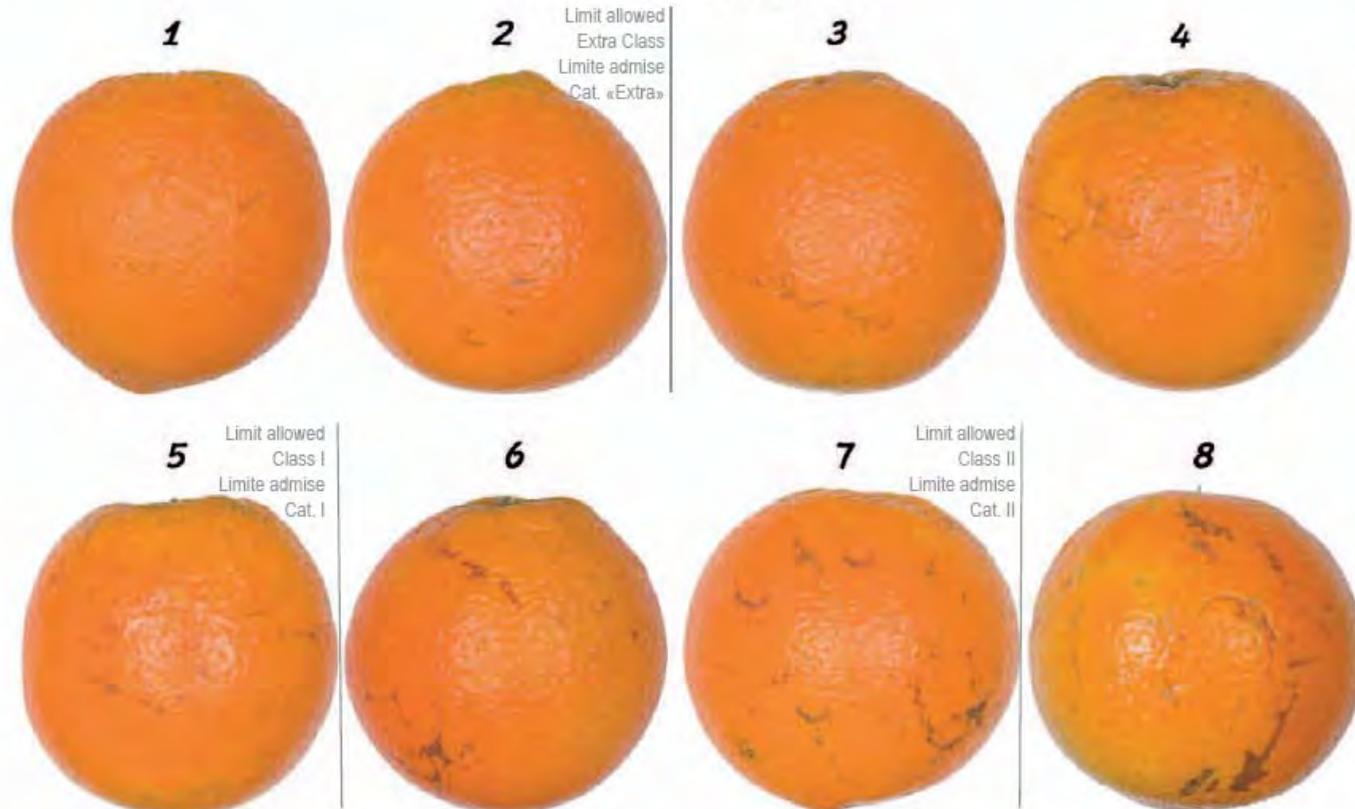


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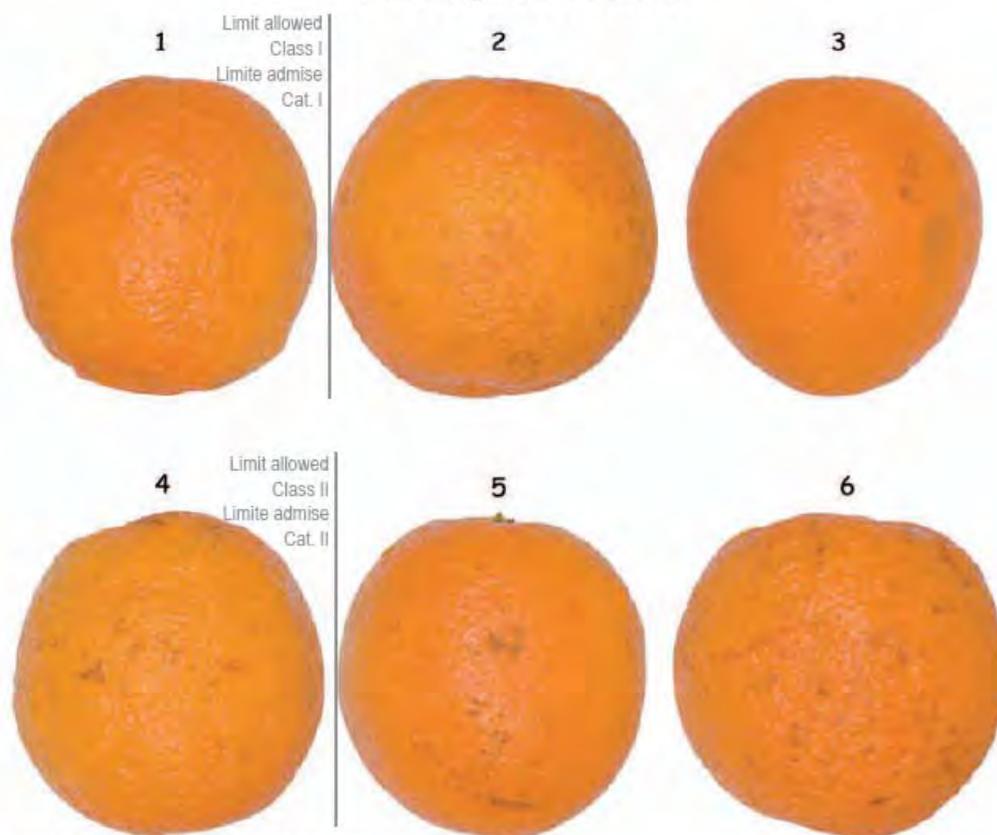
Handling

Scratching / Égratignures



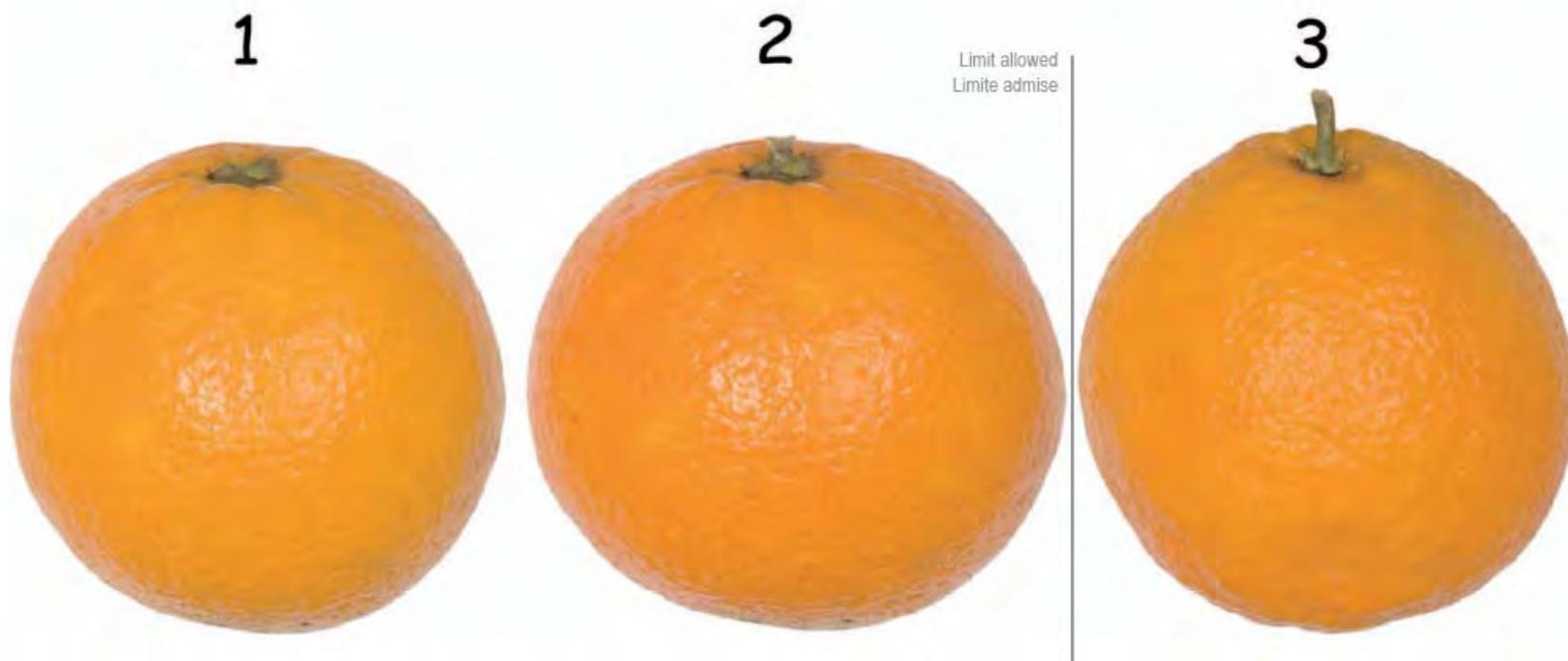
Oranges	Extra Class Cat. «Extra»	Class I Cat. I	Class II Cat. II	Out of Grade Non conforme	Notes
Scratching Égratignures	1, 2	3, 4, 5	6, 7	8	This illustration used for both Oranges and Easy Peelers. Illustration utilisée pour les oranges et les petits agrumes.

Rubbing / Frottement



Oranges	Extra Class Cat. «Extra»	Class I Cat. I	Class II Cat. II	Out of Grade Non conforme	Notes
Rubbing Frottement	x	1	2, 3, 4	5, 6	Colour may change (light to dark) within a few days of packing. La couleur peut évoluer (de clair à foncé) dans les jours qui suivent le conditionnement.

Stalks / Pédoncules



Oranges	Extra Class Cat. «Extra»	Class I Cat. I	Class II Cat. II	Out of Grade Non conforme	Notes
Stalks Pédoncules		1, 2		3	This illustration used for all product groups. Illustration utilisée pour tous les groupes de produits.

Torn stem-ends / Pédoncules arrachés



Oranges	Extra Class Cat. «Extra»	Class I Cat. I	Class II Cat. II	Out of Grade Non conforme	Notes
Torn stem-ends Pédoncules arrachés		1, 2		3, 4	If the fruit was not disinfected in a timely manner, this defect may lead to rotting. This illustration used for both Oranges and Easy Peelers. Faute d'une désinfection en temps opportun, peut entraîner le pourrissement du fruit. Illustration utilisée pour les oranges et les petits agrumes.

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Healed injuries / Blessures cicatrisées



Easy Peelers Petits agrumes	Extra Class Cat. «Extra»	Class I Cat. I	Class II Cat. II	Out of Grade Non conforme	Notes
Healed injuries Blessures cicatrisées	x	1	2, 3, 4	5, 6	<ul style="list-style-type: none"> • Superficial, flesh must not be affected • This illustration used for both Oranges and Easy Peelers • Superficiel ; la chair ne doit pas être touchée • Illustration utilisée pour les oranges et les petits agrumes

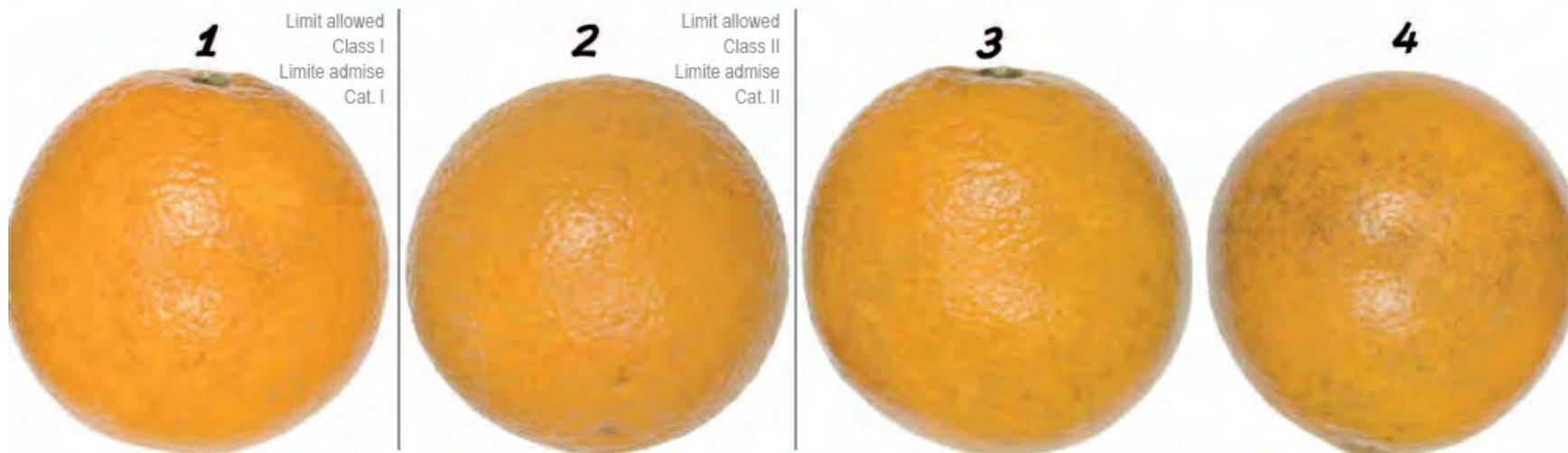


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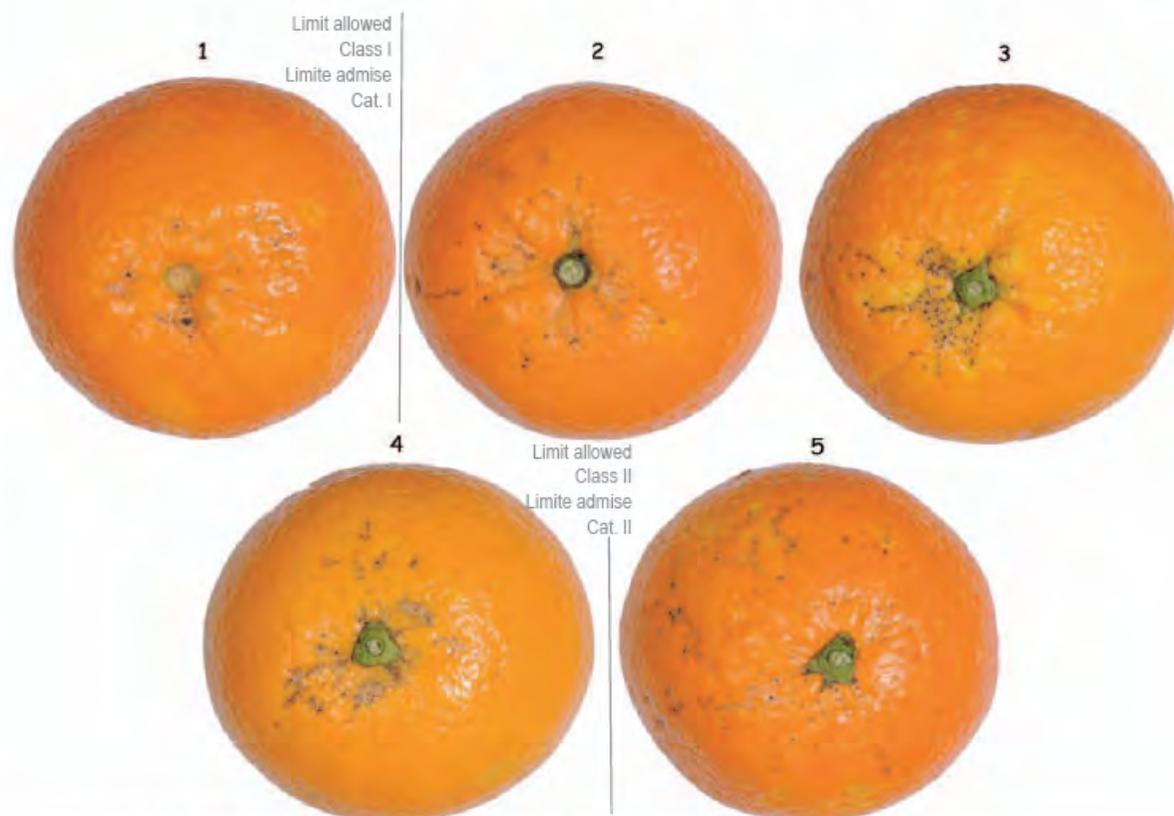
Defects caused by Pests and Diseases

Rust mite damage / Attaques de phytopte



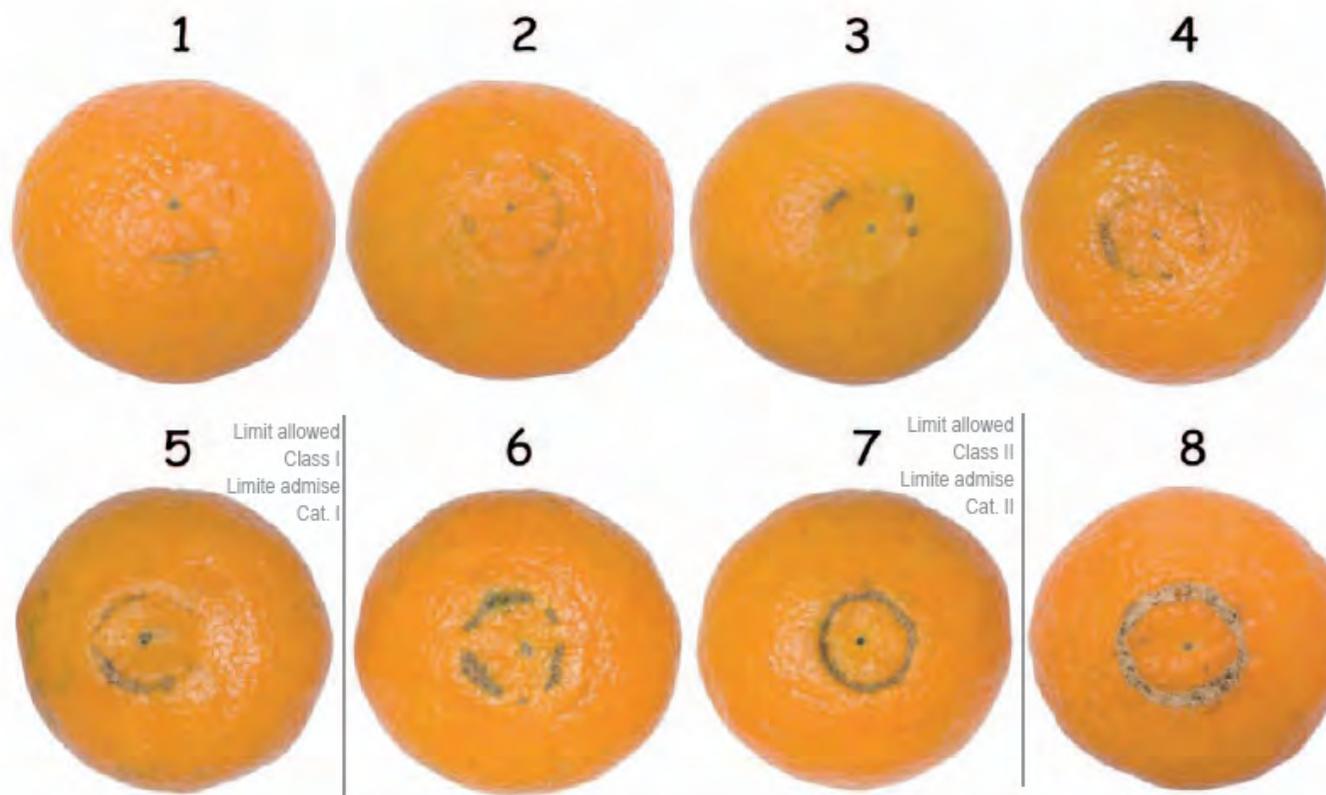
Oranges	Extra Class Cat. «Extra»	Class I Cat. I	Class II Cat. II	Out of Grade Non conforme	Notes
Rust mite damage Attaques de phytopte	x	1	2	3, 4	This illustration used for both Oranges and Easy Peelers. Illustration utilisée pour les oranges et les petits agrumes.

Thrips damage / Attaques de thrips



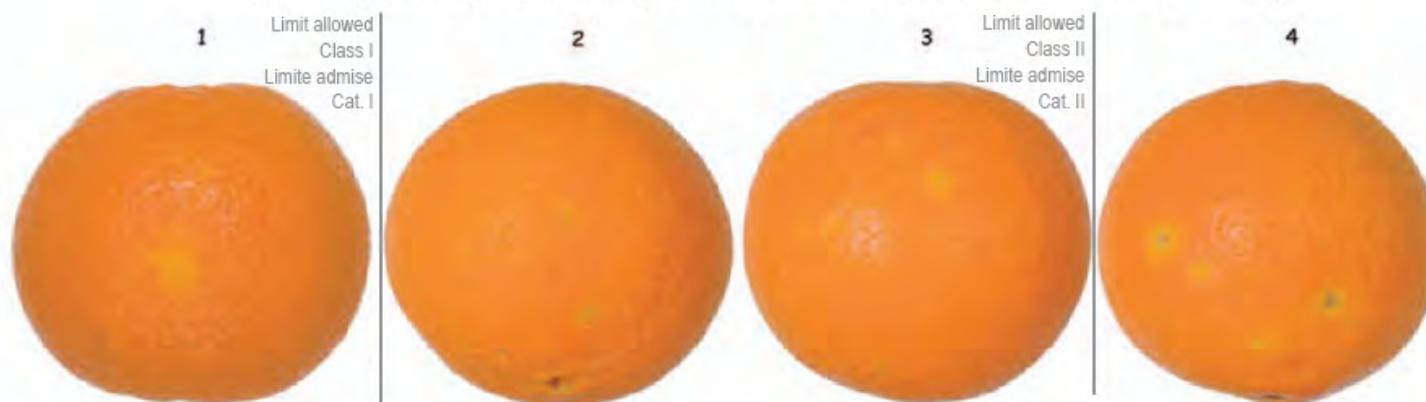
Oranges	Extra Class Cat. «Extra»	Class I Cat. I	Class II Cat. II	Out of Grade Non conforme	Notes
Thrips damage Attaques de thrips	x	1	2, 3, 4	5	This illustration used for both Oranges and Easy Peelers. Illustration utilisée pour les oranges et les petits agrumes.

Rings / Anneaux



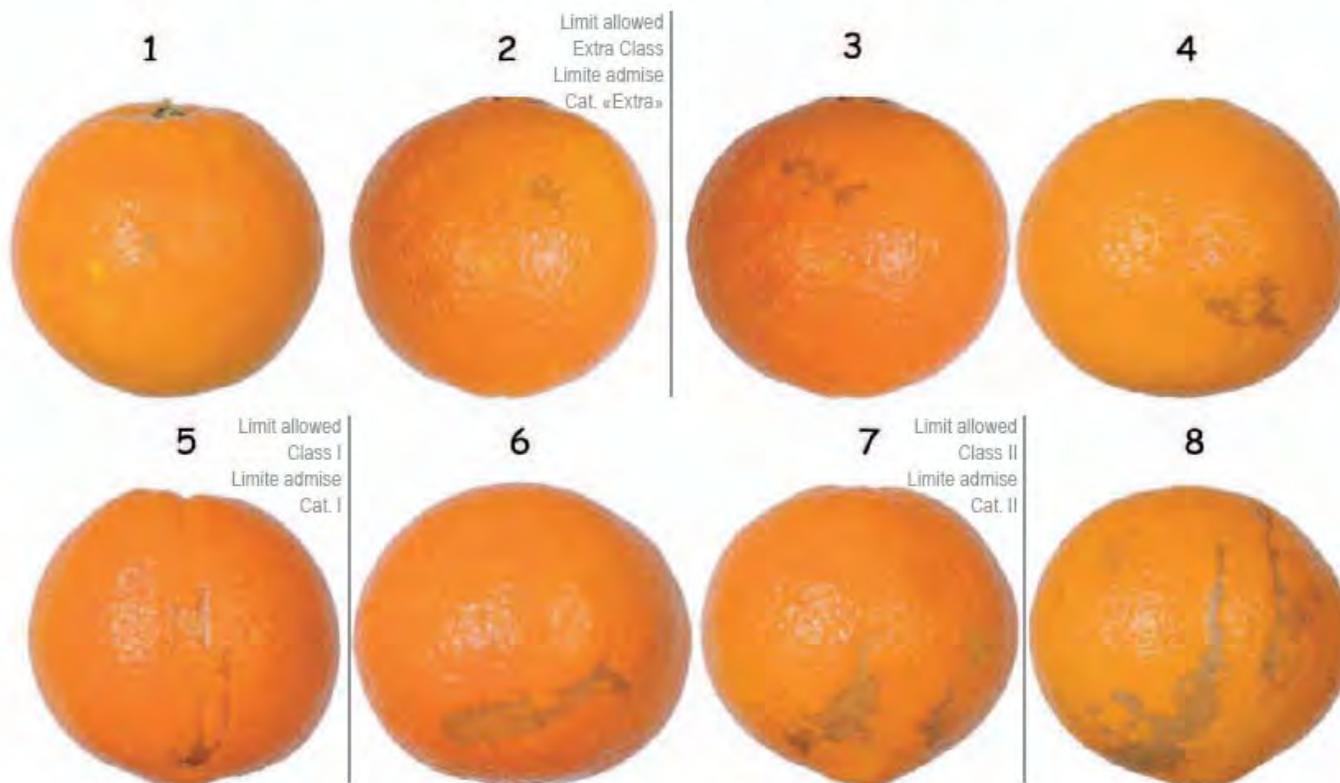
Easy Peelers Petits agrumes	Extra Class Cat. «Extra»	Class I Cat. I	Class II Cat. II	Out of Grade Non conforme	Notes
Rings Anneaux	x	1, 2, 3, 4, 5	6, 7	8	

Fruit fly damage (Infertile) / Attaques de mouche des fruits (stérile)



Oranges	Extra Class Cat. «Extra»	Class I Cat. I	Class II Cat. II	Out of Grade Non conforme	Notes
Fruit fly damage (Infertile) Attaques de mouche des fruits (stérile)	x	1	2, 3	4	<ul style="list-style-type: none"> Flesh must not be affected. This illustration used for both Oranges and Easy Peelers. La chair ne doit pas être touchée. Illustration utilisée pour les oranges et les petits agrumes.

Superficial Dark Coloured Silver Scurfs
Incrustations argentées superficielles de teinte foncée



Oranges	Extra Class Cat. «Extra»	Class I Cat. I	Class II Cat. II	Out of Grade Non conforme	Notes
Superficial Dark Coloured Silver Scurfs Incrustations argentées superficielles de teinte foncée	1, 2	3, 4, 5	6, 7	8	Can also be caused by pests. Peuvent aussi avoir une origine parasitaire.

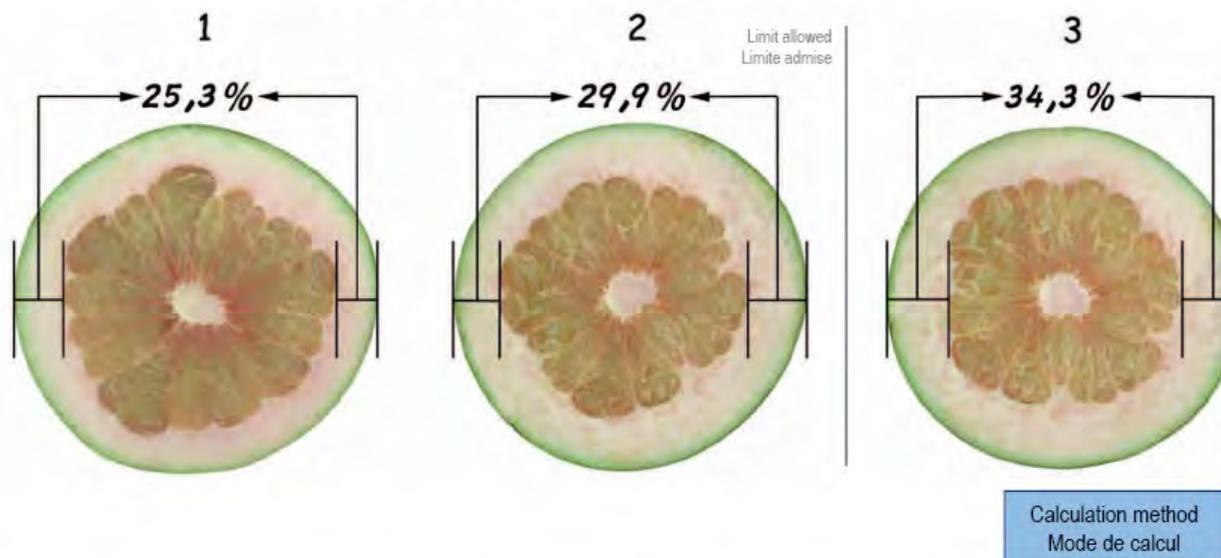


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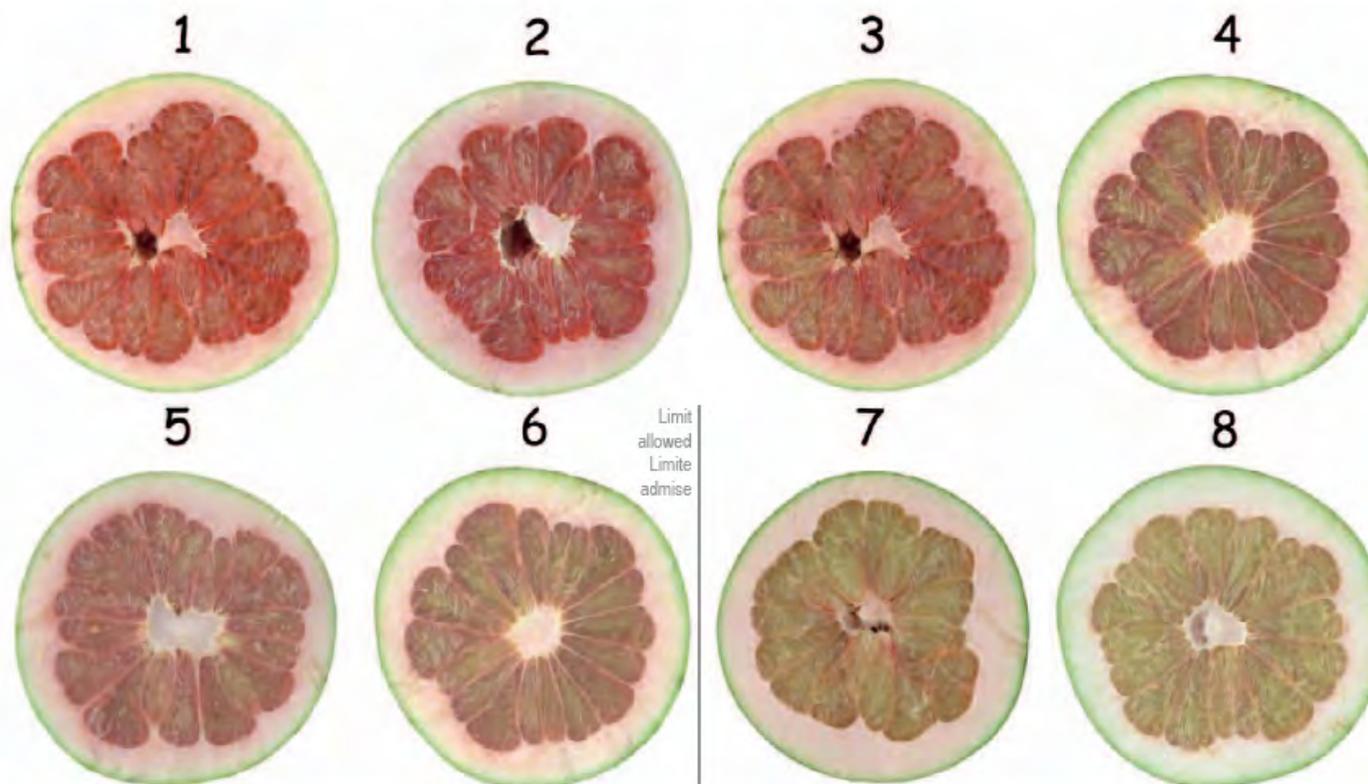
Others criteria of quality
(Not included in the standard)

Peel thickness / Épaisseur de l'épiderme



Pummelo – Chandler Pomelo - Chandler	Extra Class Cat. «Extra»	Class I Cat. I	Class II Cat. II	Out of Grade Non conforme	Notes
Peel thickness Épaisseur de l'épiderme		1, 2		3	<ul style="list-style-type: none"> •This parameter is NOT included in the Standard •Peel thickness greater than 30% of total fruit diameter should not be accepted •Ce paramètre NE figure PAS dans la norme •Une épaisseur de l'épiderme supérieure à 30 % du diamètre total du fruit n'est pas acceptable

Internal Colour / Couleur interne



Pummelo – Chandler Pomelo - Chandler	Extra Class Cat. «Extra»	Class I Cat. I	Class II Cat. II	Out of Grade Non conforme	Notes
Internal colour Couleur interne		1, 2, 3, 4, 5, 6		7, 8	<ul style="list-style-type: none"> •This parameter is NOT included in the Standard •10% of fruit #7 allowed in Class II •Ce paramètre NE figure PAS dans la norme •Tolérance de 10 % pour le fruit 7 dans la cat. II

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Pips-Seeds / Pépins



Pummelo - Chander / Goliath Pomelo - Chandler / Goliath	Extra Class Cat. «Extra»	Class I Cat. I	Class II Cat. II	Out of Grade Non conforme	Notes
Pips-Seeds Pépins					<ul style="list-style-type: none"> •This parameter is NOT included in the Standard •Too many pips/seeds affects the eating quality •Ce paramètre NE figure PAS dans la norme •Un nombre trop élevé de pépins affecte la qualité gustative

III. Provisions concerning sizing.

Size is determined by the maximum diameter of the equatorial section of the fruit or by count.

A. Minimum size.



Fruit	Diameter (mm)
Lemons	45
Persian limes	42
Mexican and Indian limes	25
Satsumas, other mandarin varieties and hybrids	45
Clementines	35
Oranges	53
Grapefruit and hybrids	70
Pummelos and hybrids	100

B. Uniformity.

To ensure uniformity in size, the range in size between produce in the same package shall not exceed:

Smallest fruit diameter	Range
< 60 mm	10 mm
≥ 60 mm but < 80 mm	15 mm
≥ 80 mm but < 110 mm	20 mm
≥ 110 mm	No limit

B. Uniformity options. (size codes)

Oranges	
<i>Size code</i>	<i>Diameter (mm)</i>
0	92 - 110
1	87 - 100
2	84 - 96
3	81 - 92
4	77 - 88
5	73 - 84
6	70 - 80
7	67 - 76
8	64 - 73
9	62 - 70
10	60 - 68
11	58 - 66
12	56 - 63
13	53 - 60

Grapefruit and hybrids	
<i>Size code</i>	<i>Diameter (mm)</i>
0	>139
1	109 - 139
2	100 - 119
3	93 - 110
4	88 - 102
5	84 - 97
6	81 - 93
7	77 - 89
8	73 - 85
9	70 - 80

Oranges	
Size code	Diameter (mm)
0	92 - 110
1	87 - 100
2	84 - 96
3	81 - 92
4	77 - 88
5	73 - 84
6	70 - 80
7	67 - 76
8	64 - 73
9	62 - 70
10	60 - 68
11	58 - 66
12	56 - 63
13	53 - 60

B. Uniformity option (b) Size Codes

Uniformity in size is achieved by the mentioned size scales, unless otherwise stated as follows:

For fruit in **bulk bin** and fruit in sales packages of a maximum net weight of 5 kg, the maximum difference must not exceed the range obtained by **grouping three consecutive sizes** in the size scale.

TOLERANCES

	Extra	Class I	Class II
Quality	<p>5% Not satisfying requirements but meeting those of Class I</p>	<p>10% Not satisfying requirements but meeting those of Class II</p>	<p>10% Not satisfying minimum minimum requirements</p>
	<p>< 0.5% Satisfying requirements Class II</p>	<p>< 1 % Unsatisfying requirements Class II nor minimum requirements or decay</p>	<p>< 2 % Produce affected by decay</p>

A. Size tolerances

- 10% of fruit corresponding to the size immediately below and/or above that (or those, in the case of the combination of three sizes) mentioned on the package is allowed.
- This tolerance of 10% does not apply below this minima

<i>Fruit</i>	<i>Diameter (mm)</i>
Lemons	43
Persian limes	40
Mexican and Indian limes	Not applicable
Satsumas, other mandarin varieties and hybrids	43
Clementines	34
Oranges	50
Grapefruit and hybrids	67
Pummelos and hybrids	98

V. Provisions concerning presentation

A. Uniformity

- The contents of each package must be uniform and contain only citrus fruit of the same origin, variety or commercial type, quality and size, and appreciably of the same degree or ripeness and development.
- In addition, for Extra Class, uniformity in colouring is required.
- **Mixtures** of citrus fruit of distinctly different species **may be packed together** in sales package, provided they are uniform in quality
- The visible package must be representative of the entire content



Non uniform presentation



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B. Packaging

The citrus fruit must be packed to protect the produce properly.

The materials used inside the package must be clean and of a quality such as to avoid any external or internal damage.

The use of paper of stamp bearing trade specification is allowed, provided the **printing or labelling has been done with non-toxic ink or glue.**

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

If the fruit is wrapped, thin, dry, new and **odourless** paper must be used

Packages must be free of all foreign matter. However a presentation where a short twig with some green leaves adheres to the fruit is allowed.





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VI. Provision concerning Marking

Identification.

Packer/or dispatcher/shipper: Name and physical address or a code mark

officially recognized by the national authority.

Nature of produce.

- Common name of the species if the content are not visible from outside.
- “Mixture of fruits” in case of mixtures
- Name of variety for oranges
- Mandarin groups: “Satsumas”, “Clementines”(may be followed by seedless/with seeds) , other hybrids (name of variety)
- Grapefruit and hybrids “Pink” or “Red”
- Pummelos and hybrids “Pink or red”

VI Provision concerning marking

- Each Packaged must bear the following particular, in letters grouped on the same side, legibly and indelibly marked, and visible from outside
- Identification
- Nature of produce
- Origin of produce
- Commercial specifications
- Official control mark (optional)





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C. Origin of produce

- Country of origin.
- In case of mixtures the indication of each country of origin shall appear next to the name of species concerned.

D. Commercial specifications

- Class
- Size express as:
 - i. Minimum and maximum size (in mm) or
 - ii. Size code(s)
 - iii. Count
- Post-harvest treatment (based on legislation of the importing country)

E. Official control mark (optional)



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Thank you for your attention



Dubrovnik, october 2011