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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

Geneva

DRAFT

PETUNIA *

UPOV Code: PETUN; PETCH

Petunia Juss.; ×*Petchoa* J.M.H. Shaw

GUIDELINES

FOR THE CONDUCT OF TESTS

FOR DISTINCTNESS, UNIFORMITY AND STABILITY

prepared by an expert from Germany

to be considered by the

Technical Working Party for Ornamental Plants and Forest Trees
at its forty-seventh session, to be held in Naivasha, Kenya, from May 19 to 23, 2014

Alternative Names:*

Botanical name	*English*	*French*	*German*	*Spanish*
Petunia Juss.	Petunia	Pétunia	Petunie	Petunia
×*Petchoa* J.M.H. Shaw, *Petunia* × *Calibrachoa*				

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 *Petunia* Juss. and ×*Petchoa* J.M.H.Shaw (*Petunia* × *Calibrachoa*). These Test Guidelines do not apply to varieties of the genus *Calibrachoa*, which are covered by the Test Guidelines for Calibrachoa (TG/207/2).

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: 15 rooted cuttings
seed propagated varieties: a sufficient quantity of seed to produce 30 plants.

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.

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 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. The color chart and version used should be specified in the variety description.

3.4 Test Design

3.4.1 Vegetatively propagated varieties: each test should be designed to result in a total of at least 15 plants.

3.4.2 Seed propagated varieties: each test should be designed to result in a total of at least 30 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 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.

4.1.4 Number of Plants / Parts of Plants to be Examined

4.1.4.1 Unless otherwise indicated, for vegetatively propagated varieties, for the purposes of distinctness, 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, disregarding any off-type plants.

4.1.4.2 Unless otherwise indicated, for seed-propagated varieties, for the purposes of distinctness, 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, disregarding any off-type plants.

4.1.5 Method of Observation

The recommended method of observing the characteristic for the purposes of distinctness is indicated by the following key in the second column of the Table of Characteristics (see document TGP/9 “Examining Distinctness”, Section 4 “Observation of characteristics”):

MG: single measurement of a group of plants or parts of plants
MS: measurement of a number of individual plants or parts of plants
VG: visual assessment by a single observation of a group of plants or parts of plants
VS: visual assessment by observation of individual plants or parts of plants

Type of observation: visual (V) or measurement (M)

“Visual” observation (V) is an observation made on the basis of the expert’s judgment. For the purposes of this document, “visual” observation refers to the sensory observations of the experts and, therefore, also includes smell, taste and touch. Visual observation includes observations where the expert uses reference points (e.g. diagrams, example varieties, side-by-side

comparison) or non-linear charts (e.g. color charts). Measurement (M) is an objective observation against a calibrated, linear scale e.g. using a ruler, weighing scales, colorimeter, dates, counts, etc.

Type of record: for a group of plants (G) or for single, individual plants (S)

For the purposes of distinctness, observations may be recorded as a single record for a group of plants or parts of plants (G), or may be recorded as records for a number of single, individual plants or parts of plants (S). In most cases, "G" provides a single record per variety and it is not possible or necessary to apply statistical methods in a plant-by-plant analysis for the assessment of distinctness.

In cases where more than one method of observing the characteristic is indicated in the Table of Characteristics (e.g. VG/MG), guidance on selecting an appropriate method is provided in document TGP/9, Section 4.2.

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 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 15 plants, 1 off-type is allowed.

4.2.3 For the assessment of uniformity of self-pollinated seed propagated varieties, a population standard of 2% and an acceptance probability of at least 95% should be applied. In the case of a sample size of 30 plants, 2 off-type 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 further examined by testing a new plant stock to ensure that it exhibits the same characteristics as those shown by the initial 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: height (characteristic 2)
(b) Leaf blade: variegation (characteristic 8)
(c) Flower: type (characteristic 15)
(d) Flower: width (characteristic 17)
(e) Flower: conspicuousness of veins (characteristic 22)

(f) Flower: main color (characteristic 24)
(g) Flower: secondary color (characteristic 25) (f) and (g) with the following groups:
Gr. 1: white
Gr. 2: yellow
Gr. 3: blue pink
Gr. 4: red
Gr. 5: blue red
Gr. 6: purple
Gr. 7: violet
Gr. 8: blue violet

5.4 Guidance for the use of grouping characteristics, in the process of examining distinctness, is provided through the General Introduction and document TGP/9 “Examining Distinctness”.

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

6.2.1 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.

6.2.2 In the case of qualitative and pseudo-qualitative characteristics (see Chapter 6.3), all relevant states of expression are presented in the characteristic. However, in the case of quantitative characteristics with 5 or more states, an abbreviated scale may be used to minimize the size of the Table of Characteristics. For example, in the case of a quantitative characteristic with 9 states, the presentation of states of expression in the Test Guidelines may be abbreviated as follows:

State	Note
small	3
medium	5
large	7

However, it should be noted that all of the following 9 states of expression exist to describe varieties and should be used as appropriate:

State	Note
very small	1
very small to small	2
small	3
small to medium	4
medium	5
medium to large	6
large	7
large to very large	8
very large	9

6.2.3 Further explanation of the presentation of states of expression and notes is provided in document TGP/7 “Development of Test Guidelines”.

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
MG, MS, VG, VS		– see Chapter 4.1.5
(a)-(b)	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. **(+)**	**VG**	**Plant: growth habit**	**Plante : port**	**Pflanze: Wuchsform**	**Planta: porte**		
QN		upright	dressée	aufrecht	erguido		1
		semi-upright	demi-dressée	halbaufrecht	semierguido		2
		spreading	étalé	breitwüchsig	extendido		3
2. **(*)** **(+)**	**VG/ MS**	**Plant: height**	**Plante : hauteur**	**Pflanze: Höhe**	**Planta: altura**		
QN		short	courte	niedrig	baja		3
		medium	moyenne	mittel	media		5
		tall	haute	hoch	alta		7
3. **(*)** **(+)**	**VG/ MS**	**Shoot: length**	**Tige : longueur**	**Trieb: Länge**	**Brote: longitud**		
QN		short	courte	kurz	corto		3
		medium	moyenne	mittel	medio		5
		long	longue	lang	largo		7
4. **(*)**	**VG/ MS**	**Leaf blade: length**	**Limbe : longueur**	**Blattspreite: Länge**	**Limbo: longitud**		
QN	**(a)**	short	court	kurz	corto		3
		medium	moyen	mittel	medio		5
		long	long	lang	largo		7
5. **(*)**	**VG/ MS**	**Leaf blade: width**	**Limbe : largeur**	**Blattspreite: Breite**	**Limbo: anchura**		
QN	**(a)**	narrow	étroit	schmal	estrecho		3
		medium	moyen	mittel	medio		5
		broad	large	breit	ancho		7

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
6. **(+)**	**VG**	**Leaf blade: shape**	**Limbe : forme**	**Blattspreite: Form**	**Limbo: forma**		
PQ		ovate	ovale	eiförmig	oval		1
		elliptic	elliptique	elliptisch	elíptico		2
		circular	arrondi	rundlich	redondo		3
		obovate	obovale	verkehrt eiförmig	oboval		4
		rhombic	losangique	rautenförmig	romboidal		5
7. **(+)**	**VG**	**Leaf blade: shape of apex**	**Limbe : forme du sommet**	**Blattspreite: Form der Spitze**	**Limbo: forma del ápice**		
PQ	**(a)**	narrow acute	aigu étroit	schmalspitz	agudo estrecho		1
		broad acute	aigu large	breitspitz	agudo ancho		2
		obtuse	obtus	stumpf	obtuso		3
8. **(*)** **(+)**	**VG**	**Leaf blade: variegation**	**Limbe : panachure**	**Blattspreite: Panaschierung**	**Limbo: variegado**		
QL	**(a)**	absent	absente	fehlend	aussente		1
		present	présente	vorhanden	presente		9
9. **(+)**	**VG**	**Leaf blade: main color**	**Limbe : couleur principale**	**Blattspreite: Hauptfarbe**	**Limbo: color principal**		
QN	**(a)**	light yellow	jaune clair	hellgelb	amarillo claro		1
		light green	vert clair	hell	verde claro		2
		medium green	vert moyen	mittel	verde medio		3
		dark green	vert foncé	dunkel	verde oscuro		4
10.	**VG**	**Leaf blade: blistering**	**Limbe : cloqûre**	**Blattspreite: Blasigkeit**	**Limbo: abullonado**		
QN	**(a)**	absent or weak	absente ou peu nette	fehlend oder gering	ausente o débil		1
		medium	moyenne	mittel	media		2
		strong	forte	stark	fuerte		3

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
11. **(+)**	**VG/ MS**	**Pedicel: length**	**Pédicelle : longueur**	**Blütenstiel: Länge**	**Pedicelo: longitud**		
QN		very short	très court	sehr kurz	muy corot		1
		short	court	kurz	corto		2
		medium	moyen	mittel	medio		3
		long	long	lang	largo		4
		very long	très long	sehr lang	muy largo		5
12. **(+)**	**VG**	**Pedicel: anthocyanin coloration**	**Pédicelle: pigmentation anthocyanique**	**Blütenstiel: Anthocyanfärbung**	**Pedicelo: pigmentación antociánica**		
QN		absent or very weak	absente ou très peu nette	fehlend oder sehr gering	ausente o muy débil		1
		weak	peu nette	gering	débil		2
		medium	moyenne	mittel	media		3
		strong	forte	stark	fuerte		4
13. **(*)** **(+)**	**VG**	**Sepal: length**	**Sépale : longueur**	**Kelchblatt: Länge**	**Sépalo: longitud**		
QN		very short	très court	sehr kurz	muy corto		1
		short	court	kurz	corto		2
		medium	moyen	mittel	medio		3
		long	long	lang	largo		4
		very long	très long	sehr lang	muy largo		5
14. **(*)** **(+)**	**VG**	**Sepal: width**	**Sépale : largeur**	**Kelchblatt: Breite**	**Sépalo: anchura**		
QN		very narrow	très étroit	sehr schmal	muy estrecho		1
		narrow	étroit	schmal	estrecho		2
		medium	moyen	mittel	medio		3
		broad	large	breit	ancho		4
		very broad	très large	sehr breit	muy ancho		5

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
15. (*) (+)	**VG**	**Flower: type**	**Fleur : type**	**Blüte: Typ**	**Flor: tipo**		
QL		single	simple	einfach	único		1
		double	double	gefüllt	doble		2
16. (+)	**VG**	**Only varieties with Flower: type: double: Flower: number of corolla lobes**	**Variétés à Fleur : type: double seulement: Fleur : nombre de lobes de corolle**	**Nur Sorten mit Blüte: Typ: gefüllt: Blüte: Anzahl Kronlappen**	**Únicamente variedades con: Flor: tipo: doble: Flor: número de lóbulos de la corola**		
QN		very few	très peu nombreuses	sehr gering	muy pocas		1
		few	peu nombreses	gering	pocas		2
		medium	moyennes	mittel	medio		3
		many	nombreuses	groß	abundantes		4
17. (*) (+)	**VG/ MS**	**Flower: width**	**Fleur : largeur**	**Blüte: Breite**	**Flor: anchura**		
QN	**(b)**	narrow	étroit	schmal	estrecho		3
		medium	moyen	mittel	medio		5
		broad	large	breit	ancho		7
18. (*) (+)	**VG**	**Flower: shape**	**Fleur : forme**	**Blüte: Form**	**Flor: forma**		
PQ	**(b)**	salverform	hypocratériforme	tellerförmig	en forma de plato		1
		campanulate	campanulé	glockenförmig	acampanado		2
		funnel-shaped	en entonnoir	trichterförmig	en forma de embudo		3
19. (*) (+)	**VG**	**Flower: degree of lobing**	**Fleur : découpure du bord**	**Blüte: Stärke der Lappung**	**Flor: grado de lobulado**		
QN	**(b)**	absent or very weak	absente ou très peu faible	fehlend oder sehr gering	ausente o muy poco débil		1
		weak	faible	gering	débil		3
		medium	moyenne	mittel	medio		5
		strong	forte	stark	fuerte		7

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
20. **(+)**	**VG**	**Flower: incisions of margin**	**Fleur : denticulation du bord**	**Blüte: Randeinschnitte**	**Flor: indentación del borde**		
QN	**(b)**	absent or very shallow	absente ou très peu profonde	fehlend oder sehr flach	ausente o muy poco profunda		1
		shallow	peu profonde	flach	poco profunda		2
		medium	moyenne	mittel	media		3
		deep	profonde	tief	profunda		4
21. **(+)**	**VG**	**Flower: degree of undulation**	**Fleur : découpure du ondulation**	**Blüte: Stärke der Wellung**	**Flor: grado de ondulación**		
QN	**(b)**	absent or very weak	absente ou très peu nette	fehlend oder sehr gering	ausente o muy débil		1
		weak	peu nette	gering	débil		2
		medium	moyenne	mittel	media		3
		strong	forte	stark	fuerte		4
22. **(*)** **(+)**	**VG**	**Flower: conspicuousness of veins**	**Fleur : netteté des nervures**	**Blüte: Ausprägung der Aderung**	**Flor: evidencia de los nervios**		
QN	**(b)**	absent or very weak	nulle ou très faible	fehlend oder sehr gering	ausente o débil		1
		weak	faible	gering	débil		3
		medium	moyenne	mittel	media		5
		strong	forte	stark	fuerte		7
		very strong	très forte	sehr stark	muy fuerte		9
23. **(*)**	**VG**	**Flower: color of veins**	**Fleur : couleur des nervures**	**Blüte: Farbe der Aderung**	**Flor: color de los nervios**		
PQ	**(b)**	white	blanc	weiß	blanca		1
		greenish	verdatre	grünlich	verdoso		2
		yellow	jaunes	gelb	amarillo		3
		pink	rose	rosa	rosa		4
		red	rouges	rot	rojo		5
		purple	pourpres	purpurn	púrpura		6
		violet	violet	violett	violetta		7
		black	noir	schwarz	negro		8

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
24. **(*)** **(+)**	**VG**	**Flower: main color**	**Fleur : couleur principale**	**Blüte: Hauptfarbe**	**Flor: color principal**		
PQ	**(b)**	RHS Colour Chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)	Carta de colores RHS (indicar el número de referencia)		
25. **(*)** **(+)**	**VG**	**Flower: secondary color**	**Fleur: couleur secondaire**	**Blüte: Sekundärfarbe**	**Flor: color secundario**		
PQ	**(b)**	RHS Colour Chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)	Carta de colores RHS (indicar número de referencia)		
26. **(*)** **(+)**	**VG**	**Only varieties with Flower: type: single: Flower: distribution of secondary color**	**Variétés à type de fleur : simple seulement : Fleur : distribution de la couleur secondaire**	**Nur Sorten mit Blüte: Typ: einfach: Blüte: Verteilung der Sekundärfarbe**	**Sólo variedades con flor tipo: simple: Flor: distribución del colour secundario**		
PQ	**(b)**	at transition to corolla tube	autor du tube de la corolle	am Übergang zur Kronröhre	en la transición al tubo de la corola		1
		along mid-veins of corolla lobes	le long de la nervure principale de la corolle lobes	entlang der Mitteladern der Kronlappen	a lo largo del nervio central de lóbulos de la corola		2
		between corolla lobes	entre la corolle lobes	zwischen den Kronlappen	intermediaria de lóbulos de la corola		3
		at margin of corolla	au bord de la corolle	am Rand der Krone	en el borde de la corola		4
		irregular	irréguière	unregelmäßig	irregular		5
27. **(+)**	**VG**	**Only varieties with Flower: type: single: Flower: area of secondary color**	**Variétés à type de fleur : simple seulement : Fleur : surface de la couleur secondaire**	**Nur Sorten mit Blüte: Typ: einfach: Blüte: Fläche der Sekundärfarbe**	**Sólo variedades con flor tipo: simple: Flor: área del colour secundario**		
QN		very small	très petite	sehr klein	muy pequeño		1
		small	petite	klein	pequeño		2
		medium	moyen	mittel	medio		3
		large	grande	groß	grande		4
28. **(+)**	**VG**	**Flower: tertiary color**	**Fleur: couleur tertiaire**	**Blüte: Tertiärfarbe**	**Flor: colour terciario**		
PQ	**(b)**	RHS Colour Chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)	Carta de colores RHS (indicar número de referencia)		
29. **(*)** **(+)**	**VG**	**Young flower: main color**	**Jeune fleur : couleur principale**	**Junge Blüte: Hauptfarbe**	**Flor joven: color principal**		
PQ		RHS Colour Chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)	Carta de colores RHS (indicar el número de referencia)		

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
30. **(+)**	**VG**	**Old flower: main color**	**Ancien fleur : couleur principale**	**Alte Blüte: Hauptfarbe**	**Flor antiguos: color principal**		
PQ		RHS Colour Chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)	Carta de colores RHS (indicar el número de referencia)		
31. **(+)**	**VG**	**Corolla lobe: shape of apex**	**Lobe de la corolle: forme du sommet**	**Kronlappen: Form der Spitze**	**Lóbulo de la corola: forma del ápice**		
PQ	**(b)**	cuspidate	cuspidé	mit aufgesetzter Spitze	cuspidado		1
		rounded	arrondi	abgerundet	redondeado		2
		truncate	tronqué	abgeflacht	truncado		3
		emarginate	émarginé	eingesenkt	emarginado		4
32. **(*)** **(+)**	**VG**	**Only varieties with Flower: type: single: Corolla tube: main color of inner side**	**Variétés à Fleur: type: simple seulement: Tube de la corolle: couleur principale de la face intérieure**	**Nur Sorten mit Blüte: Typ: einfach: Kronröhre: Hauptfarbe der Innenseite**	**Únicamente variedades con: Flor: tipo: único: Tubo de la corola: color principal de la parte interna**		
PQ		RHS Colour Chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)	Carta de colores RHS (indicar número de referencia)		
33. **(+)**	**VG**	**Only varieties with Flower: type: single: Corolla tube: conspicuousness of veins on inner side**	**Variétés à Fleu r: type : simple seulement : Tube de la corolle : netteté des nervures sur la face intérieure**	**Nur Sorten mit Blüte: Typ: einfach: Kronröhre: Stärke der Aderung an der Innenseite**	**Únicamente variedades con: Flor: tipo: único: Tubo de la corola: evidencia de los nervios de la parte interna**		
QN		absent or very weak	absente ou très peu nette	fehlend oder sehr gering	ausente o muy débil		1
		weak	peu nette	gering	débil		3
		medium	moyenne	mittel	media		5
		strong	forte	stark	fuerte		7
		very strong	très forte	sehr stark	muy fuerte		9
34. **(+)**	**VG**	**Corolla tube: main color of outer side**	**Tube de la corolle : couleur principale de la face extrieure**	**Kronröhre: Hauptfarbe der Außenseite**	**Tubo de la corola: color principal de la parte exterior**		
PQ		RHS Colour Chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)	Carta de colores RHS (indicar número de referencia)		

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
35. (*)	**<u>Only varieties with Flower: type: single:</u> Anther: color before dehiscence**	**<u>Variétés à Fleur : type : simple seulement :</u> Anthères: couleur avant la déhiscence**	**<u>Nur Sorten mit Blüte: Typ: einfach:</u> Staubbeutel: Farbe vor dem Pollenstäuben**	**<u>Únicamente variedades con: Flor: tipo: único:</u> Anteras: color antes de la dehiscencia**		
PQ	light grey	gris clair	hellgrau	gris claro		1
	yellowish white	blanc jaunâtre	gelblichweiß	blanco amarillento		2
	yellow	jaune	gelb	amarillo		3
	light brown	brun clair	hellbraun	marrón claro		4
	light blue	bleu clair	hellblau	azul claro		5
	medium blue	bleu moyen	mittelblau	azul medio		6
	violet	violet	violett	violeta		7

8. Explanations on the Table of Characteristics

8.1 Explanations covering several characteristics

Unless otherwise indicated observations should be made at the 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 on the leaf should be made on the upper side of fully developed leaves from the middle part of a shoot.

(b) Observations on the flower should be made on the inner side of the corolla lobes of a middle aged flower at the time of beginning of flowering. Observations on varieties with double flowers should be made on the outer corolla lobes.

8.2 Explanations for individual characteristics

Ad. 1: Plant: growth habit

1
upright

3
spreading

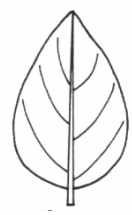
Ad. 2: Plant: height

The plant height should be observed from the soil level to the highest point of the plant. The observation should be done at the end of the trial.

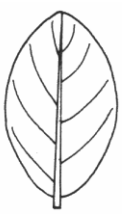
Ad. 3: Shoot: length

The shoot length should be observed on the longest shoot from the soil level to the end of the shoot. The observation should be done at the end of the trial.

Ad. 6: Leaf blade: shape

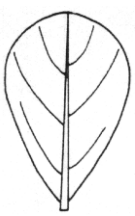


1
ovate

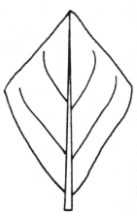


2
elliptic

3
circular



4
obovate



5
rhombic

Ad. 7: Leaf blade: shape of apex

1 narrow acute | 2 broad acute | 3 obtuse

Ad. 8: Leaf blade: variegation

1 absent | 9 present

Ad. 9: Leaf blade: main color

The main color is the color with the largest surface area. In cases where the areas of the main and the secondary color are too similar to reliably decide which color has the largest area, the darker color is considered to be the main color.

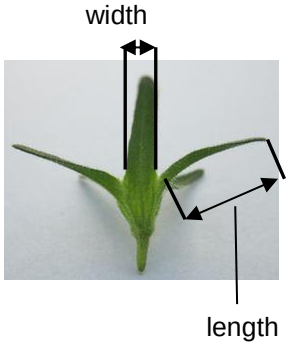
Ad. 11: Pedicel: length

Ad. 12: Pedicel: anthocyanin coloration

The anthocyanin coloration should be observed on the upper third of the pedicel.

Ad. 13: Sepal: length
Ad. 14: Sepal: width

Observations on the sepal should be made on the broadest sepal.



Ad. 15: Flower: type

1
single

2
double

Ad. 16: Only varieties with Flower: type: double: Flower: number of corolla lobes

1
very few

3
medium

4
many

Ad. 17: Flower: width

The width is observed at the broadest part of the flower.

Ad. 18: Flower: shape

1
salverform

2
campanulate

3
funnel-shaped

Ad. 19: Flower: degree of lobing

1
absent or very weak

3
weak

5
medium

7
strong

Ad. 20: Flower: incisions of margin

1
absent or very shallow

2
shallow

4
deep

Ad. 21: Flower: degree of undulation

2
weak

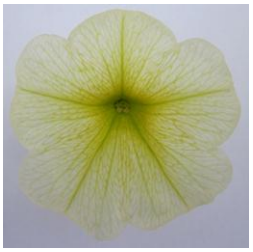
3
medium

4
strong

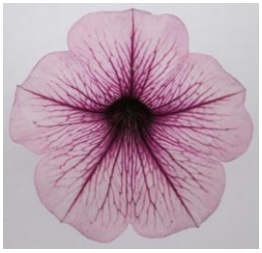
Ad. 22: Flower: conspicuousness of veins

1
absent or very weak

3
weak



5
medium



7
strong

9
very strong

The conspicuousness is determined by the color contrast and the number of contrasting veins.

Ad. 24: Flower: main color

The main color is the color with the largest surface area excluding veins. In cases where the areas of the main and the secondary color are too similar to reliably decide which color has the largest area, the darker color is considered to be the main color.

Ad. 25: Flower: secondary color

The secondary color is the color with the second largest surface area excluding veins. In cases where the areas of the main and the secondary color are too similar to reliably decide which color has the largest area, the lighter color is considered to be the secondary color. In cases where the areas of the secondary and the tertiary color are too similar to reliably decide which color has the largest area, the darker color is considered to be the secondary color.

Ad. 26: Only varieties with Flower: type: single: Flower: distribution of secondary color

1
at transition to corolla tube

2
along mid-veins of corolla lobes

3
between corolla lobes

4
at margin of corolla

5
irregular

Ad. 27: Only varieties with Flower: type: single: Flower: area of secondary color

When located at transition to corolla tube.

1
very small

3
medium

4
large

When located along mid-veins of corolla lobes.

1
very small

3
medium

4
large

When located between corolla lobes.

1
very small

3
medium

When located at margin of corolla.

1
very small

3
medium

Ad. 28: Flower: tertiary color

The tertiary color is the color with the third largest area excluding veins. In cases where the areas of the secondary and the tertiary color are too similar to reliably decide which color has the largest area, the lighter color is considered to be the tertiary color.

Ad. 29: Young flower: main color

Observations on the young flower should be made on the upper side of corolla lobes of flowers which have just fully opened. Observations on varieties with double flowers should be made on the outer corolla lobes. For definition of main color see Ad. 24

Ad. 30: Old flower: main color

Observations on the old flower should be made on the upper side of corolla lobes of flowers which have just started to fade. Observations on varieties with double flowers should be made on the outer corolla lobes.

For definition of main color see Ad. 24.

Ad. 31: Corolla lobe: shape of apex

1 cuspidate | 2 rounded | 3 truncate | 4 emarginate

Ad. 32: Only varieties with Flower: type: single: Corolla tube: main color of inner side

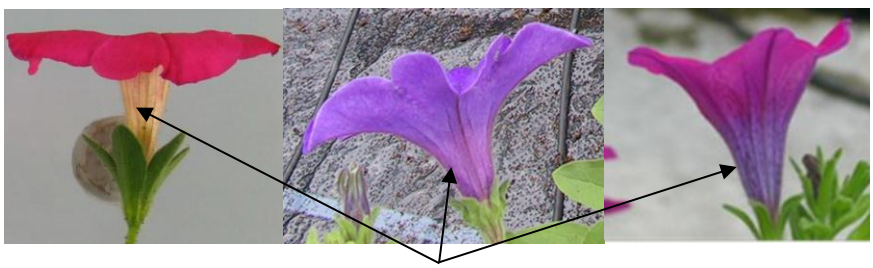
The main color is the color with the largest surface area excluding veins. In cases where the areas of the main and secondary color are too similar to reliably decide which color has the largest area, the darkest color is considered to be the main color.

Ad. 33: Only varieties with Flower: type: single: Corolla lobe: conspicuousness of veins on inner side

1 absent or very weak | 3 weak | 5 medium | 7 strong

The conspicuousness is determined by the color contrast and the number of contrasting veins.

Ad. 34: Corolla tube: main color of outer side



For definition of main color see Ad. 24.

9. LITERATURE

Wijsman, H.J.W., 1982: On the Interrelationships of Certain Species of Petunia I. Taxonomic Notes on the Parental Species of Petunia Hybrida. ActaBot. Neerl. 31 (5/6), NL, pp. 477-490.

Wijsman, H.J.W. and de Jong, J.H., 1985: On the Interrelationships of Certain Species of Petunia IV. Hybridization Between P. linearis and P. calycina and Nomenclatorial Consequences in the Petunia Group. Acta Bot. Neerl. 34 (3), NL, pp. 337-349.

Wijsman, H.J.W., 1990: On the Interrelationships of Certain Species of Petunia VI. New Names for the Species of Calibrachoa Formerly Included Into Petunia (Solanaceae). Acta Bot. Neerl. 39 (19), NL, pp. 101 and 102.

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 Genus

1.1.1 Botanical name	*Petunia* Juss.	[ ]
1.1.2 Common name	Petunia	
1.2.1 Botanical name	×*Petchoa* J. M. H. Shaw	[ ]
1.2.2 Common name	Petunia x Calibrachoa	

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)

(……..……..…) x (……..……..…)
female parent male parent

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

(……..……..…) x (……..……..…)
female parent male parent

(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 Vegetatively propagated varieties

(a) cuttings [ ]

(b) *in vitro* propagation [ ]

(b) other (state method) [ ]

4.2.2 Seed-propagated varieties

(a) Self-pollination [ ]

(b) Other [ ]
(please provide details)

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 (2)	**Plant: height**		
	very short		1[ ]
	very short to short		2[ ]
	short		3[ ]
	short to medium		4[ ]
	medium		5[ ]
	medium to tall		6[ ]
	tall		7[ ]
	tall to very tall		8[ ]
	very tall		9[ ]
5.2 (8)	**Leaf blade: variegation**		
	absent		1[ ]
	present		9[ ]
5.3 (15)	**Flower: type**		
	single		1[ ]
	double		2[ ]
5.4 (17)	**Flower: width**		
	very narrow		1[ ]
	very narrow to narrow		2[ ]
	narrow		3[ ]
	narrow to medium		4[ ]
	medium		5[ ]
	medium to broad		6[ ]
	broad		7[ ]
	broad to very broad		8[ ]
	very broad		9[ ]

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

	Characteristics	Example Varieties	Note
5.5 (22)	**Flower: conspicuousness of veins**		
	absent or very weak		1[ ]
	very weak to weak		2[ ]
	weak		3[ ]
	weak to medium		4[ ]
	medium		5[ ]
	medium to strong		6[ ]
	strong		7[ ]
	strong to very strong		8[ ]
	very strong		9[ ]
5.6 (i) (24)	**Flower: main color**		
	RHS Colour Chart (indicate reference number)	……..	
5.6 (ii) (24)	**Flower: main color**		
	white		1[ ]
	yellow		2[ ]
	orange		3[ ]
	red		4[ ]
	blue pink		5[ ]
	purple		6[ ]
	violet		7[ ]
	other color (indicate)	……...	
5.7 (i) (25)	**Flower: secondary color (if present)**		
	RHS Colour Chart (indicate reference number)	……..	

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

	Characteristics	Example Varieties	Note
5.7 (ii) (25)	**Flower: secondary color (if present)**		
	white		1[ ]
	yellow		2[ ]
	orange red		3[ ]
	red		4[ ]
	purple		5[ ]
	violet		6[ ]
	brown		7[ ]
	black		8[ ]
	other color (indicate)	……..	

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: width*	*narrow*	*medium*

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 image 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]