

PART 2**SOFT CITRUS**

16. The standards and requirements for soft citrus, excluding soft citrus "For Processing Purposes Only", are as follows:

Definitions

- (1) Where specifically used with regard to soft citrus --

"soft citrus" means mandarins of cultivars grown from the species *Citrus reticulata* Blanco, *Citrus unshiu* Marcow, *Citrus nobilis* Lour, *Citrus deliciosa* Tenore and their hybrids.

QUALITY AND FOOD SAFETY STANDARDS**Classes**

- (2) There are three classes of soft citrus, namely "Extra Class", "Class 1" and "Class 2".

Specifications

- (3) (a) The classes mentioned in subitem (2) shall comply with the quality and food safety standards set out in Table 1 of Annexure F.
- (b) The number of scale per fruit shall not exceed the applicable limits set out in Table 3 of Annexure F.
- (c) The number of mature seeds per fruit shall not exceed the applicable limits set out in Table 4 of Annexure F.
- (d) The fruit shall comply with the diameter requirements set out in Table 3 of Annexure F: Provided that no Clementines shall be smaller than 35 mm and none of the other cultivars shall be smaller than 43 mm in diameter.
- (e) The fruit shall comply with the following internal specifications:
- (i) Minimum juice content:
- For all soft citrus, excluding Novas: 48%
 - Novas: 50%

1999-15

(ii) Minimum °Brix specifications:

- Novas 9,5 °B
- Clementines and Other Mandarins: 9,0 °B
- Satsumas and Tangelos: 8,5 °B

(iii) Minimum sugar to acid ratio:

- Clementines, Other Mandarins: 8.0:1
- Satsumas, Tangelos: 7.5:1

(iv) Acid content:

- Minimum acid content: 0,65
- Maximum acid content: 1,5. A tolerance up to 1,7% acid will be allowed, provided that brix increases by 0,5° for every increase in 0,05%.

(4) Differentiation between Late Clementines, Mandarins and Satsumas

(a)

Soft citrus type	Starting Week	Minimum °Brix	Acid Content	°Brix:Acid ratio
(i) Late Satsumas	From week 18	10	0,8	9:1
(ii) Late Clementines	From week 24	11	0,85	10:1
(iii) Late Mandarins	From week 32	12	0,85	10:1

(b) Juice content for all late varieties shall be a minimum of 50%.

Unspecified defects

(5) For the purpose of this subitem "unspecified defects" means any quality factor which detrimentally affects the quality of the fruit and which is not mentioned in Table 1 or Table 2 of Annexure F.

1999-16

ANNEXURE F

TABLE 1
QUALITY AND FOOD SAFETY STANDARDS

Quality factor	Extra Class	Class 1	Class 2
1	2	3	4
1. (a) Underdeveloped or out of season	Shall not occur	Shall not occur	Shall not occur
(b) Overmaturity			
(i) Too soft	Shall not occur	Shall not occur	Shall not occur
(ii) Separation between the albedo and the segments	Limited separation may occur as depicted in Annexure H	Limited separation may occur as depicted in Annexure H	Limited separation may occur as depicted in Annexure H
(c) Internal quality requirements	As set out in sub-item (3)(e)	As set out in sub-item (3)(e)	As set out in sub-item (3)(e)/
(d) Seeds per fruit	As set out in Table 4	As set out in Table 4	As set out in Table 4
2. External blemishes	Shall not occur	As depicted in Annexure H	As depicted in Annexure H
3. Colour	As depicted in Annexure H	As depicted in Annexure H	As depicted in Annexure H
4. Foreign matter	As determined by the Executive Officer	As determined by the Executive Officer	As determined by the Executive Officer
5. Frost damage, granulation and drying out	As set out in item 5 of Table 2	As set out in item 5 of Table 2	As set out in item 5 of Table 2

DIRECTORATE FOOD SAFETY AND QUALITY ASSURANCE

Private Bag X343, Pretoria, 0001, SOUTH AFRICA

Tel: +27 12 319 6051

Fax: +27 12 319 6265

Visit our website: www.daff.gov.za

1999-16

TABLE 2
MAXIMUM PERMISSIBLE DEVIATIONS BY NUMBER

Quality factor	Extra Class	Class 1	Class 2
1	2	3	4
1. Decay	Shall not occur	1,5%: Provided that not more than one container or 10% of the containers in a sample, whichever is the greatest, contain more than 5% of such fruit per container: Provided further that no Sour rot or Brown rot are allowed	1,5%: Provided that not more than one container or 10% of the containers in a sample, whichever is the greatest, contain more than 5% of such fruit per container: Provided further that no Sour rot or Brown rot are allowed
2. Factors which may cause decay			
(a) (i) Major injuries	0%	2%	2%
(ii) Water saturation	0%	2%	2%
(b) Minor injuries	2%	4%	4%
(c) Skin weakness	2%	2%	2%
(d) Deviations specified in paragraphs (a), (b) and (c) above and item 1	2%	5%	5%

1999-11

of this table collectively: Provided that such deviations shall individually be within the specified limits			
3. Greening disease	0%	2,5%	2,5%
4. Superficial black fungus growth on scale residues	0%	2,5%	2,5%
5. Frost damage, granulation and drying out			
(a) Major granulation: Provided that if any consignment exceeds 2% major granulation, a higher internal quality shall apply by increasing the minimum Brix by 0,5%	0%	(i) 2% if major and minor granulation combined exceed 25%; 0% major granulation for Novas	(i) 2% if major and minor granulation combined exceed 25%
		(ii) 5% if major and minor granulation combined do not exceed 25%; 0% major granulation for Novas	(ii) 5% if major and minor granulation combined do not exceed 25%
(b) Minor frost damage, granulation and drying out: Provided that no major granulation is present	Permissible	Permissible; 20% minor granulation permitted for Novas	Permissible

1999-11

6. Arthropoda infestation			
Occurrence of scale: No fruit shall contain more than twice the permitted number of scale per fruit with the exception of a tolerance of two fruit per consignment or 0,4% of the fruit examined, whichever is the greater: Provided that the percentage of fruit with scale in excess of the number permitted per fruit, for the diameter concerned, does not exceed 2%	5%	8%	8%
7. (a) Blemishes, dirty fruit, wilt, shrivelling, skin defects (skinburn, sunburn with drying out of flavedo and albedo, rough, coarse, thick, ribbed or ridged, creasing, other types of skin damage excluding injuries), malformation, bruises resulting in a soft flesh structure, underdeve-	5%	8%	8%

1999-11

	loped or out of season, over-ripeness, hail-marks and foreign matter			
	(b) Oleocellosis and progressive defects including but not limited to stem end browning, rind pitting, rind breakdown and anthracnose	0%	5%	5%
8.	Long stems	5%	5%	5%
9.	Absence of buttons	20%	20%	20%
10.	(a) Deviations from requirements for containers and 6 packing requirements prescribed in items 5 and 6	5%	10%	10%
	(b) Incorrectly sealed flaps (excluding loose flaps)	5%	5%	5%
	(c) Loose flaps	Not permissible	Not permissible	Not permissible
11.	Minimum diameter and uniformity in size			
	(a) Minimum diameter (too small)	10%	10%	10%

1999-10

(b) Lack of uniformity in size in the same container	10%	10%	10%
12. Deviations from marking requirements as prescribed in item 8, excluding date codes	Two containers per consignment	Two containers per consignment	Two containers per consignment
13. Unpunched out ventilation holes	4%	4%	4%
14. Absence of date codes	25%	25%	25%
15. (a) Deviations not specified in items 1 to 7 of this table collectively, that affect the exterior appearance	5%	8%	8%
(b) Deviations specified in paragraph above and items 1 to 7 of this table collectively, that influence the external appearance: Provided that such deviations shall be individually within the specified limits: Provided further that the deviation for	5%	8%	8%

1999-11

creasing for Class 2 not be included in this collective 8%			
--	--	--	--

NOTE:

- No specification



agriculture,
forestry & fisheries

Department:
Agriculture, Forestry and Fisheries
REPUBLIC OF SOUTH AFRICA



1999-13

TABLE 3
SIZE REFERENCES, DIAMETER REQUIREMENTS AND LIMITS FOR SCALE

Kind of fruit	Size reference	Diameter (mm)	Maximum number of scale (all types collectively) per fruit - (All classes)
Soft citrus	1 - XXX	78 and above	8
	1 - XX	67 - 78	7
	1 - X	63 - 74	7
	1	63 - 72	7
	2	58 - 69	6
	3	54 - 64	6
	4	50 - 60	6
	5	46 - 56	5
	6*	43 - 52	5
	7	41 - 48	5
	8	39 - 46	4
	9	37 - 44	4
	10	35 - 42	4

Note:

* Size below 43 mm refer only to Clementines

1999-16

TABLE 4
LIMITS FOR SEED CONTENT

Kind of fruit	Cultivar	Maximum average number of mature seeds per fruit in a working sample of 12 fruit
Soft Citrus (Mandarins)		
(a) Satsumas	Aoshima; Belabela; Dobashi-Beni; Kuno; Miho Wase; Miyagawa Wase; Okitsu Wase; Owari; Primosole; Ueno; Sonet; Queen	1; provided that one fruit may contain a maximum of 2 seeds
(b) Clementines *	Andes-1 (Clemenluz); Arrufatina; Basol; Clemenpons; Clementard; Clem Late; LL; Esbal; Fina; Marisol; Nules; Orogrande; Oronules; Oroval; SRA 63	3; provided that one fruit may contain a maximum of 6 seeds
(c) Tangelos	Minneola Winola Unspecified Tangelo	6; provided that one fruit may contain a maximum of 9 seeds 3; provided that one fruit may contain a maximum of 6 seeds 6; provided that one fruit may contain a maximum of 12 seeds
(d) Other Soft Citrus	Kiyomi; Page; Primosole ARCCIT 1519 (African Sunset); Fairchild; Mor; Nadorcott; Nova; Orri; Temple; Thoro; Samba; Scarlett; Sweet Spring; ARCC 1614 (Valley Gold) Nouvelle; Tambor (Ortanique)	1; provided that one fruit may contain a maximum of 2 seeds 3; provided that one fruit may contain a maximum of 6 seeds 6; provided that one fruit may contain a maximum of 9 seeds

1999-16

		Murcott	20; provided that one fruit may contain a maximum of 30 seeds
(e)	Mandarins	Unspecified	6; provided that one fruit may contain a maximum of 12 seeds
(f)	Tangerines	Unspecified	Unspecified

- * If seed content exceeds an average of 3 seeds per fruit and not more than an average of 6 seeds per fruit, and provided that 1 fruit may contain a maximum of 12 seeds, then the indication on the container may be marked as "Clementines with seeds". Furthermore, the font size must be at least as large as the font used for the cultivar indication.



agriculture,
forestry & fisheries

Department:
Agriculture, Forestry and Fisheries
REPUBLIC OF SOUTH AFRICA



1999-16

TABLE 5
CULTIVAR INDICATIONS ON CONTAINERS

Kind of fruit	Cultivar	Indication on container **: ***
(1) Satsumas*	Aoshima, Belabela, Dobashi-Beni, Kuno, Miho Wase, Miyagawa Wase, Okitsu Wase, Owari, Ueno, Primosole @, Queen @ Sonet~	Satsumas; Cultivar followed by the word "Satsumas" or "Mandarins" Late Satsumas & Satsumas
(2) Clementines* Late Clementines*	Andes-1 ; Arrufatina, Basol, Clement-pons, Clementard, Clem Late, Esbal, Fina, LL, Marisol, Nules, Orogrande, Oronules, Oroval, SRA 63 Clem Late, LL	Clemenluz™; Clementines; Cultivar followed by the word "Clementines" or "Mandarins" or "Tangerines" Clementines; Late Clementines; Clementine Lates; Cultivar followed by the word "Clementines" or "Mandarins" or "Tangerines" Late Clementines; Clementine Lates; Cultivar followed by the word "Clementines" or "Mandarins" or "Tangerines"
(3) Other Mandarins*,****	ARCCIT 1519 (B24/African Sunset) ARCCIT 1614 (B17/Valley Gold) Clemcott (Murcott x Clem) Ellendale	African Sunset; Mandarins; Late Mandarins & Valley Gold; Mandarins; Late Mandarins & Clemcott; Tangerines; Mandarins Ellendale; Mandarins; Late Mandarins &

1999-16

Empress	Empress; Mandarins
Fairchild	Fairchild; Mandarins
Gold Nugget	Gold Nugget; Mandarins
Hadass	Hadass; Mandarins; Late Mandarins &
IRM1	IRM1 or IRM2; Low seeded Murcott; Honey Murcott;
IRM2	Mandarins; Late Mandarins &
Kiyomi\$	Kiyomi; Mandarins
Leanri	Leanri; Low –seeded Clemcott; Mandarins
Mandalate	Mandalate;Mandalate Mandarins; Mandalate Late Mandarins&
Minneola	Minneola;Mandarins;Tangelo;Late Mandarins&
Mor	Mor, Murcott; Honey Murcott;Low seeded Murcott; Mandarins; Late Mandarins &
Murcott	Murcott, Honey Murcott; Honey Tangerine; Mandarins; Late Mandarins &
Nadorcott	Nadorcott; Mandarins; Late Mandarins &
ARCCIT9 (ARC Nadorcott LS)	Nadorcott LS; Nadorcott; Mandarins; Late Mandarins &
Nectar	Nectar; Mandarins
Nouvelle	Nouvelle; Mandarins; Late Mandarins &

1999-16

Nova	Nova; Clemenvilla; Mandarins
Nova ARC	Nova Seedless ; Nova Clemenvilla ; Mandarins
Orri (Or)	Or, Orri, Orri (Clemen'Or); Mandarins; Late Mandarins &
Page	Page; Mandarins
Primosole @	Primosole; Mandarins
Queen @	Queen; Mandarins
RHM	RHM ; Murcott Early; Mandarins
Rishon	Rishon; Mandarins
Samba	Samba; Mandarins
Shani	Shani; Mandarins
Shasta Gold TDE2	Shasta Gold; Mandarins
Sonet~	Sonet; Mandarins
Sweet Spring	Sweet Spring; Mandarins; Late Mandarins &
Tahoe Gold TDE3	Tahoe Gold; Mandarins
Tambor; Ortanique	Tambor; Mandarins; Late Mandarins &
Tango	Tango; Mandarins; Late Mandarins &
Tanor	Tanor; Mandarins
Thoro Temple	Minki; Royal; Scarlet; Thoro Temple; Temple; Mandarins; Late Mandarins&

1999-16

	Winola	Winola;Mandarins; Late Mandarins&
	Yosemite Gold TDE4	Yosemite Gold; Mandarins

Notes

- * Singular or plural for cultivar group will be acceptable
- ** Indication on container using one word or two words (i.e. joined names or not joined names) will be acceptable (e.g. ThoroTemple or Thoro Temple)
- *** Where appropriate, indication on carton with or without trademark symbol ™ will be acceptable.
- **** Cultivar followed by the word "Mandarins"
- \$ Kiyomi is a 50% Mandarin and 50% Orange Hybrid
- & Must comply with internal and external quality specifications for Late Satsumas, Late Clementines or Late Mandarins when packed and marked as "Late"
- @ Primosole and Queen are a 50% Satsuma and 50% Mandarin Hybrid
- ~ Sonet is a 50% Satsuma and 50% Mandarin Hybrid



forestry & fisheries

Department:
Agriculture, Forestry and Fisheries
REPUBLIC OF SOUTH AFRICA



1999-12

TABLE 6
TEMPERATURE CORRECTION TABLE WHERE THE REFRACTOMETER IS
USED AT TEMPERATURES OTHER THAN 20 °C

Temp °C	Percentage of sugar										
	0	5	10	15	20	25	30	40	50	60	70
Subtract from percentage of sugar											
10	0.50	0.54	0.58	0.61	0.64	0.66	0.68	0.72	0.74	0.76	0.79
11	.46	.49	.53	.55	.58	.60	.62	.65	.67	.69	.71
12	.42	.45	.48	.50	.52	.54	.56	.58	.60	.61	.63
13	.37	.40	.42	.44	.46	.48	.49	.51	.53	.54	.55
14	.33	.35	.37	.39	.40	.41	.42	.44	.45	.46	.48
15	.27	.29	.31	.33	.34	.34	.35	.37	.38	.39	.40
16	.22	.24	.25	.26	.27	.28	.28	.30	.30	.31	.32
17	.17	.18	.19	.20	.21	.21	.21	.22	.23	.23	.24
18	.12	.13	.13	.14	.14	.14	.14	.15	.15	.16	.16
19	.06	.06	.06	.07	.07	.07	.07	.08	.08	.08	.08
Add to percentage of sugar											
21	0.06	0.07	0.07	0.07	0.07	0.08	0.08	0.08	0.08	0.08	0.08
22	.13	.13	.14	.14	.15	.15	.15	.15	.16	.16	.16
23	.19	.20	.21	.22	.22	.23	.23	.23	.24	.24	.24
24	.26	.27	.28	.29	.30	.30	.31	.31	.31	.32	.32
25	.33	.35	.36	.37	.38	.38	.39	.40	.40	.40	.40
26	.40	.42	.43	.44	.45	.46	.47	.48	.48	.48	.48
27	.48	.50	.52	.53	.54	.55	.55	.56	.56	.56	.56
28	.56	.57	.60	.61	.62	.63	.63	.64	.64	.64	.64
29	.64	.66	.68	.69	.71	.72	.72	.73	.73	.73	.73
30	.72	.74	.77	.78	.79	.80	.80	.81	.81	.81	.81