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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS
GENEVA

DRAFT**PHALAEOPSIS**

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Phalaenopsis Blume*Phalaenopsis* hybrids**GUIDELINES****FOR THE CONDUCT OF TESTS****FOR DISTINCTNESS, UNIFORMITY AND STABILITY***prepared by an expert from the Netherlands**to be considered by*

*the Technical Working Party for Ornamental Plants and Forest Trees
at its forty-third session, to be held in Cuernavaca, Morelos State, Mexico,
from September 20 to 24, 2010*

Alternative Names:*

<i>Botanical name</i>	<i>English</i>	<i>French</i>	<i>German</i>	<i>Spanish</i>
<i>Phalaenopsis</i> Blume	Phalaenopsis	Phalaenopsis	Phalaenopsis	Phalaenopsis
<i>Phalaenopsis</i> hybrids				

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 *Phalaenopsis* Blume and of the family Orchidaceae and their hybrids.

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 non-budded plants after flower treatment and which have not previously flowered.

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

9 young plants.

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*

The 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 Each test should be designed to result in a total of at least 9 plants.

3.4.2 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.

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

Unless otherwise indicated, all observations for the purposes of distinctness should be made on 5 plants or parts taken from each of 5 plants, 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 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 a population standard of 1% and an acceptance probability of at least 95% should be applied. In the case of a sample size of 10 plants, 1 off-type is 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) Plant: length (characteristic 1)
- (b) Leaf: longitudinal variegation (characteristic 10)
- (c) Leaf: spots on upper side (characteristic 11)
- (d) Flower: width in front view (characteristic 22)
- (e) Petal: ground color of upper side (characteristic 60) with the following groups
 - Gr. 1: white
 - Gr. 2: yellow
 - Gr. 3: green
 - Gr. 4: orange
 - Gr. 5: red
 - Gr. 6: violet
 - Gr. 7: purple red
 - Gr. 8: purple
 - Gr. 9: brown
- (f) Petal: shading (characteristic 61)
- (g) Petal: number of spots (characteristic 63)
- (h) Petal: number of stripes (characteristic 66)
- (i) Petal: density of netting (characteristic 68)

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 Section 6.1.2

QL Qualitative characteristic – see Section 6.3

QN Quantitative characteristic – see Section 6.3

PQ Pseudo-Qualitative characteristic – see Section 6.3

MG, MS, VG, VS – see Chapter 4.1.3

(a)-(c) See Explanations on the Table of Characteristics in Chapter 8, Section 8.1

(+) See Explanations on the Table of Characteristics in Chapter 8, Section 8.

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: length	Plante: longueur	Pflanze: Länge	Planta: longitud		
QN	(a) short	courte	niedrig	baja	Phalboezeq	3
	medium	moyenne	mittel	media	Phalpnizok, Red Eye	5
	long	longue	lang	larga	Figaro, Puccini	7
2.	Plant: number of inflorescence	Inflorescence: nombre	Blütenstand: Anzahl	Inflorescencia:		
QN	(a) one		ein		T-Rex	1
	one or two		eins oder zwei			2
	two		zwei			3
	two or three		zwei oder drei			4
	three		drei		SIO0020	5
	more than three		mehr wie drei			6
3.	Leaf: length	Feuille: longueur	Blatt: Länge	Hoja: longitud		
QN	(a) short	courte	niedrig	baja	Phalbexi, SOGO F1384, Taida Black Leopard	3
	(b) medium	moyenne	mittel	media	Puccini, Zhen Yu 5707	5
	long	longue	lang	larga	Corneille	7
4.	Leaf: width	Feuille: largeur	Blatt: Breite	Hoja: anchura		
QN	(a) narrow	étroite	schmal	estrecha	SOGO Fairyland	3
	(b) medium	moyenne	mittel	media	Mrs Brown, SOGO F-1442	5
	broad	large	breit	ancha	Moonwalker	7

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
5.	Leaf: ratio length/width	Feuille: rapport longueur/largeur	Blatt: Verhältnis Länge/Breite	Hoja: relación longitud/anchura		
QN	(a) very elongated					1
	(b) moderately elongated					5
	slightly elongated					7
6.	Leaf: position of broadest part	Feuille: position de la partie la plus large	Blatt: Position der breitesten Stelle	Hoja: posición de la parte más ancha		
QN	(a) towards base					1
	(b) at middle					2
	towards apex					3
7.	Leaf: shape of apex	Feuille: forme du sommet	Blatt: Form der Spitze	Hoja: forma del ápice		
PQ	(a) acute	aigu	spitz	agudo	SOGO Fairyland, SOGO F-1016	1
	(b) obtuse	obtus	stumpf	obtuso	Mrs Brown, An Ching Green Apple	2
	emarginate	émarginé	eingekerbt	emarginado	Happy Sheena Kirara', Fire Fox	3
8.	Leaf: symmetry of apex	Feuille: symétrie du sommet	Blatt: Symmetrie der spitze	Hoja: simetría del ápice		
QN	(a) symetric or slightly asymmetric				Symphony	1
	(b) moderately asymmetric				SOGO Fairyland, SOGO F-688	2
	strongly asymmetric					3
9.	Leaf: attitude	Feuille: port	Blatt: Haltung	Hoja: porte		
QN	(a) semi-erect	demi dressée	halbaufrecht	semierecta	Phalbnizok, SOGO Yukidan, v3'	3
	(b) horizontal	horizontale	waagerecht	horizontal	Pink Butterfly, Symphony	5
	semi-drooping				Moonwalker, Tai Lin Lady, N16'	7

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
10. (*)	(a) Leaf: longitudinal variegation					
QL	(a) absent				Symphony	1
	(b) present				SOGO F2806	9
11. (*)	Leaf: spots on upper side	Feuille:	Blatt: Flecken			
QL	(a) absent	absente	fehlend	ausente	SOGO Fairyland, Sunrise Beautiful Girl	1
	present	présente	vorhanden	presente	Phalnasxu, SOGO F-1320	9
12. (+)	Leaf: main color of upper side	Feuille: couleur principale de la face supérieure	Blatt: Hauptfarbe der Oberseite	Hoja: color principal del haz		
PQ	(a) yellowish green	vert jaunâtre	gelblichgrün	verde amarillento	Phalapek	1
	light green	vert claire	hellgrün	verde claro	King Car Hebe, Vivaldi	2
	medium green	vert moyen	mittelgrün	verde medio	Symphony, Torce N92	3
	dark green	vert foncé	dunkelgrün	verde oscuro	Puccini	4
13.	Leaf: anthocyanin coloration of upperside	Feuille: pigmentation anthocyanique de la face supérieure				
QN	(a) absent or very weak	absente or faible			Mrs Brown	1
	weak	faible				3
	medium	moyenne				5
	strong	forte				7
	very strong	tres forte				9
14.	Inflorescence: type	Inflorescence: type	Blütenstand: Typ	Inflorescencia: tipo		
QL	(a) single flowered					1
	raceme	grappe	traubenartig	racimo	Puccini	2
	panicle	panicule	rispenartig	panícula	SOGO Fairyland	3

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
15.	Inflorescence: length of flowering part					
(+)						
QN	(a) short				Mrs Brown	3
	medium				Puccini	5
	long				Pinnacle	7
16.	<u>Excluding varieties with inflorescence type: single flowered:</u> Inflorescence: number of flowers					
QN	(a) few				Puccini	3
	medium				Alabaster	5
	many				SOGO Fairyland	7
17.	Peduncle: length	Pédoncule: longueur	Blütenstiel: Länge	Pedúnculo: longitud		
QN	(a) short	courte	kurz	corta	SOGO F1567	3
	medium	moyen	mittel	media	Phaltulen, SOGO F-2451	5
	long	longue	lang	larga	Puccini	7
18.	Peduncle: thickness at lower third					
QN	(a) thin				Phaladadel	3
	medium				Moonwalker	5
	thick				Queen of Hearts	7
19.	Peduncle: anthocyanin coloration	Pédonculo: pigmentation anthocyanique	Blütenstiel: Anthocyanfärbung	Pedúnculo: pigmentación antociánica		
QL	(a) absent	absente	fehlend	ausente	Phaltulen	1
	present	présente	vorhanden	presente	Mrs Brown	9

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
20.	Flower: general appearance of sepals and petals	Fleur: apparence générale des sépales et pétales	Blüte: allgemeine Erscheinungsform der Kelchblätter und der Blütenblätter	Flor: aspecto general de sépalos y pétalos		
PQ	(c) incurving	incurvés	aufgebogen	curvados hacia arriba	SOGO Fairyland	1
	straight				Phalboezeq	2
	reflexing	réfléchis	zurückgebogen	curvados hacia abajo	Mrs Brown	3
21. (* (+)	Flower: length in front view	Fleur: longueur en vue de face	Blüte: Länge in der Voransicht	Flor: longitud en vista frontal		
QN	(c) short	courte	kurz	corta	Mrs. Brown	3
	medium	moyen	mittel	media	Phaladadel	5
	long	longue	lang	larga	Phalbobol	7
22. (+)	Flower: width in front view	Fleur: largeur en vue de face	Blüte: Breite in der Voransicht	Flor: anchura en vista frontal		
QN	(c) narrow	étroite	schmal	estrecha	Mrs Brown	3
	medium	moyenne	mittel	media	Phaladadel	5
	broad	large	breit	ancha	Hawaiien Dream	7
23. (+)	Flower: arrangement of petals	Fleur: disposition de pétales	Blüte: Position der Blütenblätter	Flor: disposición de los pétalos		
QN	free		frei		Fire Fox, SOGO Fairyland	1
	touching	tangents	sich berührend	tocándose	Paloma	2
	overlapping	chevauchants	überlappend	tocándose	Halcyon, Tai Lin Lady ,N16'	3
24.	Flower: fragrance	Fleur: parfum	Blüte: Duft	Flor: fragancia		
QN	(c) absent or weak	absente ou faible	fehlend oder gering	ausente o débil	Lih Jiang Diamond, SOGO Fairyland	1
	moderate					2
	strong				Sun Passat	3

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
25.	Dorsal sepal: length					
QN	(c) short				Green Star	3
	medium				Phaladadel, Ever Spring Prince ,75'	5
	long				Hawaiien Dream, Torce N92	7
26.	Dorsal sepal: width					
QN	(c) narrow				Green Star	3
	medium				Happy Days, SOGO F-977	5
	broad				Paloma, Red Rose	7
27.	Dorsal sepal: ratio length/width	Sépale: rapport longueur/largeur	Kelchblatt: Verhältnis Länge/Breite	Sépalo: relación longitud/anchura		
QN	(c) moderately elongated					3
	medium	moyen	mittel	media		5
	moderately compressed					7
28.	Dorsal sepal: position of broadest part					
QN	(c) towards base					1
	at middle					2
	towards apex					3
29.	Dorsal sepal: curvature of longitudinal axis					
QN	(c) incurving				Cuckoo, SOGO F-1016	1
	straight				Mrs Brown, SOGO F-728	2
	recurving				Paloma, Red Rose	3

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
30.	Dorsal sepal: cross section					
QN	(c) concave				SOGO Fairyland, SOGO F-1016	1
	straight				Hawaiien Dream, SOGO F-728	2
	convex				Moonwalker, Red Rose	3
31.	Dorsal sepal: twisting					
QL	(c) absent				Red Pearl, SOGO Fairyland	1
	present					7
32.	Dorsal sepal: undulation of margin					
QL	(c) absent or weak				Color Butterfly, Phaladadel	1
	moderate				Miss Saigon	9
	strong					
33.	Dorsal sepal: ground color of upper side					
(+)						
PQ	(c) RHS Colour Chart (indicate reference number)					
34.	Dorsal sepal: shading					
QL	(c) absent				Symphony	1
	present				Miss Saigon	9
35.	Dorsal sepal: color of shade					
PQ	(c) RHS Colour Chart (indicate reference number)					

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
36.	Dorsal sepal: number of spots					
QN	(c) none					1
	few					3
	medium					5
	many					7
37.	Dorsal sepal: size of spots					
QN	(c) small					3
	medium					5
	large					7
38.	Dorsal sepal: color of spots					
PQ	(c) RHS Colour Chart (indicate reference number)					
39.	Dorsal sepal: number of stripes					
QN	(c) none					1
	few					3
	medium					5
	many					7
40.	Dorsal sepal: color of stripes					
PQ	(c) RHS Colour Chart (indicate reference number)					

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
41.	Dorsal sepal: density of netting					
QN	(c) none					1
	sparse					3
	medium					5
	dense					7
42.	Dorsal sepal: color of netting					
PQ	(c) RHS Colour Chart (indicate reference number)					
43.	(c) Lateral sepal: ground color of upper side					
(+)						
PQ	RHS Colour Chart (indicate reference number)					
44.	Lateral sepal: shading					
QL	(c) absent				Paloma	1
	present				Miss Saigon, SOGO F-2451	9
45.	Lateral sepal: color of shade					
PQ	(c) RHS Colour Chart (indicate reference number)					
46.	Lateral sepal: number of spots					
QN	(c) none					1
	few					3
	medium					5
	many					7

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
47.	Lateral sepal: color of spots					
PQ	(c) RHS Colour Chart (indicate reference number)					
48.	Lateral sepal: number of stripes					
QN	(c) none					1
	few					3
	medium					5
	many					7
49.	Lateral sepal: color of stripes					
PQ	(c) RHS Colour Chart (indicate reference number)					
50.	Lateral sepal: density of netting					
QN	(c) none					1
	sparse					3
	medium					5
	dense					7
51.	Lateral sepal: color of netting					
PQ	(c) RHS Colour Chart (indicate reference number)					
52.	Petal: length	Pétale: longueur	Blütenblatt: Länge	Pétalo: longitud		
QN	(c) short	courte	kurz	corta	Color Butterfly, SOGO Fairyland	3
	medium	moyen	mittel	media	Phaladadel	5
	long	longue	lang	larga	Paloma	7

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
53.	Petal: width	Pétale: largeur	Blütenblatt: Breite	Pétalo: anchura		
QN	(c) narrow	étroite	schmal	estrecha	Mrs Brown, SOGO F-2451	3
	medium	moyenne	mittel	media	Puccini, SOGO F-982	5
	broad	large	breit	ancha	Paloma	7
54.	Petal: ratio length/width	Pétale: rapport longueur/largeur	Blütenblatt: Verhältnis Länge/Breite	Pétalo: relación longitud/anchura		
QN	(c) moderately elongated	petit	klein	pequeña		3
	medium	moyen	mittel	media		5
	moderately compressed	élevé	groß	grande		7
55.	Petal: position of broadest part	Pétale: position de la partie la plus large	Blütenblatt: Position der breitesten Stelle	Pétalo: posición de la parte más ancha		
QN	(b) towards base					1
	at middle					2
	towards apex					3
56.	Petal: curvature of longitudinal axis	Pétale: courbure de l'axe longitudinal	Blütenblatt: Biegung der Längsachse	Pétalo: curvatura del eje longitudinal		
QN	(c) incurving	incurvés	aufgebogen	curvados hacia arriba	SOGO Fairyland, SOGO F-1016	1
	straight				Mrs Brown, SOGO F-2451	2
	recurving	retombant	zurückgebogen	curvados hacia abajo	Sun Passat	3
57.	Petal: cross section	Pétale: section transversale	Blütenblatt: Querschnitt	Pétalo: corto transversal		
QN	(c) concave	concave	konkav	cóncavo	Figaro, SOGO F-1016	1
	flat				Green Star, SOGO F-2451	2
	convex	convexe	konvex	convexo	Puccini	3

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
58.	Petal: twisting	Pétale: torsion	Blütenblatt: Drehung	Pétalo: torsión		
QL	(c) absent	absente	fehlend	ausente	Mrs Brown	1
	present	présente	vorhanden	presente		9
59.	Petal: undulation of margin	Pétale: ondulation du bord	Blütenblatt: Randwellung	Pétalo: ondulación del margen		
QL	(c) absent or very weak				Phaladadel, SOGO F-1320	1
	moderate				Puccini	2
	strong					3
60. (* (+)	Petal: ground color of upper side	Pétale: couleur principale de la face supérieur	Blütenblatt: Hauptfarbe der Oberseite	Pétalo: color principal		
PQ	(c) RHS Colour Chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)	Carta de colores RHS (indíquese el número de referencia)		
61. (*	Petal: shading	Pétale:	Blütenblatt:	Pétalo:		
QL	(c) absent	absente	fehlend	ausente	Symphony	1
	present	présente	vorhanden	presente	Beaugard, SOGO F-2451	9
62.	Petal: color of shade	Pétale: couleur	Blütenblatt: Farbe	Pétalo:		
PQ	(c) RHS Colour Chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)	Carta de colores RHS (indíquese el número de referencia)		
63. (*	Petal: number of spots	Pétale:	Blütenblatt: Anzahl der Flecken			
QN	(c) none					1
	few	faible	gering	bajo		3
	medium	moyen	mittel	media		5
	many	élevé	gross	alto		7

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
64.	Petal: size of spots					
QN	(c) small					3
	medium					5
	large					7
65.	Petal: color of spots					
PQ	(c) RHS Colour Chart (indicate reference number)					
66. (*)	Petal: number of stripes					
QN	(c) none					1
	few					3
	medium					5
	many					7
67.	Petal: color of stripes					
PQ	(c) RHS Colour Chart (indicate reference number)					
68. (*)	Petal: density of netting					
QN	(c) none					1
	sparse					3
	medium					5
	dense					7
69.	Petal: color of netting					
PQ	(c) RHS Colour Chart (indicate reference number)					

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
70.	Lip: length of apical lobe	Labelle: longueur du lobe apical	Lippe: Länge des apikalen Lappens	Labio: longitud del lóbulo apical		
QN	(c) short	courte	kurz	corta	Mrs Brown	3
	medium	moyen	mittel	media	Puccini, Red Rose	5
	long	longue	lang	larga		7
71.	Lip: width of apical lobe	Labelle: largeur du lobe apical	Lippe: Breite des apikalen Lappens	Labio: anchura des lóbulo apical		
QN	(c) narrow	étroite	schmal	estrecha	Moonwalker	3
	medium	moyenne	mittel	media	Miss Saigon	5
	broad	large	breit	ancha	Phalmomen	7
72.	Lip: shape of apical lobe	Labelle: forme du lobe apical	Lippe: Form des apikalen Lappens	Labio: forma del lóbulo apical		
(+)						
PQ	(c) triangular				Paloma	1
	ovate	ovale	eiförmig	oval	Puccini	2
	trullate					3
	elliptic	elliptique	elliptisch	elíptica		4
	rhombic	losangique	rautenförmig	rómbica	Green Star	5
	circular				Phalnasxu	6
	obovate	obovale	verkehrt eiförmig	oboval	SOGO F-2451, Symphony	7
	obtriangular				Hacyon	8
73.	Lip: whiskers	Labelle: cirres	Lippe: Haaren	Labio: patillas		
(+)						
QL	(c) absent	absente	fehlend	ausente	Moonwalker, SOGO F-1016	1
	present	présente	vorhanden	presente	Phalmomen	9

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
74.	Lip: length of whiskers	Labelle: logueur du cirres	Lippe: Länge des Haaren	Labio:		
QN	(c) short	courte	kurz	corta	Green Star, SOGO F-982	3
	medium	moyen	mittel	media	Cuckoo, SOGO F-1302	5
	long	longue	lang	larga	Snow Tiger, Jiang Firebird	7
75.	Lip: bump and ridge on apical lobe	Labelle: bosse et arête sur le lobe apical	Lippe: Höcker und Wulst am apikalen Lappen	Labio: Chicón y cresta en el lóbulo apical		
(+)						
QL	(c) absent or weak				SOGO F1567, Torce N92	1
	moderate					2
	strong				Mrs Brown, SOGO F-1016	3
76.	Lip: shape of lateral lobe	Labelle: type de forme du lobe latéral	Lippe: Type der Form des Seitenlappens	Labio: tipo de forma del lóbulo lateral		
(+)						
PQ	(c) type I	type I	Typ I	tipo I	SOGO F-728	1
	type II	type II	Typ II	tipo II	LKV13509, Amy Lee	2
	type III	type III	Typ III	tipo III	Golden Jaquar	3
	type IV	type IV	Typ IV	tipo IV	Caroline	4
	type V	type V	Typ V	tipo V	SOGO Fairyland, Torce N92	5
77.	Lip: curvature of lateral lobe	Labelle: type de courbure du lobe latéral	Lippe: Type der Biegung des Seitenlappens	Labio: tipo de curvatura del lóbulo lateral		
(+)						
PQ	(c) weak				SOGO Fairyland, SOGO F-1016	1
	medium				Beaugard	2
	strong				Snow Tiger	3

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
78.	Lip: size of lateral lobe relative to apical lobe	Labelle: taille du lobe latéral par rapport au lobe apical	Lippe: Grösse des Seitenlappens im Verhältnis zum apikalen Lappen	Labio: tamaño del lóbulo lateral en relación con el lóbulo apical		
QN	(c) smaller	plus petit	kleiner	más pequeño	Phaladadel, SOGO F-1016	3
	equal	identique	gleich gross	del mismo tamaño	Puccini, SOGO F-1016	5
	larger	plus grand	grösser	más grande	Hawaiien Dream, Ruey Hih Beauty	7
79.	Apical lobe: ground color	Lobe apicale: couleur principale	Apikalen lappens: Hauptfarbe	Lóbulo apical: color principal		
(+)						
PQ	(c) RHS Colour Chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)	Carta de colores RHS (indíquese el número de referencia)		
80.	Apical lobe: shading					
QL	(c) absent				Beaugard	1
	present				Green Star, SOGO F-1320	9
81.	Apical lobe: color of shade					
PQ	(c) RHS Colour Chart (indicate reference number)					
82.	Apical lobe: number of spots					
QN	(c) few					3
	medium					5
	many					7

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
83.	Apical lobe: size of spots					
QN	(c) small					3
	medium					5
	large					7
84.	Apical lobe: color of spots					
PQ	(c) RHS Colour Chart (indicate reference number)					
85.	Apical lobe: number of stripes					
QN	(c) none					1
	few					3
	medium					5
	many					7
86.	Apical lobe: color of stripes					
PQ	(c) RHS Colour Chart (indicate reference number)					
87.	Apical lobe: density of netting					
QN	(c) none					1
	loose					3
	sparse					5
	dense					7
88.	Apical lobe: color of netting					
PQ	(c) RHS Colour Chart (indicate reference number)					

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
89.	Lateral lobe: base color	Lobe apicale: couleur principale	Apikalen lappens: Hauptfarbe	Lóbulo apical: color principal		
(+)						
PQ	(c) RHS Colour Chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)	Carta de colores RHS (indíquese el número de referencia)		
90.	Lateral lobe: shading					
QN	(c) absent or weak				Mrs Brown	1
	moderate					2
	present				Halcyon	3
91.	Lateral lobe: color of shade					
PQ	(c) RHS Colour Chart (indicate reference number)					
92.	Lateral lobe: number of spots					
QN	(c) none					1
	few					3
	medium					5
	many					7
93.	Lateral lobe: color of spots					
PQ	(c) RHS Colour Chart (indicate reference number)					
94.	Lateral lobe: number of stripes					
QN	(c) none					1
	few					3
	medium					5
	many					7

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
95.	Lateral lobe: color of stripes					
PQ	(c) RHS Colour Chart (indicate reference number)					
96.	Lateral lobe: density of netting					
QN	(c) none					1
	sparse					3
	medium					5
	dense					7
97.	Lateral lobe: color of netting					
PQ	(c) RHS Colour Chart (indicate reference number)					
98.	Lip: callus	Labelle: callus	Lippe: Kallus	Labio: callo		
QL	(c) flat or slightly raised	plat	flach	plano		1
	moderately raised					2
	strongly raised				Mrs Brown	3
99.	Callus: color	Callus: couleur	Kallus: Farbe			
PQ	(c) RHS Colour Chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)			
100.	Callus: pubescence					
QL	(c) absent				Mrs Brown	1
	present				Zuma's Pixie 'Malibu'	9
101.	Columna: color	Colonne: couleur	Säule: Farbe	Columna: color		
PQ	(c) RHS Colour Chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)	Carta de colores RHS (indíquese el número de referencia)		

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:

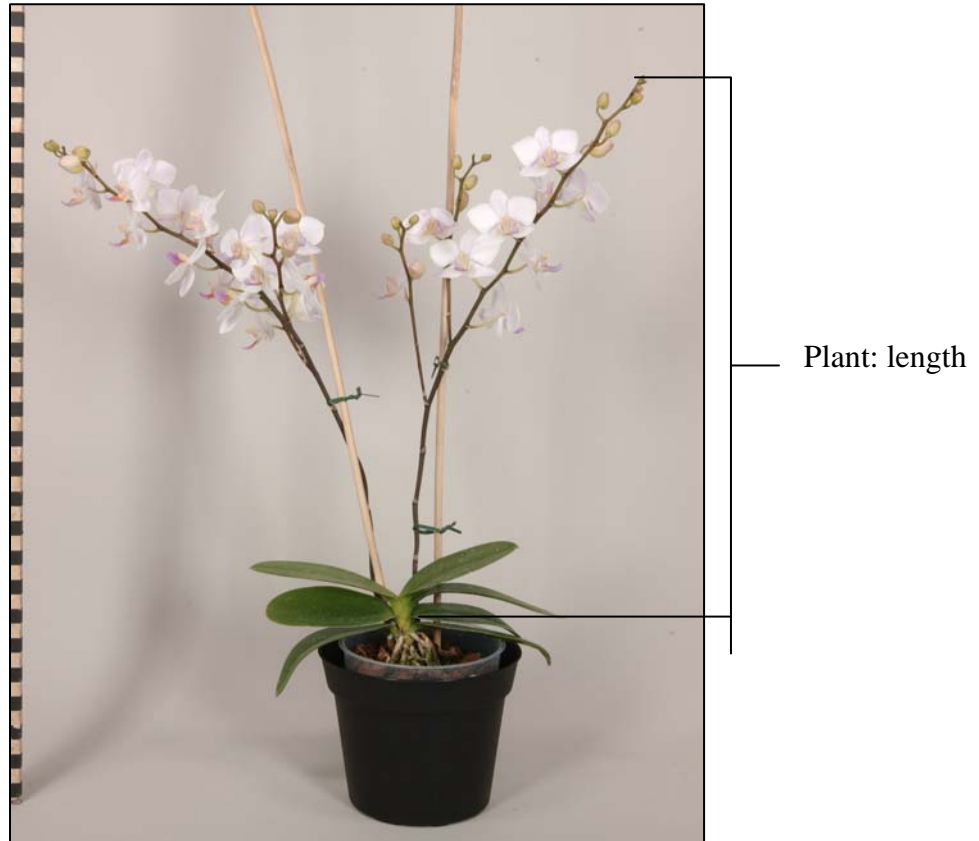
- (a) Observations on plant and stem should be made when 50 % of flowers have opened on the first inflorescence.
- (b) Observations on leaves should be made on the largest fully expanded leaf.
- (c) Observations on flowers should be made on fully expanded flowers when 50 % of flowers have opened.



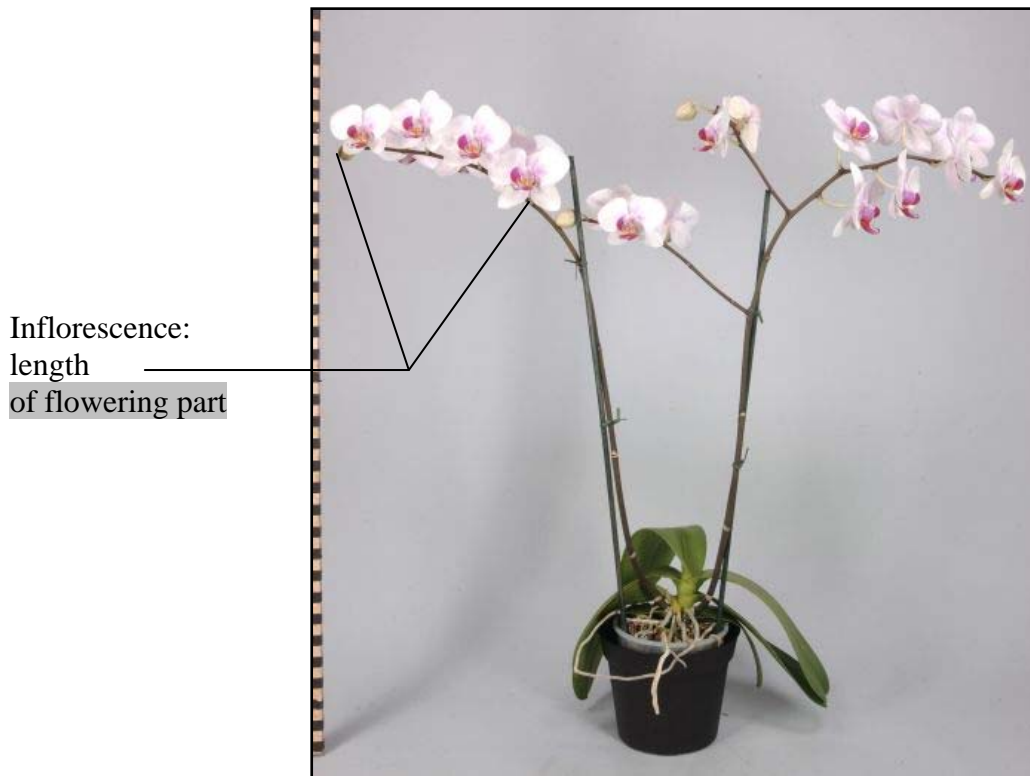
8.2 *Explanations for individual characteristics*

Ad. 1: Plant: length

Plant length should be measured from soil level to the end of the plant including the flowers.



Ad. 15: Inflorescence: length of flowering part

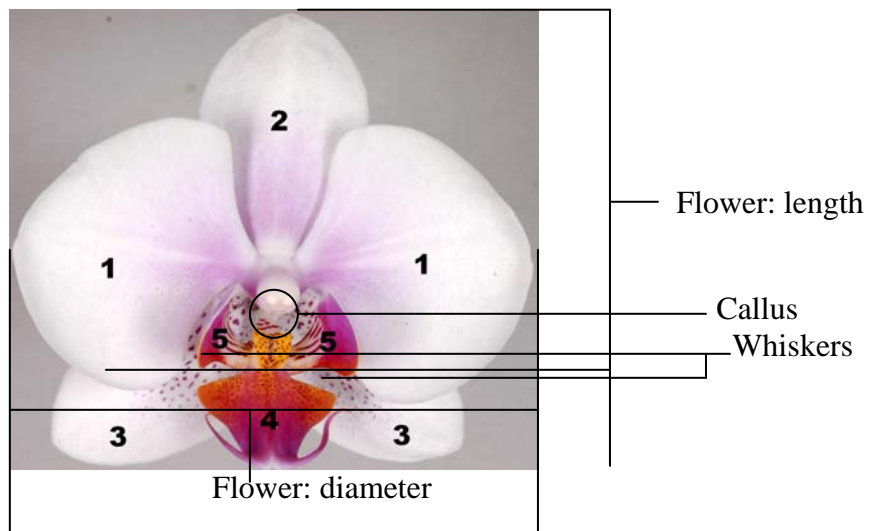


Ad. 21: Flower: length in front view

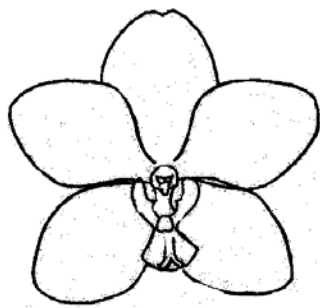
Ad. 22: Flower: width in front view

Ad. 73: Lip: whiskers

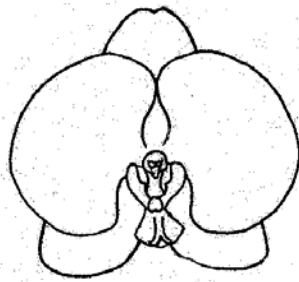
- 1: petal
- 2: dorsal sepal
- 3: lateral sepal
- 4: apical lobe
- 5: lateral lobe



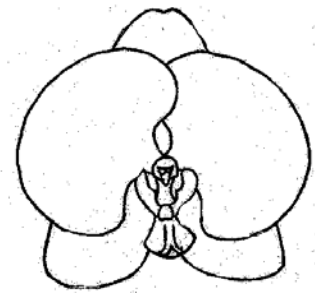
Ad. 23: Flower: arrangement of petals



1
free



2
touching



3
overlapping

Ad. 33: Dorsal sepal: ground color of upper side

Ad. 43: Lateral sepal: ground color of upper side

Ad. 60: Petal: ground color of upper side

Ad. 79: Apical lobe: ground color

The ground color is the color which is also on the lower surface.

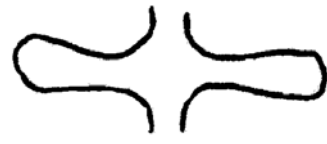
Ad. 76: Lip: shape of lateral lobe



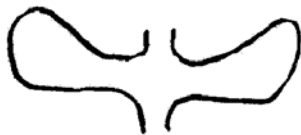
1
type I



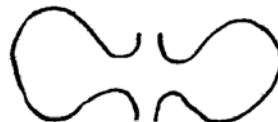
2
type II



3
type III



4
type IV



5
type V

Ad. 77: Lip: curvature of lateral lobe



1
weak



2
medium



3
strong

9. Literature

The Illustrated Encyclopedia of Orchids, Alec Pridgeon

Dictionary of Gardening, The Royal Horticultural Society

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	<input type="text" value="Phalaenopsis Blume"/>	
1.1.2 Common Name	<input type="text" value="Phalaenopsis"/>	
1.2 Species (please complete)		
1.2.1 Botanical name	<input type="text"/>	
1.2.2 Common Name	<input type="text"/>	
2. Applicant		
Name	<input type="text"/>	
Address	<input type="text"/>	
Telephone No.	<input type="text"/>	
Fax No.	<input type="text"/>	
E-mail address	<input type="text"/>	
Breeder (if different from applicant)	<input type="text"/>	

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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3. Proposed denomination and breeder's reference

Proposed denomination
(if available)

Breeder's reference

#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)

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

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- 4.1.4 Other []
(please provide details)

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TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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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 Other []
(please provide details)

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 Plant: length (1)		
short		1[]
medium		2[]
long		3[]
5.2 Leaf: longitudinal variegation (10)		
absent		1[]
present		9[]
5.3 Flower: width in front view (22)		
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
<p>5.4 Petal: ground color of upper side (60)</p> <p>white</p> <p>yellow</p> <p>green</p> <p>orange</p> <p>red</p> <p>violet</p> <p>purple red</p> <p>purple</p> <p>brown</p>		<p>1[]</p> <p>2[]</p> <p>3[]</p> <p>4[]</p> <p>5[]</p> <p>6[]</p> <p>7[]</p> <p>8[]</p> <p>9[]</p>
<p>5.5 Petal: shading (61)</p> <p>absent</p> <p>present</p>		<p>1[]</p> <p>9[]</p>
<p>5.6 Petal: number of spots (63)</p> <p>none</p> <p>none to few</p> <p>few</p> <p>few to medium</p> <p>medium</p> <p>medium to many</p> <p>many</p> <p>many to very many</p> <p>very many</p>		<p>1[]</p> <p>2[]</p> <p>3[]</p> <p>4[]</p> <p>5[]</p> <p>6[]</p> <p>7[]</p> <p>8[]</p> <p>9[]</p>

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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Characteristics	Example Varieties	Note
5.7 Petal: number of stripes (66)		
none		1[]
none to few		2[]
few		3[]
few to medium		4[]
medium		5[]
medium to many		6[]
many		7[]
many to very many		8[]
very many		9[]
5.8 Petal: density of netting (68)		
none		1[]
none to sparse		2[]
sparse		3[]
sparse to medium		4[]
medium		5[]
medium to dense		6[]
dense		7[]
dense to very dense		8[]
very dense		9[]

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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6. Similar varieties and differences from these varieties

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
<i>(Example)</i>	<i>Petal: main color of upper side</i>	<i>violet</i>	<i>red</i>

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Comments:

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TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
<p>7. Additional information which may help in the examination of the variety</p> <p>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?</p> <p>Yes [] No []</p> <p>(If yes, please provide details)</p> <p>7.2 Special conditions for the examination of the variety</p> <p>7.2.1 Are there any special conditions for growing the variety or conducting the examination?</p> <p>Yes [] No []</p> <p>7.2.2 If yes, please give details:</p> <p>7.3 Other information</p> <p>A representative color image of the variety should accompany the Technical Questionnaire.</p>		
<p>8. Authorization for release</p> <p>(a) Does the variety require prior authorization for release under legislation concerning the protection of the environment, human and animal health?</p> <p>Yes [] No []</p> <p>(b) Has such authorization been obtained?</p> <p>Yes [] No []</p> <p>If the answer to (b) is yes, please attach a copy of the authorization.</p>		

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

.....

9.3 Has the plant material to be examined been tested for the presence of virus or other pathogens?

Yes []
(please provide details as specified by the Authority)

No []

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]