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TG/242/1
ORIGINAL: English
DATE: 2008-04-09

INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

GENEVA

PORTULACA *

UPOV Code: PORTU_OLE

Portulaca oleracea L.

GUIDELINES

FOR THE CONDUCT OF TESTS

FOR DISTINCTNESS, UNIFORMITY AND STABILITY

Alternative Names:*

Botanical name	*English*	*French*	*German*	*Spanish*
Portulaca oleracea L.	Portulaca, Purslane	Pourpier	Portulak	Verdolaga

The purpose of these guidelines ("Test Guidelines") is to elaborate the principles contained in the General Introduction (document TG/1/3), and its associated TGP documents, into detailed practical guidance for the harmonized examination of distinctness, uniformity and stability (DUS) and, in particular, to identify appropriate characteristics for the examination of DUS and production of harmonized variety descriptions.

ASSOCIATED DOCUMENTS

These Test Guidelines should be read in conjunction with the General Introduction and its associated TGP documents.

* 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 Website (www.upov.int), for the latest information.]

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1. Subject of these Test Guidelines

These Test Guidelines apply to all varieties of *Portulaca oleracea* L.

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 rooted cuttings or seed.

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

vegetatively propagated varieties: 25 rooted cuttings;

seed-propagated varieties: 600 seeds.

In the case of seed, the seed should meet the minimum requirements for germination, species and analytical purity, health and moisture content, specified by the competent authority. In cases where the seed is to be stored, the germination capacity should be as high as possible and should, be stated by the applicant.

2.4 The plant material supplied should be visibly healthy, not lacking in vigor, nor affected by any important pest or disease.

2.5 The plant material should 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 Number of Growing Cycles

The minimum duration of tests should normally be a single growing cycle.

3.2 Testing Place

Tests are normally conducted at one place. In the case of tests conducted at more than one place, guidance is provided in TGP/9 “Examining Distinctness”.

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.

3.3.2 Unless otherwise stated, all observations should be made at the time of full flowering.

3.3.3 Because daylight varies, color determinations made against a color chart should be made either in a suitable cabinet providing artificial daylight or in the middle of the day in a room without direct sunlight. The spectral distribution of the illuminant for artificial daylight should conform with the CIE Standard of Preferred Daylight D 6500 and should fall within the tolerances set out in the British Standard 950, Part I. These determinations should be made with the plant part placed against a white background.

3.4 Test Design

3.4.1 In the case of vegetatively propagated varieties, each test should be designed to result in a total of at least 20 plants.

3.4.2 In the case of seed-propagated varieties, each test should be designed to result in a total of at least 40 plants.

3.4.3 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.

3.5 Number of Plants / Parts of Plants to be Examined

3.5.1 Vegetatively propagated varieties: unless otherwise indicated, all observations on single plants should be made on 10 plants or parts taken from each of 10 plants and any other observations made on all plants in the test.

3.5.2 Seed-propagated varieties: unless otherwise indicated, all observations on single plants should be made on 20 plants or parts taken from each of 20 plants and any other observations made on all plants in the test.

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 differences observed between varieties may be so clear that more than one growing cycle is not necessary. In addition, in some circumstances, the influence of the environment is not such that more than a single growing cycle is required to provide assurance that the differences observed between varieties are sufficiently consistent. One means of ensuring that a difference in a characteristic, observed in a growing trial, is

sufficiently consistent is to examine the characteristic in at least two independent growing cycles.

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

4.2.1 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.

4.2.2 Vegetatively propagated varieties

For the assessment of uniformity of vegetatively propagated varieties, a population standard of 1% and an acceptance probability of at least 95% should be applied. In the case of a sample size of 20 plants, one off-type is allowed.

4.2.3 Seed-propagated varieties

For the assessment of uniformity of seed-propagated varieties which are cross-pollinated, the recommendations in the General Introduction for cross-pollinated varieties should be followed, as appropriate.

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 seed or 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 are 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) Plant: growth habit (characteristic 1)
(b) Flower: petaloid staminodes (characteristic 14)
(c) Flower: diameter (characteristic 16)
(d) Petal: number of colors (macule excluded) (characteristic 20)
(e) Petal: main color (macule excluded) (characteristic 21)
(f) Only varieties with more than one color
Petal: secondary color (macule excluded) (characteristic 22)
(g) Only varieties with more than one color
Petal: distribution of secondary color (macule excluded) (characteristic 23)

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.

6.5 Legend

(*) Asterisked characteristic – see Chapter 6.1.2

QL: Qualitative characteristic – see Chapter 6.3
QN: Quantitative characteristic – see Chapter 6.3
PQ: Pseudo-qualitative characteristic – see Chapter 6.3

(a)-(f) See Explanations on the Table of Characteristics in Chapter 8.1

(+) See Explanations on the Table of Characteristics in Chapter 8.2

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

		English	français	Deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
1. (*) (+)		**Plant: growth habit**	**Plante: port**	**Pflanze: Wuchsform**	**Planta: porte**		
QL	**(a)**	semi-upright	demi-dressé	halbaufrecht	semierguida	Summer Duet Rose	1
		creeping	rampant	kriechend	rastrero	Yubi Apricot	2
2.		**Only semi-upright varieties: Plant: height**	**Variétés demi dressées seulement: Plante: hauteur**	**Nur halbaufrechte Sorten: Pflanze: Höhe**	**Sólo variedades semierguidas: Planta: altura**		
QN	**(a)**	short	courte	niedrig	baja		3
		medium	moyenne	mittel	media	Summer Baby Orange	5
		tall	haute	hoch	alta		7
3. (*) (+)		**Plant: width**	**Plante: largeur**	**Pflanze: Breite**	**Planta: anchura**		
QN	**(a)**	narrow	étroite	schmal	estrecha	Summer Joy Rose	3
		medium	moyenne	mittel	media	Summer Baby Orange	5
		broad	large	breit	ancha		7
4. (*)		**Plant: number of shoots**	**Plante: nombre de ramifications**	**Pflanze: Anzahl der Triebe**	**Planta: número de las ramificaciones**		
QN	**(a)**	few	petit	gering	pocas		3
		medium	moyen	mittel	medio	Summer Baby Pink	5
		many	grand	groß	abundantes	Summer Baby Orange	7
5. (*) (+)		**Shoot: anthocyanin coloration**	**Pousse: pigmentation anthocyanique**	**Trieb: Anthocyanfärbung**	**Tallo: pigmentación antociánica**		
QN	(a)	absent or very weak	absente ou très faible	fehlend oder sehr gering	ausente o muy débil	Sun White	1
		weak	faible	gering	débil	Summer Joy Pink	3
		medium	moyenne	mittel	media	Yubi Apricot	5
		strong	forte	stark	fuerte	Yubi Rose	7

		English	français	Deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
6. (*)		**Leaf: petiole**	**Feuille: pétiole**	**Blatt: Blattstil**	**Hoja: pecíolo**		
QL	**(b)**	absent	absent	vorhanden	ausente	Sun White	1
		present	présent	fehlend	presente	Yubi Rose	9
7.		**Leaf blade: length**	**Limbe: longueur**	**Blattspreite: Länge**	**Limbo: longitud**		
QN	**(b)**	short	court	kurz	corto		3
		medium	moyen	mittel	medio	Summer Joy Deep Rose	5
		long	long	lang	largo		7
8. (*)		**Leaf blade: width**	**Limbe: largeur**	**Blattspreite: Breite**	**Limbo: anchura**		
QN	**(b)**	narrow	étroit	schmal	estrecho	Valencia Ivory Poach	3
		medium	moyen	mittel	medio	Summer Joy Red	5
		broad	large	breit	ancho		7
9. (*) (+)		**Leaf blade: shape**	**Limbe: forme**	**Blattspreite: Form**	**Limbo: forma**		
QL	**(b)**	elliptic	elliptique	elliptisch	elíptica	Sun Yellow	1
		spatulate	spatulée	spatelförmig	espatulada	Summer Baby Orange	2
10. (*)		**Leaf blade: intensity of green color**	**Limbe: intensité de la couleur verte**	**Blattspreite: Intensität der Grünfärbung**	**Limbo: intensidad del color verde**		
QN	**(b) (c)**	light	claire	hell	clara	Summer Baby Pink	3
		medium	moyenne	mittel	media	Yubi Apricot	5
		dark	foncée	dunkel	oscura		7
11. (*)		**Leaf blade: variegation**	**Limbe: panachure**	**Blattspreite: Panaschierung**	**Limbo: variegación**		
QL	**(b) (c)**	absent	absente	fehlend	ausente	Yubi Apricot	1
		present	présente	vorhanden	presente	Flare Cherry	9

		English	français	Deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
12. (*)		**Leaf blade: color of variegation**	**Limbe: couleur de panachure**	**Blattspreite: Farbe der Panaschierung**	**Limbo: color de variegación**		
PQ	**(b) (c)**	light green yellow	vert jaune clair	hell grüngelb	amarillo verdoso claro	Yubi Duet Song	1
		greyish green	vert grisâtre	gräulichgrün	verde grisáceo	Flare Cherry	2
		pink white	blanc rosé	rosaweiß	blanco rosáceo	Valencia Ivory Poach	3
13. (*)		**Leaf blade: anthocyanin coloration of margin**	**Limbe: pigmentation anthocyanique du bord**	**Blattspreite: Anthocyanfärbung am Rand**	**Limbo: pigmentación antociánica del borde**		
QL	**(b) (c)**	absent	absente	fehlend	ausente	Yubi Apricot	1
		present	présente	vorhanden	presente	Summer Baby Orange	9
14. (*) (+)		**Flower: petaloid staminodes**	**Fleur: staminodes pétaloïdes**	**Blüte: Nebenkronen-staminodien**	**Flor: estaminodios petaloides**		
QL	**(d)**	absent	absentes	fehlend	ausentes	Summer Joy Pink	1
		present	présentes	vorhanden	presentes	Summer Baby Orange	9
15. (*) (+)		**Only varieties with petaloid staminodes absent: Flower: shape in lateral view**	**Uniquement les variétés dont les staminodes pétaloïdes sont absentes : Fleur : forme en vue latérale**	**Nur Sorten ohne Nebenkronen-staminodien: Blüte: Form in der Seitenansicht**	**Sólo variedades sin estaminodios petaloides: Flor: forma en vista lateral**		
QN	**(d)**	flat or slightly concave	plate ou légèrement concave	gerade oder leicht konkav	plana o ligeramente cóncava	Summer Duet Rose	1
		moderately concave	modérément concave	mäßig konkav	moderadamente cóncava	Summer Joy Golden	2
		strongly concave	fortement concave	stark konkav	fuertemente cóncava	Summer Joy Red	3
16. (*)		**Flower: diameter**	**Fleur: diamètre**	**Blüte: Durchmesser**	**Flor: diámetro**		
QN	**(d)**	small	petit	klein	pequeño	Valencia Ivory Poach	3
		medium	moyen	mittel	medio	Yubi Apricot	5
		large	grand	groß	grande	Summer Joy Red	7

		English	français	Deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
17.		**Calyx: anthocyanin coloration**	**Calice: pigmentation anthocyanique**	**Kelchblatt: Antho-cyanfärbung**	**Cáliz: pigmentación antociánica**		
QL	**(d)**	absent	absente	fehlend	ausente	Sun White	1
		present	présente	vorhanden	presente	Yubi Rose	9
18. (*) (+)		**Petal: macule**	**Pétale: macule**	**Blütenblatt: Fleck**	**Pétalo: mácula**		
QL	**(d) (e)**	absent	absente	fehlend	ausente	Summer Joy Red	1
		present	présente	vorhanden	presente	Yubi Apricot	9
19. (*)		**Petal: color of macule**	**Pétale: couleur de la macule**	**Blütenblatt: Farbe des Flecks**	**Pétalo: color de la mácula**		
PQ	**(d) (e)**	RHS Colour Chart (indicate reference number)	Code de couleurs RHS (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)	Carta de colores RHS (indíquese el número de referencia)		
20. (*) (+)		**Petal: number of colors (macule excluded)**	**Pétale: nombre de couleurs (exceptée la macule)**	**Blütenblatt: Anzahl Farben (Fleck ausgenommen)**	**Pétalo: número de colores (excluida la mácula)**		
QL	**(d) (e)**	one	une	eine	uno	Summer Joy Red	1
		two	deux	zwei	dos	Sun Rise	2
		more than two	plus de deux	mehr als zwei	más de dos		3
21. (*) (+)		**Petal: main color (macule excluded)**	**Pétale: couleur principale (exceptée la macule)**	**Blütenblatt: Hauptfarbe (Fleck ausgenommen)**	**Pétalo: color principal (excluida la mácula)**		
PQ	**(d) (e)**	RHS Colour Chart (indicate reference number)	Code de couleurs RHS (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)	Carta de colores RHS (indíquese el número de referencia)		
22. (*) (+)		**Only varieties with more than one color: Petal: secondary color (macule excluded)**	**Seulement les variétés à plus d'une couleur: Pétale: couleur secondaire (exceptée la macule)**	**Nur Sorten mit mehr als einer Farbe: Blütenblatt: Sekundärfarbe (Fleck ausge-nommen)**	**Sólo variedades con más de un color: Pétalo: color secundario (excluida la mácula)**		
PQ	**(d) (e)**	RHS Colour Chart	Code de couleurs RHS	RHS-Farbkarte	Carta de colores RHS		

		English	français	Deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
23. (*) (+)		**Only varieties with more than one color: Petal: distribution of secondary color (macule excluded)**	**Seulement les variétés à plus d'une couleur: Pétale: répartition de la couleur secondaire (exceptée la macule)**	**Nur Sorten mit mehr als einer Farbe: Blütenblatt: Verteilung der Sekundärfarbe (Fleck ausgenommen)**	**Sólo variedades con más de un color: Pétalo: distribución del color secundario (excluida la mácula)**		
PQ	**(d) (e)**	in stripes	en stries	in Streifen	en franjas	Yubi Apricot	1
		color gradient towards tip	gradient de couleur jusqu'au sommet	Farbverlauf zur Spitze	gradiente de color hacia la punta	Summer Duet Ero	2
		on margin	en bordure	an den Rändern	en los bordes	Summer Duet Rose	3
24. (*) (+)		**Only varieties with more than two colors: Petal: distribution of tertiary color (macule excluded)**	**Seulement les variétés à plus de deux couleurs: Pétale: répartition de la couleur tertiaire (exceptée la macule)**	**Nur Sorten mit mehr als zwei Farben: Blütenblatt: Verteilung der Tertiärfarbe (Fleck ausgenommen)**	**Únicamente variedades con más de dos colores: Pétalo: distribución del color terciario (excluida la mácula)**		
PQ	**(d) (e)**	in stripes	en stries	in Streifen	en franjas	Yubi Apricot	1
		color gradient towards tip	gradient de couleur jusqu'au sommet	Farbverlauf zur Spitze	gradiente de color hacia la punta	Summer Duet Ero	2
		on margin	en bordure	am Rand	en los bordes	Summer Duet Rose	3
25.		**Petal: length**	**Pétale: longueur**	**Blütenblatt: Länge**	**Pétalo: longitud**		
QN	**(d)**	short	court	kurz	corta	Valencia Ivory Poach	3
		medium	moyen	mittel	media	Summer Joy Wine Red	5
		long	long	lang	larga	Summer Joy Red	7
26.		**Petal: width**	**Pétale: largeur**	**Blütenblatt: Breite**	**Pétalo: anchura**		
QN	**(d)**	narrow	étroit	schmal	estrecha	Summer Baby Orange	3
		medium	moyen	mittel	media	Sono Pink	5
		broad	large	breit	ancha	Summer Joy Pink	7

		English	français	Deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
27. (*) (+)		**Petal: emargination**	**Pétale: échancrure**	**Blütenblatt: Kerbung**	**Pétalo: emarginación**		
QN	**(d) (e)**	absent or shallow	absente ou peu profonde	fehlend oder flach	ausente o poco profunda	Yubi Apricot	1
		medium	moyenne	mittel	media	Yubi Rose	2
		deep	profonde	tief	profunda		3
28. (*)		**Petaloid staminodes: main color**	**Staminodes pétaloïdes: couleur principale**	**Nebenkronen-staminodien: Hauptfarbe**	**Estaminodios petaloides: color principal**		
PQ	**(d) (e)**	RHS Colour Chart (indicate reference number)	Code de couleurs RHS (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)	Carta de colores RHS (indíquese el número de referencia)		
29.		**Style: anthocyanin coloration**	**Style: pigmentation anthocyanique**	**Griffel: Anthocyanfärbung**	**Estilo: pigmentación antociánica**		
QN	**(d)**	absent or very weak	absente ou très faible	fehlend oder sehr gering	ausente o muy débil	Sono Cream	1
		weak	faible	gering	débil	Valencia Ivory Poach	3
		medium	moyenne	mittel	media	Yubi Rose	5
		strong	forte	stark	fuerte	Yubi Apricot	7
30. (*)		**Time of beginning of flowering**	**Époque de début de floraison**	**Zeitpunkt des Blühbeginns**	**Época de comienzo de la floración**		
QN		early	précoce	früh	temprana	Summer Baby Lemon Yellow	3
		medium	moyenne	mittel	media	Summer Joy Ero	5
		late	tardive	spät	tardía	Valencia Ivory Poach	7

8. Explanations on the Table of Characteristics

8.1 Explanations covering several characteristics

Unless otherwise noted, all characteristics should be observed at time of full flowering.

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

(a) Observations which should be made at one month after first flowering.
(b) Observations on the leaf which should be made on fully expanded leaves in the middle third of the flowering shoot at one month after first flowering.
(c) Observations of the leaf color which should be made on the upper side.
(d) Observations on the flower which should be made on a fully opened flower at anther dehiscence.
(e) Observations of the petal which should be made on the upper side.

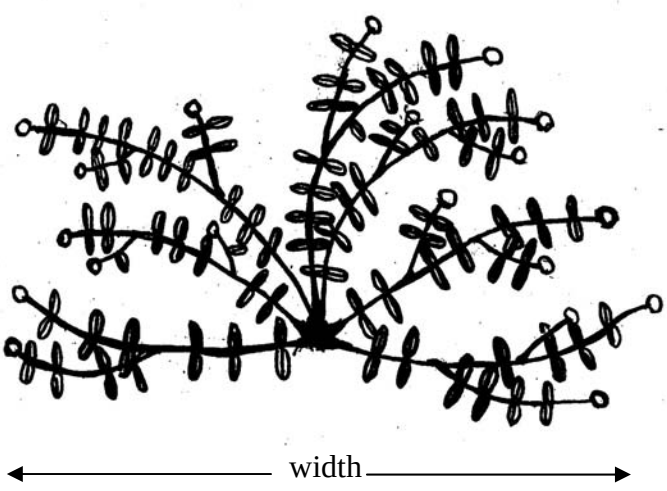
8.2 Explanations for individual characteristics

Ad. 1: Plant: growth habit

1
semi-upright

2
creeping

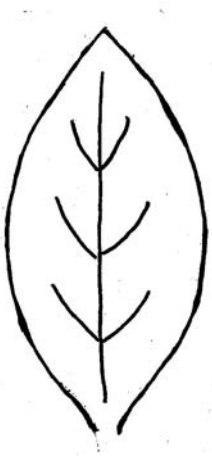
Ad. 3: Plant: width



Ad. 5: Shoot: anthocyanin coloration

The anthocyanin coloration should be observed in the middle of the shoot.

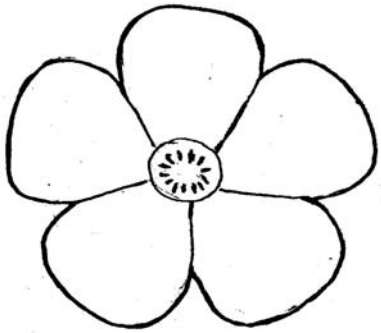
Ad. 9: Leaf blade: shape



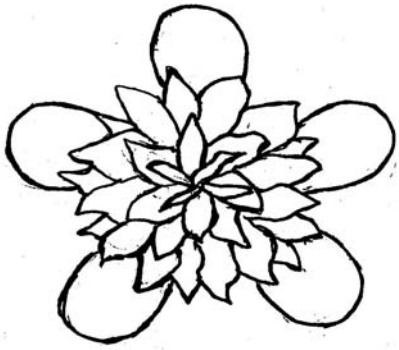
1
elliptic

2
spatulate

Ad. 14: Flower: petaloid staminodes



1
absent



2
present

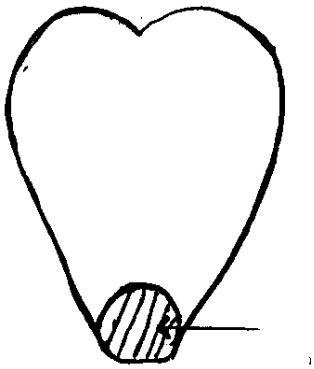
Ad. 15: Only varieties with petaloid staminodes absent: Flower: shape in lateral view

1
flat to slightly concave

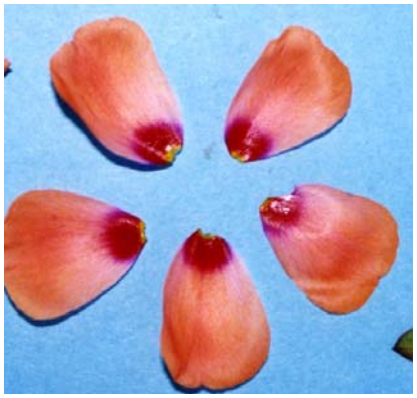
2
moderately concave

3
strongly concave

Ad. 18: Petal: macule



Ad. 20: Petal: number of colors (macule excluded)



1
one

2
two

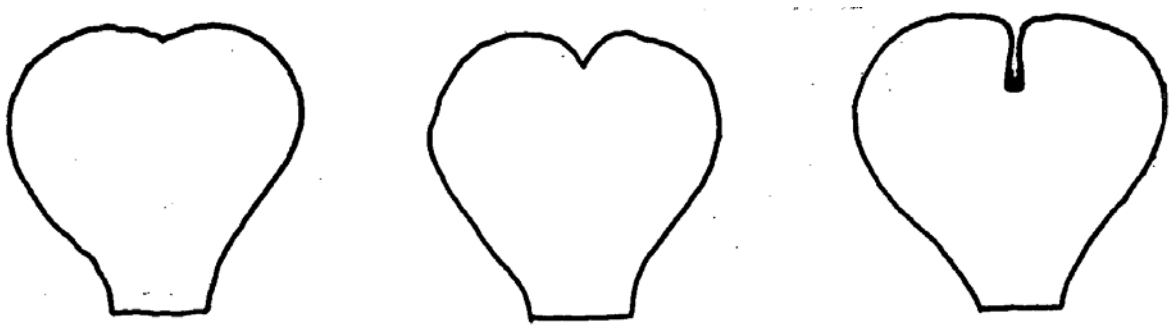
Ad. 21: Petal: main color (macule excluded)
Ad. 22: Only varieties with more than one color: Petal: secondary color (macule excluded)
Ad. 23: Only varieties with more than one color: Petal: distribution of secondary color (macule excluded)
Ad. 24: Only varieties with more than two colors: Petal: distribution of tertiary color (macule excluded)

The main color is the color with the largest surface area.
The secondary color is the color with secondary large surface area.
The tertiary color is the color with the third largest surface area.

Ad. 23: Only varieties with more than one color: Petal: distribution of secondary color (macule excluded)
Ad. 24: Only varieties with more than two colors: Petal: distribution of tertiary color (macule excluded)

1	2	3
in stripes	color gradient towards tip	on margin

Ad. 27: Petal: emargination



1	2	3
absent or shallow	medium	deep

9. Literature

Honda, S., 1991: Illustrated Horticultural Flora in Color. The Hokuryukan Ltd., Tokyo, JP, 22 pp.

Makino, T., 1979: Makino's New Illustrated Flora of Japan. The Hokuryukan Ltd., Tokyo, JP, pp. 138 to 139.

Noma, S., 1981: The Grand Dictionary of Horticulture Volume 8. The Kodansha Ltd., Tokyo, JP, 55 pp.

Suzuki, N., 1998: The Color Dictionary of Horticulture. The Yama & Keikoku Ltd., Tokyo, JP, pp. 344 to 345.

Tsukamoto, Y., 1984: The Grand Dictionary of Flower Horticulture. The Youkendo Ltd., Tokyo, JP, pp. 710 to 711.

Tsukamoto, Y., 1991: The Grand Dictionary of Horticulture Volume 3. The Shogakukan Ltd., Tokyo, JP, 40 pp.

10. Technical Questionnaire

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:

	Application date: (not to be filled in by the applicant)

TECHNICAL QUESTIONNAIRE
to be completed in connection with an application for plant breeders' rights

1. Subject of the Technical Questionnaire

1.1 Botanical Name	*Portulaca oleracea* L.
1.2 Common name	Portulaca

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:

[#]4. Information on the breeding scheme and propagation of the variety

4.1 Breeding scheme

Variety resulting from:

4.1.1 Crossing

(a) controlled cross [ ]
(please state parent varieties)

(b) partially known cross [ ]
(please state known parent variety(ies))

(c) unknown cross [ ]

4.1.2 Mutation [ ]
(please state parent variety)

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

4.1.4 Other [ ]
(please provide details)

4.2 Method of propagating the variety

4.2.1 Vegetative propagation

(a) cuttings [ ]

(b) *in vitro* propagation [ ]

(c) other (state method) [ ]

4.2.2 Seed [ ]

4.2.3 Other [ ]
(please provide details)

[#] Authorities may allow certain of this information to be provided in a confidential section of the Technical Questionnaire.

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:

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 (1)	**Plant: growth habit**		
	semi-upright	Summer Duet Rose	1[ ]
	creeping	Yubi Apricot	2[ ]
5.2 (14)	**Flower: petaloid staminodes**		
	absent	Summer Joy Pink	1[ ]
	present	Summer Baby Orange	9[ ]
5.3 (16)	**Flower: diameter**		
	small	Valencia Ivory Poach	3[ ]
	medium	Yubi Apricot	5[ ]
	large	Summer Joy Red	7[ ]
5.4 (20)	**Petal: number of colors (macule excluded)**		
	one	Summer Joy Red	1[ ]
	two	Sun Rise	2[ ]
	more than two		3[ ]
5.5i (21)	**Petal: main color (macule excluded)**		
	RHS Colour Chart (indicate reference number)		
	……..		

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:

	Characteristics	Example Varieties	Note
5.5ii (21)	**Petal: main color (macule excluded)**		
	white		1[ ]
	yellow		2[ ]
	yellow orange		3[ ]
	orange		4[ ]
	pink		5[ ]
	red		6[ ]
	purple		7[ ]
	violet		8[ ]
	other colour (indicate) ……		9[ ]
5.6i (22)	**<u>Only varieties with more than one color</u>: Petal: secondary color (macule excluded)**		
	RHS Colour Chart (indicate reference number)		
	…….		
5.6ii (22)	**<u>Only varieties with more than one color</u>: Petal: secondary color (macule excluded)**		
	yellow		1[ ]
	orange		2[ ]
	orange brown		3[ ]
	red		4[ ]
	purple		5[ ]
	violet		6[ ]
	other color (please indicate) **……**		7[ ]
5.7 (23)	**<u>Only varieties with more than one color</u>: Petal: distribution of secondary color (macule excluded)**		
	in stripes	Yubi Apricot	1[ ]
	color gradient towards tip	Summer Duet Ero	2[ ]
	on margin	Summer Duet Rose	3[ ]

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:

6. Similar varieties and differences from these varieties

Please use the following table and box for comments to provide information on how your candidate variety differs from the variety (or varieties) which, to the best of your knowledge, is (or are) most similar. This information may help the examination authority to conduct its examination of distinctness in a more efficient way.

Denomination(s) of variety(ies) similar to your candidate variety	Characteristic(s) in which your candidate variety differs from the similar variety(ies)	Describe the expression of the characteristic(s) for the **similar** variety(ies)	Describe the expression of the characteristic(s) for **your** candidate variety
Example	*Flower: diameter*	*medium*	*large*

Comments:

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:

[#]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 Are there any special conditions for growing the variety or conducting the examination?

Yes [ ] No [ ]

(If yes, please provide 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.

[#] Authorities may allow certain of this information to be provided in a confidential section of the Technical Questionnaire.

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:

9. Information on plant material to be examined or submitted for examination.

9.1 The expression of a characteristic or several characteristics of a variety may be affected by factors, such as pests and disease, chemical treatment (e.g. growth retardants or pesticides), effects of tissue culture, different rootstocks, scions taken from different growth phases of a tree, etc.

9.2 The plant material should 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 the plant material has undergone such treatment, full details of the treatment must be given. In this respect, please indicate below, to the best of your knowledge, if the plant material to be examined has been subjected to:

(a) Microorganisms (e.g. virus, bacteria, phytoplasma) Yes [ ] No [ ]

(b) Chemical treatment (e.g. growth retardant, pesticide) Yes [ ] No [ ]

(c) Tissue culture Yes [ ] No [ ]

(d) Other factors Yes [ ] No [ ]

Please provide details for where you have indicated “yes”.

……

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

Applicant’s name

Signature Date

[End of document]