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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS
GENEVA

DRAFT

CITRUS L. – Group 2

ORANGES

GUIDELINES
FOR THE CONDUCT OF TESTS
FOR DISTINCTNESS, UNIFORMITY AND STABILITY

Alternative Names:

[*See the list of alternative names and corresponding subgroups on page 2*]

ASSOCIATED DOCUMENTS

These guidelines should be read in conjunction with document TG/1/3, “General Introduction to the Examination of Distinctness, Uniformity and Stability and the Development of Harmonized Descriptions of New Varieties of Plants” (hereinafter referred to as the “General Introduction”) and its associated “TGP” documents.

Other associated documents:

CITRUS L. – GROUP 1: TG/MANDA*
CITRUS L. – GROUP 3: TG/LEM-LIM*
CITRUS L. – GROUP 4: TG/GRA-PUM*
CITRUS L. – GROUP 5: TG/PONCI*

* Final relevant TG’s reference to be inserted in due time.

GROUP 2 – ALTERNATIVE NAMES AND CORRESPONDING SUBGROUPS**

<i>Latin</i>	<i>Subgroup</i>	<i>English</i>	<i>French</i>	<i>German</i>	<i>Spanish</i>
<i>Citrus aurantium</i> L.	SOR	Sour Orange	Bigaradier, Oranger amer	Sauerorange, Sevilla Orange	Naranjo agrio, Naranjo amargo
<i>Citrus aurea</i> hort. ex Tanaka	SWO				
<i>Citrus canaliculata</i> hort. ex Yu. Tan	SOR				
<i>Citrus funadoko</i> hort. ex Yu. Tanaka	SWO				
<i>Citrus iriomotensis</i> hort. ex Tanaka	HOR				
<i>Citrus iyo</i> hort. ex Tanaka	SWO				
<i>Citrus luteoturgida</i> hort. ex Tanaka	SWO				
<i>Citrus maderaspatana</i> hort. ex Tan.	SOR				
<i>Citrus myrtifolia</i> Raf.	SOR				
<i>Citrus neoaurantium</i> Tanaka	SOR				
<i>Citrus oblonga</i> hort. ex Yu. Tanaka	SWO				
<i>Citrus papillaris</i> Blanco	HOR				
<i>Citrus pseudopapillaris</i> Tanaka	HOR				
<i>Citrus rokugatsu</i> hort. ex Yu. Tanaka	SOR				
<i>Citrus shunkokan</i> hort. ex Tanaka	SWO				
<i>Citrus sinensis</i> (L.) Osbeck	SWO	Sweet Orange	Oranger doux	Apfelsine, Süsse Orange	Naranjo dulce
<i>Citrus sinograndis</i> hort. ex Yu. Tanaka	SWO				
<i>Citrus taiwanica</i> Tanaka & Y. Shimada	HOR				
<i>Citrus tamurana</i> hort. ex Tanaka	SWO				
<i>Citrus tankan</i> Hayata	SWO				
<i>Citrus ujukitsu</i> Tanaka	SWO				
<i>Citrus yanbaruensis</i> hort. ex Tanaka	SOR				

** These names were correct at the time of the introduction of these Test Guidelines but may be revised or updated. [Readers are advised to consult the UPOV Code, which can be found on the UPOV Web Site (www.upov.int), for the latest information.]

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1. Subject of these Guidelines

1.1 The following Test Guidelines have been developed from the standard Citrus Test Guidelines template. In particular, the Table of Characteristics has been selected from the overall set of citrus characteristics presented in the Annex.

1.2 These Test Guidelines apply to all varieties of the following group of the genus *Citrus* L. (Rutaceae), and their hybrids:

Group 2. ORANGES AND THEIR HYBRIDS

See page 2 for the list of species and their subgroups.

1.3 In the case of hybrids between species within the genus *Citrus* L., the Test Guidelines to be used should be those for which the overall appearance of fruit is most suited. However, if the variety cannot be clearly distinguished from all varieties covered by other Test Guidelines, those other Test Guidelines should also be used to examine the variety.

1.4 In the case of hybrids between species within the genus *Citrus* L., even where the variety is clearly distinguishable from all other varieties covered by other Test Guidelines, it may still be necessary to use additional citrus characteristics to examine the variety. In these circumstances the characteristics from the Test Guidelines covering the parent species, or characteristics from the overall set of citrus characteristics, presented in the Annex, may be particularly useful.

2. Material Required

2.1 The competent authorities decide on the quantity and quality of the plant material required for testing the variety and when and where it is to be delivered. Applicants submitting material from a State other than that in which the testing takes place must ensure that all customs formalities and phytosanitary requirements are complied with.

2.2 The material is to be supplied in the form of bud sticks of 6 to 10 mm in diameter (one year old), each cut just behind a typical fruit or, if required by the competent authorities, one-year-old grafted trees. In the case of rootstock varieties, rooted cuttings or polyembryonic seeds may be required in addition.

2.3 The minimum quantity of plant material, to be supplied by the applicant, should be:

10 bud sticks sufficient to establish 10 plants or,
if required by the competent authorities,
10 one-year-old grafted trees.

2.4 The plant material supplied should be visibly healthy, not lacking in vigor, nor affected by any important pest or disease. It should preferably not be obtained from *in vitro* propagation. If it has been produced by *in vitro* propagation this fact must be stated by the applicant.

2.5 The plant material must not have undergone any treatment which would affect the expression of the characteristics of the variety, unless the competent authorities allow or request such treatment. If it has been treated, full details of the treatment must be given.

3. Method of Examination

3.1 *Duration of Tests*

The minimum duration of tests should normally be two independent growing cycles. For the purposes of these Test Guidelines, a growing cycle refers to the fruiting cycle.

3.2 *Testing Place*

The tests should normally be conducted at one place. If any characteristics of the variety, which are relevant for the examination of DUS, cannot be seen at that place, the variety may be tested at an additional place.

3.3 *Conditions for Conducting the Examination*

3.3.1 The tests should be carried out under conditions ensuring satisfactory growth for the expression of the relevant characteristics of the variety and for the conduct of the examination. In particular, a satisfactory crop of fruit must be produced in at least two fruiting cycles. Where necessary for the examination of fruit varieties, a standard specified rootstock should be used for each group.

3.3.2 All observations should be made on plants of the same age not less than 3 years after planting. The age of the plants should be specified.

3.4 *Test Design*

3.4.1 The design of the tests should be such that plants or parts of plants may be removed for measurement or counting without prejudice to the observations which must be made up to the end of the growing cycle.

3.4.2 Each test should be designed to result in a total of, at least, 5 plants.

3.5 *Number of Plants / Parts of Plants to be Examined*

Unless otherwise indicated, all observations determined by measuring or counting should be made on 5 plants or 2 parts taken from each of 5 plants.

3.6 *Additional Tests*

Additional tests, for examining relevant characteristics, may be established.

4. Assessment of Distinctness, Uniformity and Stability

4.1 *Distinctness*

4.1.1 General Recommendations

It is of particular importance for users of these Test Guidelines to consult the General Introduction prior to making decisions regarding distinctness. However, the following points are provided for elaboration or emphasis in these Test Guidelines:

4.1.2 Consistent Differences

The minimum duration of tests recommended in section 3.1 reflects, in general, the need to ensure that any differences in a characteristic are sufficiently consistent.

4.1.3 Clear Differences

Determining whether a difference between two varieties is clear depends on many factors, and should consider, in particular, the type of expression of the characteristic being examined, i.e. whether it is expressed in a qualitative, quantitative, or pseudo-qualitative manner. Therefore, it is important that users of these Test Guidelines are familiar with the recommendations contained in the General Introduction prior to making decisions regarding distinctness.

4.2 *Uniformity*

It is of particular importance for users of these Test Guidelines to consult the General Introduction prior to making decisions regarding uniformity. However, the following points are provided for elaboration or emphasis in these Test Guidelines:

For the assessment of uniformity a population standard of 1% and an acceptance probability of at least 95% should be applied. In the case of a sample size of 5 plants no off-types are allowed.

4.3 *Stability*

4.3.1 In practice, it is not usual to perform tests of stability that produce results as certain as those of the testing of distinctness and uniformity. However, experience has demonstrated that, for many types of variety, when a variety has been shown to be uniform, it can also be considered to be stable.

4.3.2 Where appropriate, or in cases of doubt, stability may be tested, either by growing a further generation, or by testing a new plant stock to ensure that it exhibits the same characteristics as those shown by the previous material supplied.

5. Grouping of Varieties and Organization of the Growing Trial

5.1 The selection of varieties of common knowledge to be grown in the trial with the candidate varieties and the way in which these varieties are divided into groups to facilitate the assessment of distinctness is aided by the use of grouping characteristics.

5.2 Grouping characteristics are those in which the documented states of expression, even where produced at different locations, can be used, either individually or in combination with other such characteristics: (a) to select varieties of common knowledge that can be excluded from the growing trial used for examination of distinctness; and (b) to organize the growing trial so that similar varieties are grouped together.

5.3 The following have been agreed as useful grouping characteristics:

- (a) Fruit: length (characteristic 29)
- (b) Fruit: diameter (characteristic 30)
- (c) Fruit surface: predominant color (characteristic 51)
- (d) Fruit: presence of navel (viewed internally) (characteristic 77)
- (e) Time of maturity of fruit for consumption (characteristic 93).

5.4 Guidance for the use of grouping characteristics, in the process of examining distinctness, is provided through the General Introduction.

6. Introduction to the Table of Characteristics

6.1 *Categories of Characteristics*

6.1.1 Standard Test Guidelines Characteristics

Standard Test Guidelines characteristics are those which are approved by UPOV for examination of DUS and from which members of the Union can select those suitable for their particular circumstances.

6.1.2 Asterisked Characteristics

Asterisked characteristics (denoted by *) are those included in the Test Guidelines which are important for the international harmonization of variety descriptions and should always be examined for DUS and included in the variety description by all members of the Union, except when the state of expression of a preceding characteristic or regional environmental conditions render this inappropriate.

6.2 *States of Expression and Corresponding Notes*

States of expression are given for each characteristic to define the characteristic and to harmonize descriptions. Each state of expression is allocated a corresponding numerical note for ease of recording of data and for the production and exchange of the description.

6.3 *Types of Expression*

An explanation of the types of expression of characteristics (qualitative, quantitative and pseudo-qualitative) is provided in the general Introduction.

6.4 *Example Varieties*

Where appropriate, example varieties are provided to clarify the states of expression of each characteristic. Each example variety is followed by the abbreviation of its subgroup in brackets.

6.5 *Legend*

- (*) Asterisked characteristic – see section 6.1.2
- (+) See Explanations on the Table of Characteristics in Chapter 8, Section 8.2
- QL Qualitative characteristic – see section 6.3
- QN Quantitative characteristic – see section 6.3
- PQ Pseudo-Qualitative characteristic – see section 6.3
- c#. Corresponding number of characteristic in the citrus overall table of characteristics
- (a)-(h) See Explanations on the Table of Characteristics in Chapter 8, Section 8.1

6.6 *Abbreviations*

See page 2 for the list of species and their subgroups.

7. Table of Characteristics/Tableau des caractères/Merkmalstabelle/Tabla de caracteres

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
1.	Ploidy	Ploïdie	Ploidie	Ploidía		
QL	diploid	diploïde	diploid	diploide		2
	triploid	triploïde	triploid	triploide		3
c1.	tetraploid	tetraploïde	tetraploid	tetraploide		4
2. (*) (+)	Tree: growth habit	Arbre: port	Baum: Wuchstyp	Árbol: porte		
PQ	upright	droit	aufrecht	erguido	Salustiana (SWO)	1
	spreading	étalé	breitbuschig	abierto	Valencia Late (SWO)	2
c2.	drooping	retombant	hängend	colgante	Washington Navel (SWO)	3
3.	Tree: density of spines	Arbre: densité des épines	Baum: Dichte der Stacheln	Árbol: densidad de las espinas		
QN	absent or sparse	absentes ou éparses	fehlend oder locker	ausente o laxa	Washington Navel (SWO)	1
	intermediate	intermédiaires	mittel	media	Valencia Late (SWO)	2
c3.	dense	denses	dicht	densa	Navelate (SWO)	3
4.	Tree: length of spines	Arbre: longueur des épines	Baum: Länge der Stacheln	Árbol: longitud de las espinas		
QN	short	courtes	kurz	cortas		3
	medium	moyennes	mittel	medias		5
c4.	long	longues	lang	largas		7
5.	(b) Leaf blade: length (apical leaflet in case of compound leaf)	Limbe: longueur (foliole apicale en cas de feuille composée)	Blattspreite: Länge (apikales Teilblatt bei zusammengesetztem Blatt)	Limbo: longitud (foliolo atípico en caso de hoja compuesta)		
QN	short	court	kurz	corto	Valencia Late (SWO)	3
	medium	moyen	mittel	medio	Salustiana (SWO)	5
c10.	long	long	lang	largo	Navelate (SWO)	7

	English	français	deutsch	español	Example Varieties Exemples Beispielsorten Variedades ejemplo	Note/ Nota
6. (b) Leaf blade: width (as for 5)		Limbe: largeur (comme pour 5)	Blattspreite: Breite (wie für 5)	Limbo: anchura (como para 5)		
QN	narrow	étroit	schmal	estrecho	Lanelate (SWO)	3
	medium	moyen	mittel	medio	Salustiana (SWO)	5
c11.	broad	large	breit	ancho	Washington Navel (SWO)	7
7. (b) Leaf blade: ratio length/width (as for 5)		Limbe: rapport longueur/largeur (comme pour 5)	Blattspreite: Verhältnis Länge/Breite (wie für 5)	Limbo: relación longitud/anchura (como para 5)		
QN	small	faible	klein	pequeño	Navelate (SWO)	3
	medium	moyen	mittel	medio	Salustiana (SWO)	5
c12.	large	élevé	groß	grande	Lanelate (SWO)	7
8. (b) Leaf blade: shape in cross section (as for 5)		Limbe: forme en section transversale (comme pour 5)	Blattspreite: Form im Querschnitt (wie für 5)	Limbo: forma en sección transversal (como para 5)		
QN	straight or weakly concave	droit ou légèrement concave	gerade oder leicht konkav	recto o ligeramente cóncavo	Salustiana (SWO)	1
	intermediate	intermédiaire	mittel	intermedio	Washington Navel (SWO)	2
c17.	strongly concave	fortement concave	stark konkav	fuertemente cóncavo	Sweet Navel (SWO)	3
9. (b) Leaf blade: twisting		Limbe: torsion	Blattspreite: Drehung	Limbo: torsión		
QN	absent or weak	absente ou faible	fehlend oder gering	ausente o débil	Washington Navel (SWO)	1
	intermediate	intermédiaire	mittel	media		2
c18.	strong	forte	stark	fuerte		3
10. (b) Leaf blade: blistering		Limbe: cloûre	Blattspreite: Blasigkeit	Limbo: abullonado o ampollado		
QN	absent or weak	absente ou faible	fehlend oder gering	ausente o débil	Washington Navel (SWO)	1
	intermediate	intermédiaire	mittel	medio	Summer Navel (SWO)	2
c19.	strong	forte	stark	fuerte	Navel Mas Baró (SWO)	3

	English	français	deutsch	español	Example Varieties Exemples Beispielsorten Variedades ejemplo	Note/ Nota
11. (b)	Leaf blade: intensity of green color	Limbe: intensité de la couleur verte	Blattspreite: Intensität der Grünfärbung	Limbo: intensidad del color verde		
QN	light	claire	hell	claro	Valencia Late (SWO)	3
	medium	moyenne	mittel	medio	Washington Navel (SWO)	5
c20.	dark	foncée	dunkel	oscuro	Navelina (SWO)	7
12. (b)	Leaf blade: undulation of margin	Limbe: ondulation du bord	Blattspreite: Randwellung	Limbo: ondulación del borde		
QN	absent or weak	absente ou faible	fehlend oder gering	ausente o débil	Washington Navel (SWO)	1
	intermediate	intermédiaire	mittel	media		2
c22.	strong	forte	stark	fuerte		3
13. (b)	Leaf blade: incisions of margin	Limbe: incisions du bord	Blattspreite: Randeinschnitte	Limbo: incisiones del borde		
PQ	absent	absentes	fehlend	ausentes		1
	crenate	crénelées	gekerbt	crenadas		2
c23.	dentate	dentelées	gezähnt	dentadas		3
14. (b)	Leaf blade: shape of apex	Limbe: forme de l'extrémité	Blattspreite: Form der Spitze	Limbo: forma del ápice		
(+)						
PQ	acuminate	acuminée	mit aufgesetzter Spitze	acuminado		1
	acute	pointue	spitz	agudo	Salustiana (SWO)	2
	obtuse	obtuse	stumpf	obtuso		3
c24.	rounded	arrondie	abgerundet	redondeado	Navelate (SWO)	4
15. (b)	Leaf blade: emargination at tip	Limbe: échancrure à l'extrémité	Blattspreite: Einkerbung an der Spitze	Limbo: emarginado en la parte superior		
(+)						
QL	absent	absente	fehlend	ausente	Washington Navel (SWO)	1
c25.	present	présente	vorhanden	presente		9

	English	français	deutsch	español	Example Varieties Exemples Beispielsorten Variedades ejemplo	Note/ Nota
16. (b) Petiole: length		Pétiole: longueur	Blattstiel: Länge	Pecíolo: longitud		
QN	short	court	kurz	corto	Lanelate (SWO)	3
	medium	moyen	mittel	medio	Valencia	5
c26.	long	long	lang	largo	Navelina (SWO)	7
17. (b) Petiole: presence of wings		Pétiole: présence d'ailes	Blattstiel: Vorhandensein von Flügeln	Pecíolo: presencia de alas		
QL	absent	absentes	fehlend	ausentes	Salustiana (SWO)	1
c27.	present	présentes	vorhanden	presentes	Newhall (SWO)	9
18. (b) <u>Varieties with petiole wings present only:</u> Petiole: width of wings		<u>Seulement les variétés présentant des ailes au pétiole:</u> Pétiole: largeur des ailes	<u>Nur Sorten mit vorhandenen Flügel am Blattstiel:</u> Blattstiel: Breite der Flügel	<u>Sólo variedades con alas presentes en el pecíolo:</u> Pecíolo: anchura de las alas		
QN	narrow	étroites	schmal	estrechas	Newhall (SWO)	3
	medium	moyennes	mittel	medias		5
c28.	broad	larges	breit	anchas		7
19. (c) Flower: diameter of calyx		Fleur: diamètre du calice	Blüte: Durchmesser des Kelches	Flor: diámetro del cáliz		
QN	small	petit	klein	pequeño		3
	medium	moyen	mittel	medio		5
c31.	large	grand	groß	grande		7
20. (c) Flower: length of petal		Fleur: longueur du pétale	Blüte: Länge des Blütenblattes	Flor: longitud del pétalo		
QN	short	court	kurz	corto	Newhall (SWO)	3
	medium	moyen	mittel	medio	Lanelate (SWO)	5
c32.	long	long	lang	largo	Salustiana (SWO)	7
21. (c) Flower: width of petal		Fleur: largeur du pétale	Blüte: Breite des Blütenblattes	Flor: anchura del pétalo		
QN	narrow	étroit	schmal	estrecho	Newhall (SWO)	3
	medium	moyen	mittel	medio	Lanelate (SWO)	5
c33.	broad	large	breit	ancho	Salustiana (SWO)	7

	English	français	deutsch	español	Example Varieties Exemples Beispielsorten Variedades ejemplo	Note/ Nota
22. (c)	Flower: ratio length/width of petal	Fleur: rapport longueur/largeur du pétale	Blüte: Verhältnis Länge/Breite des Blütenblattes	Flor: relación longitud/anchura del pétalo		
QN	small	faible	klein	pequeño	Summer Navel (SWO)	3
	medium	moyen	mittel	medio	Washington Navel (SWO)	5
c34.	large	élevé	groß	grande	Sanguinelli (SWO)	7
23. (c)	Flower: length of stamens	Fleur: longueur des étamines	Blüte: Länge der Staubfäden	Flor: longitud de los estambres		
QN	short	courtes	kurz	cortos	Newhall (SWO)	3
	medium	moyennes	mittel	medios	Washington Navel (SWO)	5
c35.	long	longues	lang	largos	Valencia Late (SWO)	7
24. (c)	Flower: basal union of stamens	Fleur: union basale des étamines	Blüte: Vereinigung der Staubfäden an der Basis	Flor: unión basal de los estambres		
QL	absent	absente	fehlend	ausente		1
c36.	present	présente	vorhanden	presente	Valencia Late (SWO)	9
25. (c)	Anther: color	Anthère: couleur	Anthere: Farbe	Antera: color		
PQ	white	blanc	weiß	blanco		1
	light yellow	jaune clair	hellgelb	amarillo claro	Washington Navel (SWO)	2
c38.	medium yellow	jaune moyen	mittelgelb	amarillo medio	Valencia Late (SWO)	3
26. (c)	Anther: viable pollen	Anthère: pollen viable	Anthere: keimfähiger Pollen	Antera: polen viable		
QL	absent	absent	fehlend	ausente	Washington Navel (SWO)	1
c39.	present	présent	vorhanden	presente		9
27. (c)	Style: length	Style: longueur	Griffel: Länge	Estilo: longitud		
QN	short	court	kurz	corto		3
	medium	moyen	mittel	medio		5
c40.	long	long	lang	largo		7

	English	français	deutsch	español	Example Varieties Exemples Beispielsorten Variedades ejemplo	Note/ Nota
28.	(c) Style: shape	Style: forme	Griffel: Form	Estilo: forma		
PQ	straight	droit	gerade	recto	Washington Navel (SWO)	1
	arched	arqué	nach unten gebogen	arqueado		2
c41.	kinked	coudé	geknickt	sinuoso		3
29.	(e) Fruit: length (*)	Fruit: longueur	Frucht: Länge	Fruto: longitud		
QN	short	court	kurz	corto	Comuna (SWO)	3
	medium	moyen	mittel	medio	Valencia Late (SWO)	5
c44.	long	long	lang	largo	Newhall (SWO)	7
30.	(e) Fruit: diameter (*)	Fruit: diamètre	Frucht: Durchmesser	Fruto: diámetro		
QN	small	petit	klein	pequeño	Sanguinelli (SWO)	3
	medium	moyen	mittel	medio	Valencia Late (SWO)	5
c45.	large	grand	groß	grande	Washington Navel (SWO)	7
31.	(e) Fruit: ratio (*) length/diameter	Fruit: rapport longueur/diamètre	Frucht: Verhältnis Länge/Durchmesser	Fruto: relación longitud/diámetro		
QN	small	faible	klein	pequeño	Salustiana (SWO)	3
	medium	moyen	mittel	medio	Valencia Late (SWO)	5
c46.	large	élevé	groß	grande	Newhall (SWO)	7
32.	(e) Fruit: position of (*) broadest part	Fruit: position de la partie la plus large	Frucht: Position des breitesten Teils	Fruto: posición de la parte más amplia		
QN	towards stalk end	vers l'extrémité pédonculaire	zum Stielende hin	hacia el extremo peduncular		1
	at middle	au milieu	in der Mitte	en el medio	Washington Navel (SWO)	2
c47.	towards distal end	vers la partie distale	zum distalen Ende hin	hacia el extremo distal		3

	English	français	deutsch	español	Example Varieties Exemples Beispielsorten Variedades ejemplo	Note/ Nota
33.	(e) Fruit: general shape of proximal part (excluding neck, collar and depression at stalk end)	Fruit: forme générale de la partie proximale (à l'exclusion du col, de la collerette et de la dépression à l'extrémité pédonculaire)	Frucht: allgemeine Form des proximalen Teils (ohne Hals, Kragen und Einsenkung am Stielende)	Fruto: forma general de la parte proximal (excluido el cuello, el collar y la depresión del extremo peduncular)		
(+)						
PQ	flattened	aplatie	abgeflacht	aplanada	Salustiana (SWO)	1
	slightly rounded	légèrement arrondie	leicht abgerundet	ligeramente redondeada	Valencia Late (SWO)	2
	strongly rounded	fortement arrondie	stark abgerundet	fuertemente redondeada		3
c49.	tapered	effilée	spitz	afilada		4
34.	(e) <u>Only varieties without fruit neck:</u>	<u>Seulement les variétés dont le fruit ne présente pas de col:</u>	<u>Nur Sorten ohne Fruchthals: Frucht:</u>	<u>Sólo variedades con fruto sin cuello:</u>		
(*)	Fruit: presence of depression at stalk end	Fruit: présence d'une dépression à l'extrémité pédonculaire	Vorhandensein einer Einsenkung am Stielende	Fruto: presencia de una depresión en el extremo peduncular		
(+)						
QL	absent	absente	fehlend	ausente	Sanguinelli (SWO)	1
c53.	present	présente	vorhanden	presente	Washington Navel (SWO)	9
35.	(e) <u>Only varieties without fruit neck:</u>	<u>Seulement les variétés dont le fruit ne présente pas de col:</u>	<u>Nur Sorten ohne Fruchthals: Frucht:</u>	<u>Sólo variedades con fruto sin cuello:</u>		
	Fruit: depth of depression at stalk end	Fruit: profondeur de la dépression à l'extrémité pédonculaire	Tiefe der Einsenkung am Stielende	Fruto: profundidad de la depresión en el extremo peduncular		
QN	shallow	peu profonde	flach	poco profunda	Washington Navel (SWO)	3
	medium	moyenne	mittel	media		5
c54.	deep	profonde	tief	profunda		7

	English	français	deutsch	español	Example Varieties Exemples Beispielsorten Variedades ejemplo	Note/ Nota
36.	(e) Fruit: number of radial grooves at stalk end	Fruit: nombre de cannelures radiales à l'extrémité pédonculaire	Frucht: Anzahl radialer Furchen am Stielende	Fruto: número de acanaladuras radiales en el extremo peduncular		
QN	absent or few	absentes ou peu nombreuses	fehlend oder sehr gering	ausente o bajo	Valencia Late (SWO)	1
	intermediate	moyennement nombreuses	mittel	medio	Lanelate (SWO)	2
c57.	many	nombreuses	groß	alto		3
37.	(e) Fruit: length of radial grooves at stalk end	Fruit: longueur des cannelures radiales à l'extrémité pédonculaire	Frucht: Länge der radialen Furchen am Stielende	Fruto: longitud de las acanaladuras radiales en el extremo peduncular		
QN	short	courtes	kurz	cortas		3
	medium	moyennes	mittel	medias		5
c58.	long	longues	lang	largas		7
38.	(e) Fruit: presence of collar	Fruit: présence d'une corolle	Frucht: Vorhandensein eines Kragens	Fruto: presencia de un collar		
(+)						
QL	absent	absente	fehlend	ausente	Salustiana (SWO)	1
c60.	present	présente	vorhanden	presente		9
39.	(e) Fruit: general shape of distal part (excluding nipple, bulging of navel and depression at distal end)	Fruit: forme générale de la partie distale (à l'exclusion du mamelon, de la courbure du fruit secondaire et de la dépression à l'extrémité distale)	Frucht: allgemeine Form des distalen Teils (ohne Warze, Wölbung der sekundären Frucht und Einsenkung am distalen Ende)	Fruto: forma general de la parte distal (excluido el mamelón o pezón, el abultamiento del ombligo y la depresión en el extremo distal)		
(+)						
QN	flattened	aplatie	abgeflacht	aplanada	Hamlin (SWO)	1
	slightly rounded	légèrement arrondie	leicht abgerundet	ligeramente redondeada	Valencia Late (SWO)	2
c64.	strongly rounded	fortement arrondie	stark abgerundet	fuertemente redondeada		3

	English	français	deutsch	español	Example Varieties Exemples Beispielsorten Variedades ejemplo	Note/ Nota
40. (e) (*) (+)	Fruit: presence of depression at distal end	Fruit: présence d'une dépression à l'extrémité distale	Frucht: Vorhandensein der Einsenkung am distalen Ende	Fruto: presencia de una depresión en el extremo distal		
QL	absent	absente	fehlend	ausente	Valencia Late (SWO)	1
c65.	present	présente	vorhanden	presente		9
41. (e) (*)	Fruit: presence of areola	Fruit: présence d'une aréole	Frucht: Vorhandensein einer Areola	Fruto: presencia de un areola		
QL	absent	absente	fehlend	ausente	Valencia Late (SWO)	1
	incomplete	incomplète	unvollständig	incompleta		2
c70.	complete	complète	vollständig	completa	Peret (SWO)	3
42. (e) (+)	Fruit: type of areola	Fruit: type d'aréole	Frucht: Typ der Areola	Fruto: tipo de areola		
QL	smooth	régulière	glatt	lisa	Peret (SWO)	1
	grooved	cannelée	gerieft	acanalada		2
c71.	ridged	annelée	geringelt	acrestada		3
43. (e)	Fruit: diameter of areola	Fruit: diamètre de l'aréole	Frucht: Durchmesser der Areola	Fruto: diámetro de la areola		
QN	small	petit	klein	pequeña		3
	medium	moyen	mittel	media	Peret (SWO)	5
c72.	large	grand	groß	grande		7
44. (e)	Fruit: diameter of stylar scar	Fruit: diamètre de la cicatrice stylaire	Frucht: Durchmesser der Griffelnarbe	Fruto: diámetro de la cicatriz estilar		
QN	small	petit	klein	pequeña	Salustiana (SWO)	3
	medium	moyen	mittel	media		5
c73.	large	grand	groß	grande		7

	English	français	deutsch	español	Example Varieties Exemples Beispielsorten Variedades ejemplo	Note/ Nota
45. (e)	Fruit: persistence of style	Fruit: persistance du style	Frucht: Persistenz des Griffels	Fruto: persistencia del estilo		
PQ	none	aucune	fehlend	ninguna	Valencia Late (SWO)	1
	partial	partielle	teilweise gegeben	parcial	Sangre Oval (SWO)	2
c75.	total	totale	vollständig gegeben	total		3
46. (e)	Fruit: presence of navel opening	Fruit: présence d'une ouverture du fruit secondaire	Frucht: Vorhandensein der Öffnung der sekundären Frucht	Fruto: presencia de un apertura del ombligo		
PQ	absent	absente	fehlend	ausente	Ricalate (SWO)	1
	occasionally present	présente occasionnellement	zuweilen vorhanden	ocasionalmente presente	Navelate (SWO)	2
c76.	always present	toujours présente	immer vorhanden	siempre presente	Washington Navel (SWO)	3
47. (e)	Fruit: diameter of navel opening	Fruit: diamètre de l'ouverture du fruit secondaire	Frucht: Durchmesser der Öffnung der sekundären Frucht	Fruto: diámetro de la apertura del ombligo		
QN	small	petit	klein	pequeña	Navelate (SWO)	3
	medium	moyen	mittel	media	Lanelate (SWO)	5
c77.	large	grand	groß	grande	Washington Navel (SWO)	7
48. (e)	Fruit: bulging of navel	Fruit: courbure du fruit secondaire	Frucht: Wölbung der sekundären Frucht	Fruto: abultamiento del ombligo		
QN	absent or weak	absente ou faible	fehlend	ausente o débil	Washington Navel (SWO)	1
	intermediate	intermédiaire	mittel	medio		2
c78.	strong	forte	stark	fuerte		3
49. (e)	Fruit: presence of radial grooves at distal end	Fruit: présence de cannelures radiales à l'extrémité distale	Frucht: Vorhandensein radialer Furchen am distalen Ende	Fruto: presencia de acanaladuras radiales en el extremo distal		
QL	absent	absentes	fehlend	ausentes	Valencia Late (SWO)	1
c79.	present	présentes	vorhanden	presentes	Salustiana (SWO)	9

	English	français	deutsch	español	Example Varieties Exemples Beispielsorten Variedades ejemplo	Note/ Nota
50.	(e) Fruit: color variegation	Fruit: panachure de la couleur	Frucht: Pana-chierung der Farbe	Fruto: variegación del color		
QL	absent	absente	fehlend	ausente		1
c81.	present	présente	vorhanden	presente		9
51.	(e) Fruit surface: predominant color	Fruit: couleur prédominante à la surface	Fruchtoberfläche: Hauptfarbe	Superficie del fruto: color predominante		
PQ	yellow orange	orange-jaune	gelborange	naranja amarillento	Pinalate (SWO)	1
	medium orange	orange moyen	mittelorange	naranja medio	Valencia Late (SWO)	2
	dark orange	orange foncé	dunkelorange	naranja oscuro	Washington Navel (SWO)	3
	orange red	rouge orangé	orangerot	rojo anaranjado	Navelate (SWO)	4
c82.	red	rouge	rot	rojo	Sanguinelli (SWO)	5
52.	(e) Fruit surface: roughness	Surface du fruit: rugosité	Fruchtoberfläche: Rauheit	Superficie del fruto: rugosidad		
QN	smooth	lisse	glatt	lisa	Sangre Doblefina (SWO)	3
	medium	intermédiaire	mittel	media	Valencia Late (SWO)	5
c86.	rough	rugueuse	rauh	rugosa		7
53.	(e) Fruit surface: size of oil glands	Surface du fruit: taille des glandes à huile	Fruchtoberfläche: Größe der Öldrüsen	Superficie del fruto: tamaño de las glándulas de aceite		
PQ	all more or less the same size	toutes plus ou moins de la même taille	alle mehr oder weniger gleich groß	todas más o menos del mismo tamaño		1
c87.	larger ones interspersed by smaller ones	grandes et petites intercalées	größere vermischt mit kleineren	glándulas grandes intercaladas con otras más pequeñas		2
54.	(e) Fruit surface: size of larger oil glands	Surface du fruit: taille des glandes à huile les plus grosses	Fruchtoberfläche: Größe der größeren Öldrüsen	Superficie del fruto: tamaño de las glándulas de aceite más grandes		
QN	small	petites	klein	pequeñas		3
	medium	moyennes	mittel	medianas		5
c88.	large	grosses	groß	grandes		7

	English	français	deutsch	español	Example Varieties Exemples Beispielsorten Variedades ejemplo	Note/ Nota
55.	(e) Fruit surface: (f) conspicuousness of larger oil glands	Surface du fruit: netteté des glandes à huile les plus grosses	Fruchtoberfläche: Sichtbarkeit der größeren Öldrüsen	Superficie del fruto: visibilidad de las glándulas de aceite más grandes		
QN	weak	faible	gering	débil	Valencia Late (SWO)	3
	medium	moyenne	mittel	media	Bonanza (SWO)	5
c89.	strong	forte	stark	fuerte		7
56.	(e) Fruit surface: (f) presence of pitting and pebbling on oil glands	Surface du fruit: présence de dépression et de protubérance sur les glandes à huile	Fruchtoberfläche: Vorhandensein von Grübchen und Körnern an den Öldrüsen	Superficie del fruto: presencia de picado y granulado en las glándulas de aceite		
PQ	pitting and pebbling absent	dépression et protubérance absentes	Grübchen und Körner fehlend	picado y granulado ausentes		1
	pitting absent, pebbling present	dépression absente, protubérance présente	Grübchen fehlend, Körner vorhanden	picado ausente, granulado presente		2
	pitting present, pebbling absent	dépression présente, protubérance absente	Grübchen vorhanden, Körner fehlend	picado presente, granulado ausente		3
c90.	pitting and pebbling present	dépression et protubérance présentes	Grübchen und Körner vorhanden	picado y granulado présentes		4
57.	(e) <u>Varieties with</u> (f) <u>pitting only:</u> Fruit surface: density of pitting on oil glands	<u>Variétés avec dé-</u> <u>pression seulement:</u> Surface du fruit: densité de la dépres- sion sur les glandes à huile	<u>Nur Sorten mit</u> <u>Grübchen:</u> Frucht- oberfläche: Dichte der Grübchen an den Öldrüsen	<u>Sólo variedades con</u> <u>picado:</u> Superficie del fruto: densidad del picado en las glándulas de aceite		
QN	sparse	éparse	locker	dispersa		3
	medium	moyenne	mittel	media		5
c91.	dense	dense	dicht	densa		7

	English	français	deutsch	español	Example Varieties Exemples Beispielsorten Variedades ejemplo	Note/ Nota
58.	(e) <u>Varieties with</u> (f) <u>pebbling only:</u> Fruit surface: density of pebbling on oil glands	<u>Variétés avec protubérance seulement:</u> Surface du fruit: densité de la protubérance sur les glandes à huile	<u>Nur Sorten mit Körnern:</u> Frucht-oberfläche: Dichte der Körner an den Öldrüsen	<u>Sólo variedades con granulado:</u> Superficie del fruto: densidad del granulado en las glándulas de aceite		
QN	sparse	éparse	locker	dispersa		3
	medium	moyenne	mittel	media		5
c93.	dense	dense	dicht	densa		7
59.	(e) <u>Varieties with</u> (f) <u>pebbling only:</u> Fruit surface: degree of pebbling on oil glands	<u>Variétés avec protubérance seulement:</u> Surface du fruit: degré de protubérance sur les glandes à huile	<u>Nur Sorten mit Körnern:</u> Frucht-oberfläche: Grad der Körnerbildung an den Öldrüsen	<u>Sólo variedades con granulado:</u> Superficie del fruto: nivel de granulado en las glándulas de aceite		
QN	weak	faible	gering	débil		3
	medium	moyen	mittel	medio		5
c94.	strong	fort	stark	fuerte		7
60.	(e) <u>Fruit rind: thickness</u> (*) (f)	<u>Écorce du fruit: épaisseur</u>	<u>Fruchtschale: Dicke</u>	<u>Corteza del fruto: espesor</u>		
QN	thin	fine	dünn	delgada	Navelate (SWO)	3
	medium	moyenne	mittel	media	Valencia Late (SWO)	5
c95.	thick	épaisse	dick	gruesa	Newhall (SWO)	7
61.	(e) <u>Fruit rind: strength</u> (f)	<u>Écorce du fruit: rigidité</u>	<u>Fruchtschale: Festigkeit</u>	<u>Corteza del fruto: vigor</u>		
QN	weak	faible	gering	débil		3
	medium	moyenne	mittel	medio		5
c97.	strong	forte	groß	fuerte		7

	English	français	deutsch	español	Example Varieties Exemples Beispielsorten Variedades ejemplo	Note/ Nota
62.	(e) Fruit: color of albedo	Fruit: couleur de l'albédo	Frucht: Farbe der Albedo	Fruto: color del albedo		
PQ	greenish	verdâtre	grünlich	verdoso		1
	white	blanc	weiß	blanco		2
	light yellow	jaune clair	hellgelb	amarillo claro		3
	light orange	orange clair	hellorange	naranja claro		4
	pink	rose	rosa	rosa		5
c100.	reddish	rougeâtre	rötlich	rojizo		6
63.	(e) Fruit: differently colored specks in flesh (g)	Fruit: taches de couleurs différentes dans la chair	Frucht: unterschiedlich gefärbte Flecken am Fleisch	Fruto: manchas de distinto color en la pulpa		
QL	absent	absentes	fehlend	ausentes	Valencia Late (SWO)	1
c105.	present	présentes	vorhanden	presentes	Sanguinelli (SWO)	9
64.	(e) Fruit: bicolored segments (g)	Fruit: segments bicolores	Frucht: zweifarbige Segmente	Fruto: gajos bicolores		
QL	absent	absents	fehlend	ausentes	Valencia Late (SWO)	1
c106.	present	présents	vorhanden	presentes	Sanguinelli (SWO)	9
65.	(e) Fruit: main color of flesh (*) (g)	Fruit: couleur principale de la chair	Frucht: Hauptfarbe des Fleisches	Fruto: color principal de la pulpa		
PQ	light orange	orange clair	hellorange	naranja claro	Valencia Late (SWO)	1
	medium orange	orange moyen	mittelorange	naranja medio	Washington Navel (SWO)	2
	dark orange	orange foncé	dunkelorange	naranja oscuro		3
	orange red	rouge orangé	orangerot	rojo anaranjado	Caracara (SWO)	4
c107.	red	rouge	rot	rojo	Sanguinelli (SWO)	5
66.	(e) Fruit: bitterness of flesh (g)	Fruit: amertume de la chair	Frucht: Bitterkeit des Fleisches	Fruto: amargor de la pulpa		
QL	absent	absente	fehlend	ausente		1
c108.	present	présente	vorhanden	presente		9

	English	français	deutsch	español	Example Varieties Exemples Beispielsorten Variedades ejemplo	Note/ Nota
67.	(e) Fruit: filling of core (g)	Fruit : structure du cœur	Frucht: Ausfüllung des inneren Fruchtfleisches	Fruto: relleno del hueco central		
QN	absent or very sparse	absente ou très lâche	fehlend oder sehr locker	ausente o muy laxo		1
	sparse	lâche	locker	laxo		3
	medium	intermédiaire	mittel	medio	Washington Navel (SWO)	5
	dense	dense	dicht	denso	Salustiana (SWO)	7
c109.	very dense	très dense	sehr dicht	muy denso		9
68.	(e) Fruit: diameter of core (g)	Fruit: diamètre du cœur	Frucht: Durchmesser des inneren Fruchtfleisches	Fruto: diámetro del hueco central		
QN	small	petit	klein	pequeño	Salustiana (SWO)	3
	medium	moyen	mittel	medio	Valencia Late (SWO)	5
c110.	large	grand	groß	grande	Navelate (SWO)	7
69.	(e) Fruit: presence of rudimentary segments (g)	Fruit: présence de segments rudimentaires	Frucht: Vorhandensein von unvollständigen Segmenten	Fruto: presencia de gajos rudimentarios		
QN	absent or weak	nulle ou faible	null oder gering	nula o débil	Valencia Late (SWO)	1
	intermediate	intermédiaire	mittel	intermedia		2
c111.	strong	forte	stark	fuerte		3
70.	(e) Fruit: number of well developed segments (g)	Fruit: nombre de segments bien développés	Frucht: Anzahl gut entwickelter Segmente	Fruto: número de gajos bien desarrollados		
QN	few	peu	gering	bajo	Navelate (SWO)	3
	medium	moyen	mittel	medio	Sanguinelli (SWO)	5
c112.	many	beaucoup	groß	alto		7

	English	français	deutsch	español	Example Varieties Exemples Beispielsorten Variedades ejemplo	Note/ Nota
71.	(e) Fruit: coherence of adjacent segment walls	Fruit: adhérence des parois des segments adjacents	Frucht: Zusammenhalt der nebeneinanderliegenden Segmentwände	Fruto: adherencia entre los gajos adyacentes		
QN	weak	faible	gering	débil	Navelina (SWO)	3
	medium	moyenne	mittel	media	Valencia Late (SWO)	5
c113.	strong	forte	stark	fuerte		7
72.	(e) Fruit: strength of segment walls	Fruit: rigidité des parois des segments	Frucht: Festigkeit der Segmentwände	Fruto: firmeza de las paredes de los gajos		
QN	weak	faible	schwach	débil	Navelate (SWO)	3
	medium	moyenne	mittel	media	Valencia Late (SWO)	5
c114.	strong	forte	stark	fuerte	Berna	7
73.	(e) Fruit: length of juice vesicles	Fruit: longueur des vésicules de jus	Frucht: Länge der Saftbläschen	Fruto: longitud de las vesículas de jugo		
QN	short	courtes	kurz	corta	Salustiana (SWO)	3
	medium	moyennes	mittel	media		5
c115.	long	longues	lang	larga	Washington Navel (SWO)	7
74.	(e) Fruit: thickness of juice vesicles	Fruit: épaisseur des vésicules de jus	Frucht: Dicke der Saftbläschen	Fruto: grosor de las vesículas de jugo		
QN	thin	fines	dünn	delgadas		3
	medium	moyennes	mittel	medianas		5
c116.	thick	épaisses	dick	gruesas		7
75.	(e) Fruit: conspicuousness of juice vesicle walls	Fruit: netteté des parois des vésicules de jus	Frucht: Sichtbarkeit der Saftbläschenwände	Fruto: visibilidad de las paredes de las vesículas de jugo		
QN	low	faible	gering	baja		3
	medium	moyenne	mittel	media		5
c117.	high	forte	groß	alta		7

	English	français	deutsch	español	Example Varieties Exemples Beispielsorten Variedades ejemplo	Note/ Nota
76. (e) Fruit: coherence of (g) juice vesicles		Fruit: adhérence des vésicules de jus	Frucht: Zusammenhalt der Saftbläschen	Fruto: coherencia de las vesículas de jugo		
QN	weak	faible	gering	débil		3
	medium	moyenne	mittel	media		5
c118.	strong	forte	stark	fuerte		7
77. (*) (e) Fruit: presence of navel (viewed internally)		Fruit: présence de fruit secondaire (vue interne)	Frucht: Vorhandensein von sekundären Früchten (von innen gesehen)	Fruto: presencia de ombligo (visto internamente)		
PQ	absent or very rare	absent ou très rare	fehlend oder sehr selten	ausente o muy rara	Valencia Late (SWO)	1
	occasionally present	présent occasionnellement	zuweilen vorhanden	ocasionalmente presente		2
c119.	always present	toujours présent	immer vorhanden	siempre presente	Washington Navel (SWO)	3
78. (e) Fruit: size of navel (viewed internally)		Fruit: taille du fruit secondaire (vue interne)	Frucht: Größe der sekundären Frucht (von innen gesehen)	Fruto: tamaño del ombligo visto internamente		
QN	small	petit	klein	pequeño		3
	medium	moyen	mittel	medio	Washington Navel (SWO)	5
c120.	large	grand	groß	grande	Navelate (SWO)	7
79. (e) Fruit: juiciness		Fruit: succulence	Frucht: Saftigkeit	Fruto: contenido de jugo		
QN	low	faible	gering	baja		3
	medium	moyenne	mittel	media	Washington Navel (SWO)	5
c121.	high	élevée	hoch	alta	Salustiana (SWO)	7
80. (e) Fruit juice: total soluble solids		Jus du fruit: total de solides solubles	Fruchtsaft: Gehalt an löslicher Trockensubstanz	Jugo del fruto: sólidos solubles totales		
QN	low	faible	niedrig	bajo	Valencia Late (SWO)	3
	medium	moyen	mittel	mediano	Washington Navel (SWO)	5
c122.	high	fort	hoch	alto	Navelate (SWO)	7

	English	français	deutsch	español	Example Varieties Exemples Beispielsorten Variedades ejemplo	Note/ Nota
81. (e) Fruit juice: acidity		Jus du fruit: acidité	Fruchtsaft: Säure	Jugo del fruto: acidez		
QN	low	faible	gering	baja	Sucreña (SWO)	3
	medium	moyenne	mittel	media	Washington Navel (SWO)	5
c123.	high	forte	stark	alta	Valencia Late (SWO)	7
82. (e) Fruit: strength of fibre		Fruit: rigidité des fibres	Frucht: Festigkeit der Fasern	Fruto: vigor de la fibra		
QN	weak	faible	schwach	débil	Salustiana (SWO)	3
	medium	moyenne	mittel	medio	Washington Navel (SWO)	5
c124.	strong	forte	stark	fuerte		7
83. (e) Fruit: number of seeds (controlled manual self-pollination)		Fruit: nombre de pépins (autopollinisation manuelle contrôlée)	Frucht: Anzahl Samen (manuell kontrollierte Selbstbefruchtung)	Fruto: número de semillas (autopollinización manual controlada)		
QN	absent or very few	absents ou très peu nombreux	fehlend oder sehr gering	ausente o muy bajo	Washington Navel (SWO)	1
	few	peu nombreux	gering	bajo	Valencia Late (SWO)	3
	medium	moyennement nombreux	mittel	medio		5
	many	nombreux	groß	alto		7
c125.	very many	très nombreux	sehr groß	muy alto	Comuna (SWO)	9
84. (e) Fruit: number of seeds (open pollination)		Fruit: nombre de pépins (fécondation libre)	Frucht: Anzahl Samen (frei abblühend)	Fruto: número de semillas (polinización libre)		
QN	absent or very few	absents ou très peu nombreux	fehlend oder sehr gering	ausente o muy bajo	Salustiana (SWO)	3
	few	peu nombreux	gering	bajo	Valencia Late (SWO)	5
	moderate	modérément nombreux	mittel	moderado		7
c126.	many	nombreux	groß	alto	Pineapple (SWO)	4

	English	français	deutsch	español	Example Varieties Exemples Beispielsorten Variedades ejemplo	Note/ Nota
85. (h) Seed: polyembryony (*)		Pépin: polyembryonnie	Samen: Polyembryonie	Semilla: poliembrionía		
QL	absent	absente	fehlend	ausente		1
c127.	present	présente	vorhanden	presente	Valencia Late (SWO)	9
86. (h) Seed: length		Pépin: longueur	Samen: Länge	Semilla: longitud		
QN	short	court	kurz	corta		3
	medium	moyen	mittel	media		5
c128.	long	long	lang	larga		7
87. (h) Seed: width		Pépin: largeur	Samen: Breite	Semilla: anchura		
QN	narrow	étroit	schmal	estrecha		3
	medium	moyen	mittel	media		5
c129.	broad	large	breit	ancha		7
88. (h) Seed: surface		Pépin: surface	Samen: Oberfläche	Semilla: superficie		
QL	smooth	lisse	glatt	lisa		1
c130.	wrinkled	ridée	runzlig	arrugada		2
89. (h) Seed: prominence of wrinkles		Pépin: proéminence des rides	Samen: Ausprägung der Runzeln	Semilla: prominencia de las arrugas		
QN	weak	faible	schwach	débil		3
	medium	moyenne	mittel	media		5
c131.	strong	forte	stark	fuerte		7
90. (h) Seed: external color		Pépin: couleur externe	Samen: Außenfarbe	Semilla: color externo		
PQ	greenish	verdâtre	grünlich	verdoso		1
	whitish	blanchâtre	weißlich	blanquecino	Comuna (SWO)	2
	yellowish	jaunâtre	gelblich	amarillento		3
	pinkish	rosâtre	rosa	rosado		4
c132.	brownish	brunâtre	bräunlich	amarronado		5

	English	français	deutsch	español	Example Varieties Exemples Beispielsorten Variedades ejemplo	Note/ Nota
91. (h)	Seed: color of inner seed coat	Pépin: couleur du tégument interne	Samen: Farbe der inneren Samenschale	Semilla: color de la cubierta interna		
PQ	white	blanc	weiß	blanco	Sucreña (SWO)	1
	light yellow	jaune clair	hellgelb	amarillo claro		2
	light brown	marron clair	hellbraun	marrón claro		3
	medium brown	marron moyen	mittelbraun	marrón medio	Comuna (SWO)	4
	dark brown	marron foncé	dunkelbraun	marrón oscuro		5
	red	rouge	rot	rojo		6
c133.	purple	violet	purpur	púrpura		7
92. (h)	<u>Polylembryonic varieties only:</u> Seed: color of cotyledons	<u>Variétés poly-embryonnaires seulement:</u> Pépin: couleur des cotylédons	<u>Nur poly-embryonische Sorten:</u> Samen: Farbe der Kotyledonen	<u>Sólo variedades poliembriónicas:</u> Semilla: color de los cotiledones		
PQ	white	blanc	weiß	blanco	Comuna (SWO)	1
	cream	crème	cremefarben	crema		2
	light green	vert clair	hellgrün	verde claro		3
c134.	dark green	vert foncé	dunkelgrün	verde oscuro		4
93. (*)	Time of maturity of fruit for consumption	Époque de maturité du fruit pour la consommation	Zeitpunkt der Genußreife	Época de madurez del fruto para su consumo		
QN	early	précoce	früh	temprana	Navelina (SWO)	3
	medium	moyenne	mittel	media	Salustiana (SWO)	5
c136.	late	tardive	spät	tardía	Valencia Late (SWO)	7
94. (*)	Fruit: parthenocarpy	Fruit: parthénocarpie	Frucht: Parthenokarpie	Fruto: partenocarpía		
QL	absent	absente	fehlend	ausente	Comuna (SWO)	1
c137.	present	présente	vorhanden	presente	Washington Navel (SWO)	9

	English	français	deutsch	español	Example Varieties Exemples Beispielsorten Variedades ejemplo	Note/ Nota
95.	Plant: self-incompatibility	Plante: auto-incompatibilité	Pflanze: Selbstinkompatibilität	Planta: auto-incompatibilidad		
QL	absent	absente	fehlend	ausente	Pineapple (SWO)	1
c138.	present	présente	vorhanden	presente		9

8. Explanations on the Table of Characteristics

8.1 *Explanations covering several characteristics*

Characteristics containing the following key in the second column of the Table of Characteristics should be examined as indicated below:

- (a) Young leaf: Observations on the young leaf should be made on actively growing spring flush.
[Not applicable for Groups 1 (Mandarin) and 2 (Oranges).]
- (b) Leaf: Observations on the leaf should be made on fully developed leaves on the middle third of the youngest spring flush branch sections not showing signs of active growth.
- (c) Flower: Unless otherwise indicated, observations on the flower bud and the flower should be made on the terminal flower bud and flower, at the time of full flowering of the variety.

Observations on the open flower should be made on the first day of opening.

- (d) Flower bud: Observations on the flower bud should be made when the petal tips are visible just before the opening of the bud.
[Not applicable for Groups 1 (Mandarin), 2 (Oranges) and 5 (Trifoliate Orange).]
- (e) Fruit: Observations on the fruit should be made at the stage of optimum ripeness. The fruit should be tested weekly and harvested as soon as this stage has been reached.

All fruits for observation should be taken from the periphery of the tree and fruit misformed as a result of clustering should not be sampled.

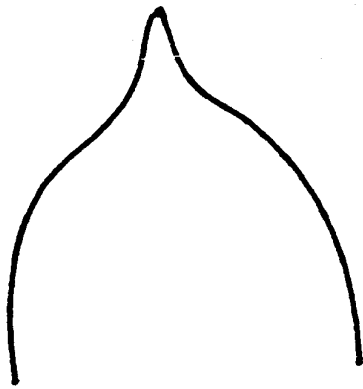
- (f) Fruit surface and fruit rind: Observations on the fruit surface and on the fruit rind should be made at the middle, between the base and apex of the fruit.
- (g) Fruit flesh: Observations on the flesh of the fruit should be made on a cross section through the middle of the fruit.
- (h) Seed: Observations on the seed should be made on the fresh seed.

8.2 *Explanations for individual characteristics*

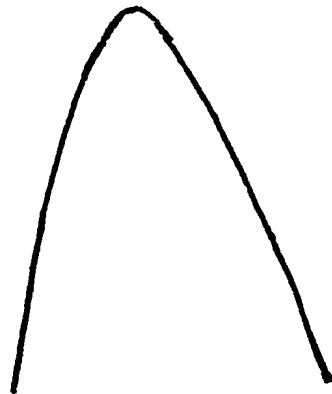
Ad. 2 (c2.): Tree: Growth habit

The observation on the growth habit of the tree should be made immediately after harvest.

Ad. 14 (c24.): Leaf blade: shape of apex



1
acuminate



2
acute

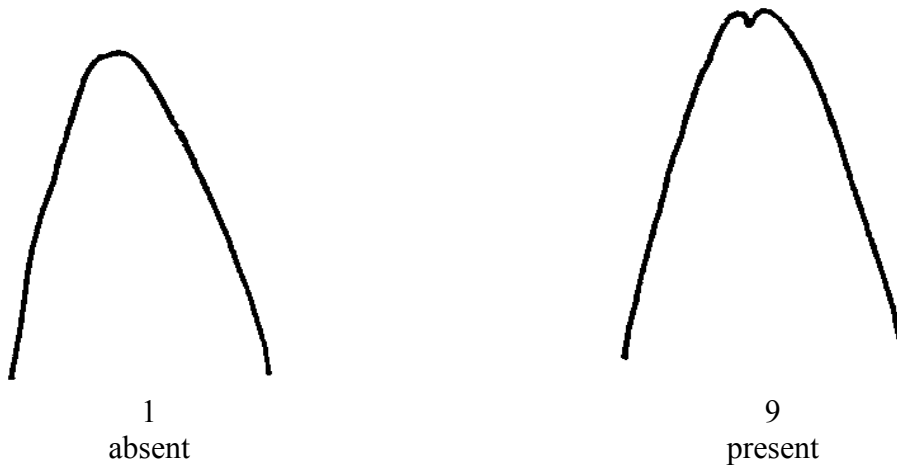


3
obtuse

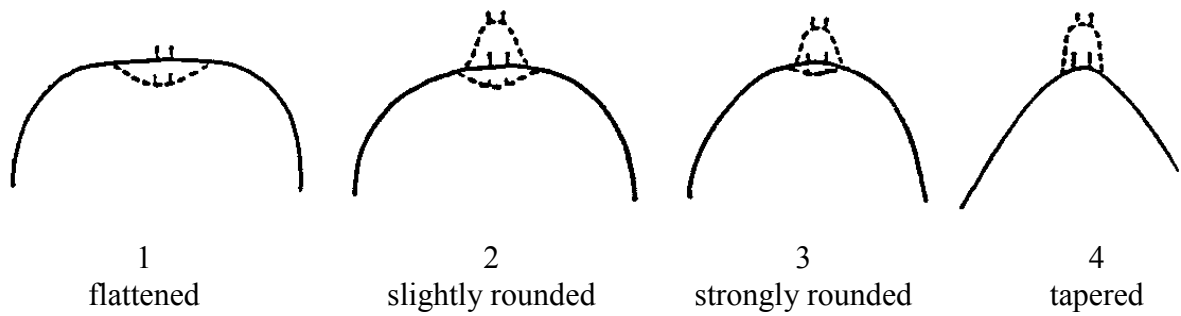


4
rounded

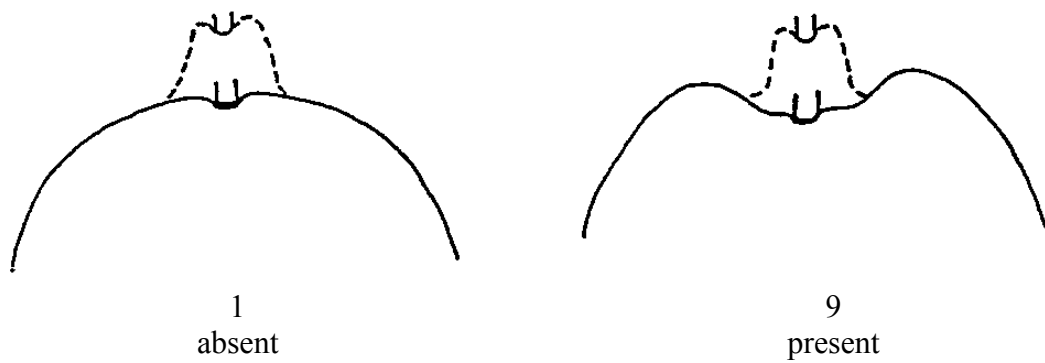
Ad. 15 (c25.): Leaf blade: emargination at tip



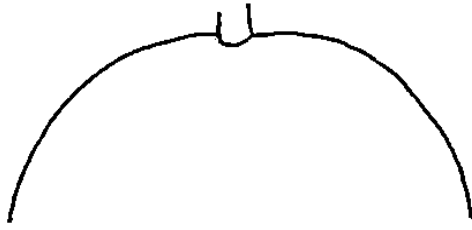
Ad. 33 (c49.): Fruit: general shape of proximal part (excluding neck, collar and depression at stalk end)



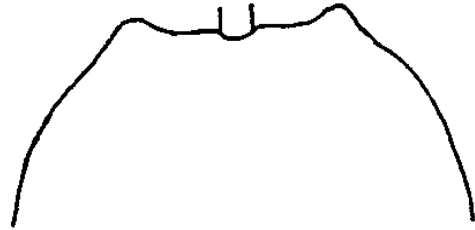
Ad. 34 (c53.): Only varieties without fruit neck: Fruit: presence of depression at stalk end



Ad. 38 (c60.): Fruit: presence of collar

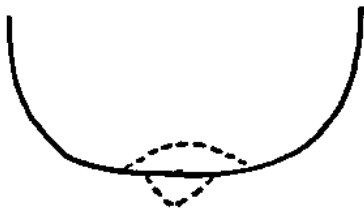


1
absent



9
present

Ad. 39 (c64.): Fruit: general shape of distal part (excluding nipple, bulging of navel and depression at distal end)



1
flattened



2
slightly rounded



3
strongly rounded

Ad. 40 (c65.): Fruit: presence of depression at distal end



1
absent



9
present

Ad. 42 (c71.): Fruit: type of areola



1
smooth



2
grooved



3
ridged

LIST OF EXAMPLE VARIETIES FOR ORANGES

Variety denomination	Subgroup
Bonanza	SWO
Caracara	SWO
Comuna	SWO
Hamlin	SWO
Lanelate	SWO
Navel Mas Baró	SWO
Navelate	SWO
Navelina	SWO
Newhall	SWO
Peret	SWO
Pineapple	SWO
Pinalate	SWO
Ricalate	SWO
Salustiana	SWO
Sangre Doblefina	SWO
Sangre Oval	SWO
Sanguinelli	SWO
Sucreña	SWO
Summer Navel	SWO
Sweet Navel	SWO
Valencia Late	SWO
Washington Navel	SWO

9. Literature

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10. Technical Questionnaire

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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	Application date: (not to be filled in by the applicant)
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TECHNICAL QUESTIONNAIRE
 to be completed in connection with an application for plant breeders' rights

1. Subject of the Technical Questionnaire

(a) Subgroup: (i) SOR ---- []

(ii) SWO --- []

(iii) HOR ---- []

(b) Species (please specify):

2. Applicant: Name

Address

Telephone No.

Fax No.

E-mail address

Breeder (if different
from applicant)

3. Proposed denomination and breeder's reference

Proposed denomination
(if available)

Breeder's reference

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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4. Information on the breeding scheme and propagation of the variety

4.1 Breeding Scheme

4.1.1 Variety resulting from:

- (a) controlled cross []
(please state parent varieties)
- (b) partially unknown cross []
(please state known parent variety(ies))
- (c) totally unknown cross []

4.1.2 Mutation []
(please state parent variety)

4.1.3 Discovery []
(please state where, when and how developed)

4.1.4 Other []
(please provide details)

4.2 Method of Propagating the Variety

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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5. Characteristics of the variety to be indicated (the number in brackets refers to the corresponding characteristic in Test Guidelines; please mark the note which best corresponds).

Characteristics	Example Varieties	Note
5.1 Fruit: length (29)		
short	Comuna (SWO)	3[]
medium	Valencia Late (SWO)	5[]
long	Newhall (SWO)	7[]
5.2 Fruit: diameter (30)		
small	Sanguinelli (SWO)	3[]
medium	Valencia Late (SWO)	5[]
large	Washington Navel (SWO)	7[]
5.3 Fruit surface: predominant color (51)		
yellow orange	Pinalate (SWO)	1[]
medium orange	Valencia Late (SWO)	2[]
dark orange	Washington Navel (SWO)	3[]
orange red	Navelate (SWO)	4[]
red	Sanguinelli (SWO)	5[]
5.4 Fruit: main color of flesh (65)		
light orange	Valencia Late (SWO)	1[]
medium orange	Washington Navel (SWO)	2[]
dark orange		3[]
orange red	Caracara (SWO)	4[]
red	Sanguinelli (SWO)	5[]

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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7. Additional information which may help in the examination of the variety

7.1 In addition to the information provided in sections 5 and 6, are there any additional characteristics which may help to distinguish the variety?

Yes No

(If yes, please provide details)

7.2 Special conditions for the examination of the variety

7.2.1 Are there any special conditions for growing the variety or conducting the examination?

Yes No

7.2.2 If yes, please give details:

7.3 Other information

A representative color photograph of the variety should accompany the Technical Questionnaire

8. Authorization for release

(a) Does the variety require prior authorization for release under legislation concerning the protection of the environment, human and animal health?

Yes No

(b) Has such authorization been obtained?

Yes No

If the answer to (b) is yes, please attach a copy of the authorization.

9. I hereby declare that, to the best of my knowledge, the information provided in this form is correct:

Applicant's name

Signature Date

[Annex follows]