



TG/VRIES(proj.4)
ORIGINAL: English
DATE: 2010-10-02

INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS
 GENEVA

DRAFT

VRIESEA

UPOV Code: VRIES

Vriesea Lindl.

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GUIDELINES

FOR THE CONDUCT OF TESTS

FOR DISTINCTNESS, UNIFORMITY AND STABILITY

prepared by experts from the Netherlands

to be considered by the

*Technical Committee at its forty-sixth session,
 to be held in Geneva from March 22 to 24, 2010*

Alternative Names:^{*}

<i>Botanical name</i>	<i>English</i>	<i>French</i>	<i>German</i>	<i>Spanish</i>
Vriesea Lindl.	Vriesea	Vriesea	Vriesea	Vriesea

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 *Vriesea* Lindl. of the family *Bromeliaceae*.

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 young plants, one month before flower induction, capable of expressing all relevant characteristics of the variety during the first growing cycle.

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

Seed-propagated varieties: 45 plants

Vegetatively propagated varieties: 20 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*

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.

3.4 *Test Design*

3.4.1 Seed-propagated varieties: each test should be designed to result in a total of at least 45 plants.

3.4.2 Vegetatively propagated varieties: each test should be designed to result in a total of at least 20 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*

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.

3.6 *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, 1 off-type is allowed.

4.2.3 Seed-propagated varieties: the assessment of uniformity of seed-propagated varieties should be according to the recommendations for cross-pollinated varieties in the General Introduction.

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, the 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 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 (inflorescence excluded) (characteristic 1)
- (b) Leaf blade: main color of upper side (excluding longitudinal variegation) (characteristic 16)
- (c) Inflorescence: branching (characteristic 24)

(d) Floral bract: main color of outer side (characteristic 40) with the following groups:

- Gr. 1: white
- Gr. 2: green
- Gr. 3: yellow
- Gr. 4: orange
- Gr. 5: orange red
- Gr. 6: purple pink
- Gr. 7: red
- Gr. 8: red purple
- Gr. 9: purple

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)-(c) 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 caracteresticas

		English	français	deutsch	español	Example Varieties	
						Exemples	Note/ Nota
						Beispielsorten	
1. (*) (+)	Plant: height (inflorescence excluded)	Plante: hauteur (inflorescence exclue)	Pflanze: Höhe (ohne Blütenstand)	Planta: altura (inflorescencia excluida)			
QN (a)	very short	très basse		sehr niedrig	muy baja		1
	short	basse		niedrig	baja	Pluto	3
	medium	moyenne		mittel	media	Clementine	5
	tall	haute		hoch	alta	Enjoy	7
	very tall	très haute		sehr hoch	muy alta	Evita	9
2. (*) (+)	Plant: diameter	Plante: diamètre	Pflanze: Durchmesser	Planta: diámetro			
QN (a)	very small	très petit		sehr klein	muy pequeño	Pluto	1
	small	petit		klein	pequeño	Cathy	3
	medium	moyen		mittel	medio	Venus	5
	large	grand		groß	grande	Magic	7
	very large	très grand		sehr groß	muy grande	Saturn	9
3.	Plant: number of leaves	Plante: nombre de feuilles	Pflanze: Anzahl Blätter	Planta: número de hojas			
QN (a)	very few	très petit		sehr gering	muy bajo		1
	few	petit		gering	bajo	Era	3
	medium	moyen		mittel	medio	Saturn	5
	many	grand		groß	alto	Oberon	7
	very many	très grand		sehr groß	muy alto		9

		English	français	deutsch	español	Example Varieties	Note/ Nota
						Exemples Beispielssorten Variedades ejemplo	
4. (*) (+)	Young leaf blade: main color of upper side (excluding longitudinal variegation)	Jeune limbe : couleur principale de la face supérieure (panachure longitudinale exclue)	Junge Blattspreite: Hauptfarbe der Oberseite (ohne Längs- panaschierung)	Limbo: color principal del haz (excluida la variegación longitudinal)			
PQ	(a) light green	vert clair	hellgrün	verde claro			1
	(b) medium green	vert moyen	mittelgrün	verde medio	Style		2
	dark green	vert foncé	dunkelgrün	verde oscuro	Lion		3
	grey green	vert-gris	graugrün	verde gris			4
	red purple	rouge-pourpre	rotpurpurn	púrpura rojizo	Autumn Blaze		5
	purple	pourpre	purpurn	púrpura	Pacific Ruby		6
	red brown	rouge-brun	rotbraun	marrón rojizo			7
5. (*) (+)	Young leaf blade: longitudinal variegation	Jeune limbe : panachure longitudinale	Junge Blattspreite: Längspanaschierung	Limbo joven: variegación longitudinal			
QL	(a) absent	absente	fehlend	ausente	Style		1
	(b) present	présente	vorhanden	presente	Robin		9
6. (*) (+)	Young leaf blade: type of longitudinal variegation	Jeune limbe : type de panachure longitudinale	Junge Blattspreite: Art der Längs- panaschierung	Limbo joven: tipo de variegación longitudinal			
PQ	(a) narrow marginal	marginale étroite	schmal marginal	marginal estrecho			1
	(b) broad marginal	marginale large	breit marginal	marginal ancho			2
	central stripe	bande centrale	Mittelstreifen	raya central	Robin		3
	multiple stripes	bandes multiples	mehrere Streifen	múltiples rayas	Clementine		4

		English	français	deutsch	español	Example Varieties	
						Exemples	Note/ Nota
						Beispielssorten	
7.	(*) (+)	Young leaf blade: pattern of secondary color (excluding longitudinal variegation)	Jeune limbe : distribution de la couleur secondaire (panachure longitudinale exclue)	Junge Blattspreite: Verteilung der Sekundärfarbe (ohne Längs- panaschierung)	Limbo joven: distribución del color secundario (excluida la variegación longitudinal)		
PQ	(a)	none	nulle	keine	ninguna	Stream	1
	(b)	with a flush	floue	geflammt	difusa		2
		striated	striée	gestreift	estriada	Tasman Cherry White	3
		netted	réticulée	netzartig	reticular		4
		banded	regroupée	in Banden	listada	Era	5
		marbled	marbrée	marmoriert	marmórea		6
		spotted	tachetée	gefleckt	moteada	Style	7
		marbled and spotted	marbrée et tachetée	marmoriert und gefleckt	marmórea y moteada	Tasman Tartan	8
		marginal	marginale	marginal	marginal	Lion	9
8.		Young leaf blade: secondary color of upper side (excluding longitudinal variegation)	Jeune limbe : couleur secondaire de la face supérieure (panachure longitudinale exclue)	Junge Blattspreite: Sekundärfarbe der Oberseite (ohne Längs- panaschierung)	Limbo joven: color secundario del haz (excluida la variegación longitudinal)		
PQ	(a)	light green	vert clair	hellgrün	verde claro		1
	(b)	medium green	vert moyen	mittelgrün	verde medio		2
		dark green	vert foncé	dunkelgrün	verde oscuro		3
		grey green	vert-gris	graugrün	verde gris		4
		red purple	rouge-pourpre	rotpurpurn	púrpura rojizo	Style	5
		purple	pourpre	purpurn	púrpura		6
		red brown	rouge-brun	rotbraun	marrón rojizo	Era	7

	English	français	deutsch	español	Example Varieties	Note/ Nota
					Exemples Beispielssorten Variedades ejemplo	
9. <small>(*)</small>	Young leaf blade: color of apical part if different from main color (excluding longitudinal variegation)	Jeune limbe : couleur de la partie apicale si elle diffère de la couleur principale (panachure longitudinale exclue)	Junge Blattspreite: Farbe der oberen Hälfte sofern nicht gleichfarbig mit Hauptfarbe (ohne Längs- panaschierung)	Limbo joven: color de la zona apical si difiere del color principal (excluida la variegación longitudinal)		
PQ	(a) light green	vert clair	hellgrün	verde claro		1
	(b) medium green	vert moyen	mittelgrün	verde medio	Showman	2
	dark green	vert foncé	dunkelgrün	verde oscuro		3
	grey green	vert-gris	graugrün	verde gris	Tasman coconut Ice	4
	red purple	rouge-pourpre	rotpurpurn	púrpura rojizo	Tasman Rose	5
	purple	pourpre	purpurn	púrpura		6
	red brown	rouge-brun	rotbraun	marrón rojizo		7
10. <small>(+)</small>	Leaf sheath: length	Gaine de la feuille: longueur	Blattscheide: Länge	Vaina: longitud		
QN	(a) short	courte	kurz	corta	Era	3
	(c) medium	moyenne	mittel	media	Clementine	5
	long	longue	lang	larga	Deplacar	7
11. <small>(+)</small>	Leaf sheath: width	Gaine de la feuille: largeur	Blattscheide: Breite	Vaina: anchura		
QN	(a) narrow	étroite	schmal	estrecha	Venus	3
	(c) medium	moyenne	mittel	media	Clementine	5
	broad	large	breit	ancha	Saturn	7
12. <small>(*) (+)</small>	Leaf blade: length	Limbe: longueur	Blattspreite: Länge	Limbo: longitud		
QN	(a) short	court	kurz	corto	Deplacar	3
	(c) medium	moyen	mittel	medio	Draco	5
	long	long	lang	largo	Saturn	7

	English	français	deutsch	español	Example Varieties	Note/ Nota
					Exemples Beispielssorten Variedades ejemplo	
13. (*) (+)	Leaf blade: width	Limbe: largeur	Blattspreite: Breite		Limbo: anchura	
QN	(a) very narrow	très étroit	sehr schmal	muy estrecho		1
	(b) narrow	étroit	schmal	estrecho	Draco	3
	medium	moyen	mittel	medio	Clementine	5
	broad	large	breit	ancho	Stream	7
	very broad	très large	sehr breit	muy ancho		9
14. (*)	Leaf blade: shape of tip	Limbe: forme de l'extrémité	Blattspreite: Form der Spitze	Limbo: forma del extremo		
PQ	(a) acute	aiguë	spitz	ancha	Pluto	1
	(c) acuminate	acuminée	zugespitzt		Isabel	2
	mucronate	mucronée	keilförmig		Stream	3
15. (*) (+)	Leaf blade: longitudinal variegation	Limbe : panachure longitudinale	Blattspreite: Längs-panaschierung	Limbo: variegación longitudinal		
QL	(a) absent	absente	fehlend	ausente		1
	(c) present	présente	vorhanden	presente		9
16. (*) (+)	Leaf blade: main color of upper side (excluding longitudinal variegation)	Limbe : couleur principale de la face supérieure (panachure longitudinale exclue)	Blattspreite: Hauptfarbe der Oberseite (ohne Längs-longitudinale exklusive panaschierung)	Limbo: color principal del haz (excluida la variegación longitudinal)		
PQ	(a) light green	vert clair	hellgrün	verde claro	Draco	1
	(c) medium green	vert moyen	mittelgrün	verde medio	Era	2
	dark green	vert foncé	dunkelgrün	verde oscuro	Isabel	3
	grey green	vert-gris	graugrün	verde gris	Kiwi Sunset	4
	red purple	rouge-pourpre	rotpurpurn	púrpura rojizo		5
	purple	pourpre	purpurn	púrpura		6
	red brown	rouge-brun	rotbraun	marrón rojizo	Alcantarea Vinivolor	7
	dark brown	brun foncé	dunkelbraun	marrón oscuro		8

		English	français	deutsch	español	Example Varieties	Note/ Nota
						Exemples Beispielssorten Variedades ejempl	
17. (*) (+)	Leaf blade: type of longitudinal variegation	Limbe : type de panachure longitudinale	Blattspreite: Art der Längspanaschierung	Limbo; tipo de variegación longitudinal			
PQ	(a) narrow marginal	marginale étroite	schmal marginal	marginal estrecha		1	
	(c) broad marginal	marginale large	breit marginal	marginal ancha		2	
	central stripe	bande centrale	Mittelstreifen	raya central		3	
	multiple stripes	bandes multiples	mehrere Streifen	múltiples rayas		4	
18. (*) (+)	Leaf blade: pattern of secondary color (excluding longitudinal variegation)	Limbe : distribution de la couleur secondaire (panachure longitudinale exclue)	Blattspreite: Verteilung der Sekundärfarbe (ohne Längs-longitudinale panaschierung)	Limbo: distribución del color secundario (excluida la variegación longitudinal)			
PQ	(a) none	nulle	keine	ninguna	Stream	1	
	(c) with a flush	floue	geflammt	difusa	Tasman Candyman	2	
	striated	striée	gestreift	estriada	Tasman Cherry White	3	
	banded	regroupée	in Banden	listada	Era	4	
	marbled	marbrée	marmoriert	marmórea	Kiwi Cream	5	
	spotted	tachetée	gefleckt	moteada	Style	6	
	marbled and spotted	marbrée et tachetée	marmoriert und gefleckt	marmórea y moteada	Tasman Tartan	7	
	marginal	marginale	marginal	marginal	Lion	8	
19. (*)	Leaf blade: secondary color of upper side (excluding longitudinal variegation)	Limbe : couleur secondaire de la face supérieure (panachure longitudinale exclue)	Blattspreite: Sekundärfarbe der Oberseite (ohne Längs-longitudinale panaschierung)	Limbo: color secundario del haz (excluida la variegación longitudinal)			
PQ	(a) light green	vert clair	hellgrün	verde claro	TO BE PROVIDED	1	
	(c) medium green	vert moyen	mittelgrün	verde medio	TO BE PROVIDED	2	
	dark green	vert foncé	dunkelgrün	verde oscuro	TO BE PROVIDED	3	
	grey green	vert-gris	graugrün	verde gris	TO BE PROVIDED	4	
	red purple	rouge-pourpre	rotpurpurn	púrpura rojizo	Style	5	
	purple	pourpre	purpurn	púrpura	TO BE PROVIDED	6	
	red brown	rouge-brun	rotbraun	marrón rojizo	Era	7	

	English	français	deutsch	español	Example Varieties	Note/ Nota
					Exemples Beispielssorten Variedades ejemplo	
20. <small>(*)</small>	Leaf blade: color of apical part if different from main color (excluding longitudinal variegation)	Limbe : couleur de la partie apicale si elle diffère de la couleur principale (panachure longitudinale exclue)	Blattspreite: Farbe der oberen Hälfte sofern nicht gleichfarbig mit Hauptfarbe (ohne Längs-panaschierung)	Limbo: color de la zona apical si difiere del color principal (excluida la variegación longitudinal)		
PQ	(a) pink	rose	rosa	rosa		1
	(c) red	rouge	rot	rojo	Tasman Rose	2
	red purple	rouge pourpre	rotpurpurn	púrpura rojizo	Draco	3
	purple brown	pourpre brun	purpurbraun	marrón púrpura	Enjoy	4
21.	Leaf blade: main color of lower side (excluding longitudinal variegation)	Limbe : couleur principale de la face inférieure (panachure longitudinale exclue)	Blattspreite: Hauptfarbe der Unterseite (ohne Längs-panaschierung)	Limbo: color principal del envés (excluida la variegación longitudinal)		
PQ	(a) light green	vert clair	hellgrün	verde claro		1
	(c) medium green	vert moyen	mittelgrün	verde medio		2
	dark green	vert foncé	dunkelgrün	verde oscuro		3
	grey green	vert-gris	graugrün	verde gris		4
	red purple	rouge-pourpre	rotpurpurn	púrpura rojizo		5
	purple	pourpre	purpurn	púrpura		6
	red brown	rouge-brun	rotbraun	marrón rojizo		7
	dark brown	brun foncé	dunkelbraun	marrón oscuro		8
22. <small>(*) (+)</small>	Inflorescence: point of origin	Inflorescence : point d'origine	Blütenstand: Ausgangspunkt	Inflorescencia: punto de origen		
QL	(a) from centre	au centre	von der Mitte	desde el centro		1
	from lateral leaf axil	sur l'aisselle d'une feuille latérale	von der seitlichen Blattachsel	desde la axila de la hoja lateral		2

					Example Varieties	
	English	français	deutsch	español	Exemples	Note/ Nota
					Beispielssorten	
23. (*)	Inflorescence: position in relation to top of foliage	Inflorescence : position par rapport au sommet du feuillage	Blütenstand: Stellung im Vergleich zu Blätterhöhe	Inflorescencia: posición en relación con el extremo más alto del follaje		
QN (a)	below	dessous	unterhalb	por debajo		1
	same level	même niveau	auf gleicher Höhe	en el mismo nivel	Modesto	2
	above	dessus	oberhalb	por encima	Draco	3
24. (*) (+)	Inflorescence: branching	Inflorescence: ramification	Blütenstand: Verzweigung	Inflorescencia: ramificación		
QL (a)	absent	nulle	fehlend	ausente	Era, Venus	1
	present	présente	vorhanden	presente	Goldstar, Pluto	9
25.	Inflorescence: number of branches	Inflorescence : nombre de rameaux	Blütenstand: Anzahl Zweige	Inflorescencia: número de ramas		
QN (a)	few	petit	gering	pocas	Cathy	3
	medium	moyen	mittel	medio	Style	5
	many	grand	groß	muchas	Evita	7
26.	Inflorescence: attitude	Inflorescence : port	Blütenstand: Haltung	Inflorescencia: porte		
QN (a)	erect	dressé	aufrecht	erecto	Style	1
	semi erect	semi-dressé	halbaufrecht	semierecto		2
	drooping	retombant	überhängend	curvado	Vriesea guttata	3
27. (*) (+)	Inflorescence: length	Inflorescence: longueur	Blütenstand: Länge	Inflorescencia: longitud		
QN (d)	short	courte	kurz	corta	Pavo	3
	medium	moyenne	mittel	media	Clementine	5
	long	longue	lang	larga	Evita	7
28. (*)	Inflorescence: color of peduncle bracts	Inflorescence : couleur des bractées du pédoncule	Blütenstand: Farbe der Hüllblätter des Stiels	Inflorescencia: color de las brácteas del pedúnculo		
PQ (d)	RHS Colour Chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)	Tabla de colores RHS (indíquese el número de referencia)		

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
29. (*) (+)	Inflorescence: length of flowering part	Inflorescence: longueur de la partie florifère	Blütenstand: Länge des blühenden Teils	Inflorescencia: longitud de la parte floral		
QN (d)	short	courte	kurz	corta	Energy	3
	medium	moyenne	mittel	media	Style	5
	long	longue	lang	larga	Deplacar	7
30. (*) (+)	Only varieties with inflorescence branching: present: Inflorescence: diameter of flowering part	Seulement variétés avec inflorescence : ramification présente : Inflorescence : diamètre de la partie florifère	Nur Sorten mit Blütenstand Verzweigung: vorhanden: Blütenstand: Durchmesser des blühenden Teils	Únicamente variedades con ramificación de la inflorescencia: presente: inflorescencia: diámetro de la parte floral		
QN (d)	very small	très petit	sehr klein	muy pequeño		1
	small	petit	klein	pequeño		3
	medium	moyen	mittel	medio		5
	large	grand	groß	grande		7
	very large	très grand	sehr groß	muy grande		9
31. (+)	Only varieties with inflorescence branching: present: Inflorescence: length of terminal branch	Seulement variétés avec inflorescence : ramification présente : Inflorescence : longueur du rameau terminal	Nur Sorten mit Blütenstand Verzweigung: vorhanden: Blütenstand: Länge des Endzweiges terminal	Únicamente variedades con ramificación de la inflorescencia: presente: inflorescencia: longitud de la rama terminal		
QN (d)	short	courte	kurz	corta	Oberon	1
	medium	moyenne	mittel	media	Lion	2
	long	longue	lang	larga	Stream	3
32. (+)	Inflorescence: width of terminal branch	Inflorescence : largeur du rameau terminal	Blütenstand: Breite des Endzweiges	Inflorescencia: anchura de la rama terminal		
QN (d)	narrow	étroite	schmal	delgada	Pacific Ruby	1
	medium	moyenne	mittel	media	Lion	2
	broad	large	breit	gruesa	Venus	3

		English	français	deutsch	español	Example Varieties	Note/ Nota
						Exemples Beispielssorten Variedades ejemplo	
33. (+)	Inflorescence: thickness of terminal branch	Inflorescence : épaisseur du rameau terminal	Blütenstand: Dicke des Endzweiges	Inflorescencia: grosor de la rama terminal			
QN (d)	thin	fine	dünn		delgada		3
	medium	moyenne	mittel		media		5
	thick	épaisse	dick		gruesa		7
34. (*) (+)	Inflorescence: shape of terminal branch	Inflorescence : forme du rameau terminal	Blütenstand: Form des Endzweiges	Inflorescencia: forma de la rama terminal			
PQ (d)	narrow ovate	ovale étroit	schmal eiförmig	oval estrecha	Jumping Bofire		1
	medium ovate	ovale moyen	mittel eiförmig	oval media	Clementine		2
	elliptic	elliptique	elliptisch	elíptica	Deplacar		3
	oblong	oblong	rechteckig	oblonga	Pacific Ruby		4
	ovovate	obovale	verkehrt eiförmig	oboval	Tasman Cherry Wine		5
35.	Inflorescence: number of floral bracts of terminal branch	Inflorescence : nombre de bractées florales du rameau terminal	Blütenstand: Anzahl Hochblätter des Endzweiges	Inflorescencia: número de brácteas florales de la rama terminal			
QN (d)	few	faible	gering	bajo	Annie		3
	medium	moyen	mittel	medio	Draco		5
	many	élevé	groß	alto	Oberon		7
36. (*) (+)	Floral bract: arrangement	Bractée : disposition	Hochblatt: Anordnung	Bráctea floral: disposición			
QL (d)	free	disjoints	frei	libre	Jumping Bofire		1
	adpressed	appliquée	anliegend	alineada	Lion		2
37.	Floral bract: length	Bractée: longueur	Deckblatt: Länge	Bráctea: longitud			
(+)							
QN (d)	short	courte	kurz	corta	Pacific Ruby		3
	medium	moyenne	mittel	media	Lion		5
	long	longue	lang	larga	Enjoy		7

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplos	Note/ Nota
38.	Floral bract: width	Bractée: largeur	Deckblatt: Breite	Bráctea: anchura		
(+)						
QN (d)	narrow	étroite	schmal	estrecha	Oberon	3
	medium	moyenne	mittel	media	Pavo	5
	broad	large	breit	ancha	Stream	7
39.	Floral bract: angle of apex	Bractée : angle du sommet	Hochblatt: Winkel der Spitze	Bráctea floral: ángulo del ápice		
(+)						
QN (d)	small	petit	klein	pequeño		1
	medium	moyen	mittel	mediano		2
	large	grand	groß	grande		3
40.	Floral bract: main color of outer side	Bractée: couleur principale de la face supérieure	Deckblatt: Hauptfarbe der Oberseite	Bráctea: color principal del haz		
(*)						
(+)						
PQ (d)	RHS Colour Chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)	Tabla de colores RHS (indíquese el número de referencia)		
41.	Floral bract: secondary color of outer side	Bractée: couleur secondaire de la face inférieure	Deckblatt: sekundäre Farbe der Unterseite	Bráctea: color secundario del envés		
(*)						
(+)						
PQ (d)	RHS Colour Chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)	Tabla de colores RHS (indíquese el número de referencia)		
42.	Floral bract: main color of inner side	Bractée: couleur principale de la face inférieure	Deckblatt: Hauptfarbe der Unterseite	Bráctea: color principal del envés		
(+)						
PQ (d)	RHS Colour Chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)	Tabla de colores RHS (indíquese el número de referencia)		
43.	Calyx: color	Calice : couleur	Kelch: Farbe	Cáliz: color		
PQ (d)	whitish	blanchâtre	weißlich	blanquecino	Era	1
	yellowish	jaunâtre	gelblich	amarillento	Pluto	2
	greenish	verdâtre	grünlich	verdoso	Magic	3

					Example Varieties	
	English	français	deutsch	español	Exemples	Note/ Nota
					Beispielssorten	
44.	Petal: length		Pétale: longueur		Kronblatt: Länge	
QN	(d)	short	courte	kurz	corta	3
		medium	moyenne	mittel	media	Deplacar
		long	longue	lang	larga	Goldstar
45.	Petal: width		Pétale: largueur		Kronblatt: Breite	
QN	(d)	narrow	étroit	schmal	estrecho	Oberon
		medium	moyen	mittel	medio	Enjoy
		broad	large	breit	ancho	Draco
46.	Petal: color of apex		Pétale : couleur du sommet		Blütenblatt: Farbe der Spitze	
(*)					Pétalo: color del ápice	
PQ	(d)	RHS Colour Chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)	Tabla de colores RHS (indíquese el número de referencia)	
47.	Ovary: color		Ovaire : couleur		Fruchtknoten: Farbe	
PQ	(d)	white	blanc	weiß	blanco	Clementine, Pluto
		light yellow	jaune clair	hellgelb	amarillo claro	2
		light green	vert clair	hellgrün	verde claro	Era, Venus
48.	Style: color		Style: couleur		Griffel: Farbe	
PQ	(d)	white	blanc	weiß	blanco	1
		light yellow	jaune clair	hellgelb	amarillo claro	Era, Saturn
		medium yellow	jaune moyen	mittelgelb	amarillo medio	3
		yellow green	vert-jaune	gelbgrün	verde amarillento	Goldstar, Pluto
49.	Stigma: color		Stigmate: couleur		Narbe: Farbe	
PQ	(d)	white	blanc	weiß	blanco	1
		light yellow	jaune clair	hellgelb	amarillo claro	Style
		light green	vert clair	hellgrün	verde claro	Clementine
		medium green	vert moyen	mittelgrün	verde medio	Saturn, Venus

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, leaves and inflorescence should be made when flowers are opened in the middle third of the main spike
- (b) Observation on young leaves should be made on recently expanded leaves in the center of the rosette.
- (c) Observations on leaves should be made on largest leaves of the rosette.
- (d) Observations on flowers should be made on fully expanded flowers in the middle third of the terminal branch.

8.2 Explanations for individual characteristics

Ad. 1: Plant: height (inflorescence excluded)

Ad. 2: Plant: diameter

Plant: height
(inflorescence
excluded)



Plant: diameter

Ad. 4: Young leaf blade: main color of upper side (excluding longitudinal variegation)
Ad. 7: Yong leaf blade: pattern of secondary color (excluding longitudinal variegeation)

EXPLANATION OF MAIN COLOR TO BE PROVIDED

Ad. 5: Young leaf blade: longitudinal variegation

ILLUSTRATION TO BE PROVIDED

Ad. 6: Young leaf blade: type of longitudinal variegation

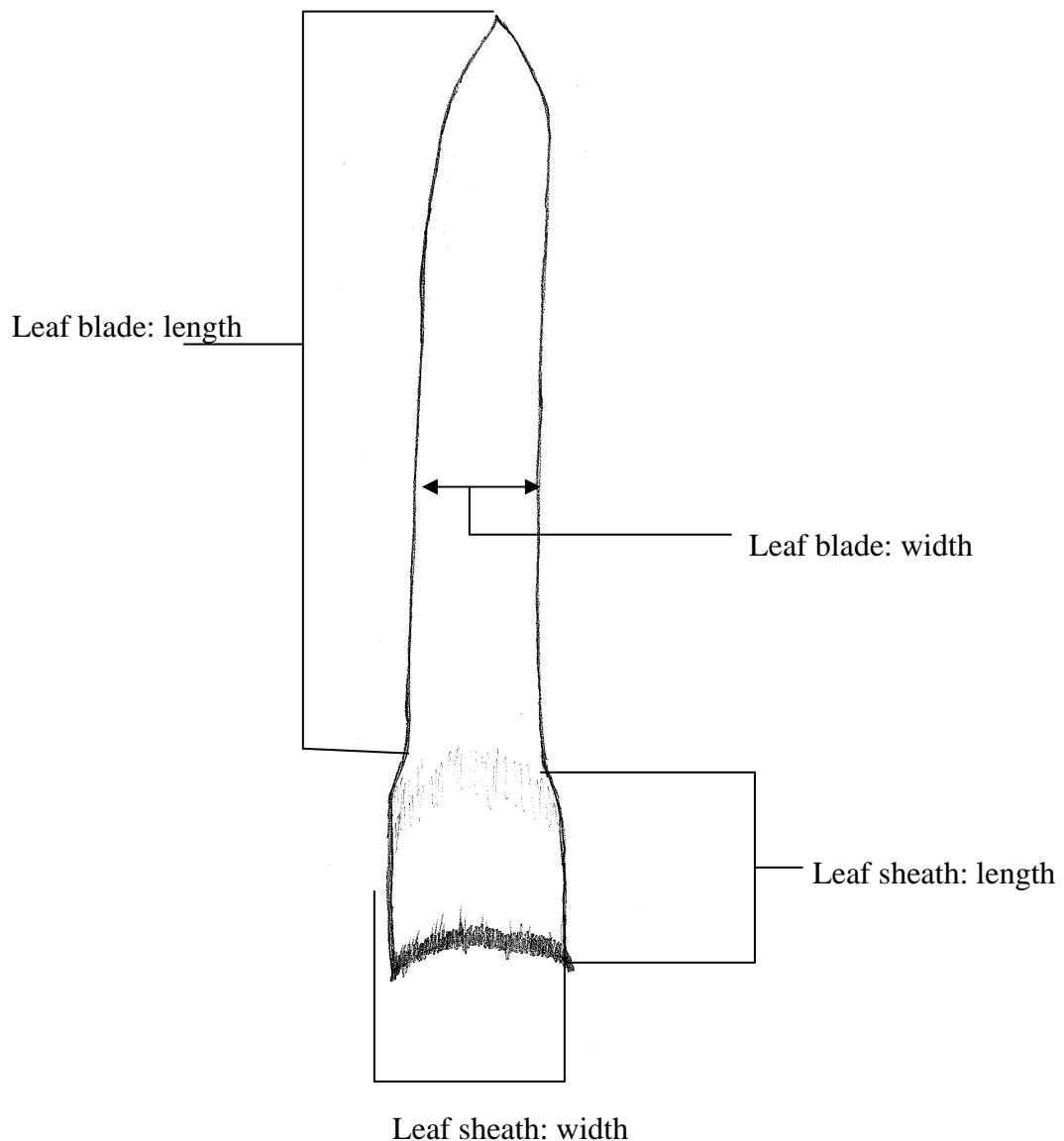
ILLUSTRATION TO BE PROVIDED

Ad. 10: Leaf sheath: length

Ad. 11: Leaf sheath: width

Ad. 12: Leaf blade length

Ad. 13: Leaf blade: width



The leaf blade width should be observed in the middle third of the leaf.

Ad. 15: Leaf blade: longitudinal variegation

ILLUSTRATION TO BE PROVIDED

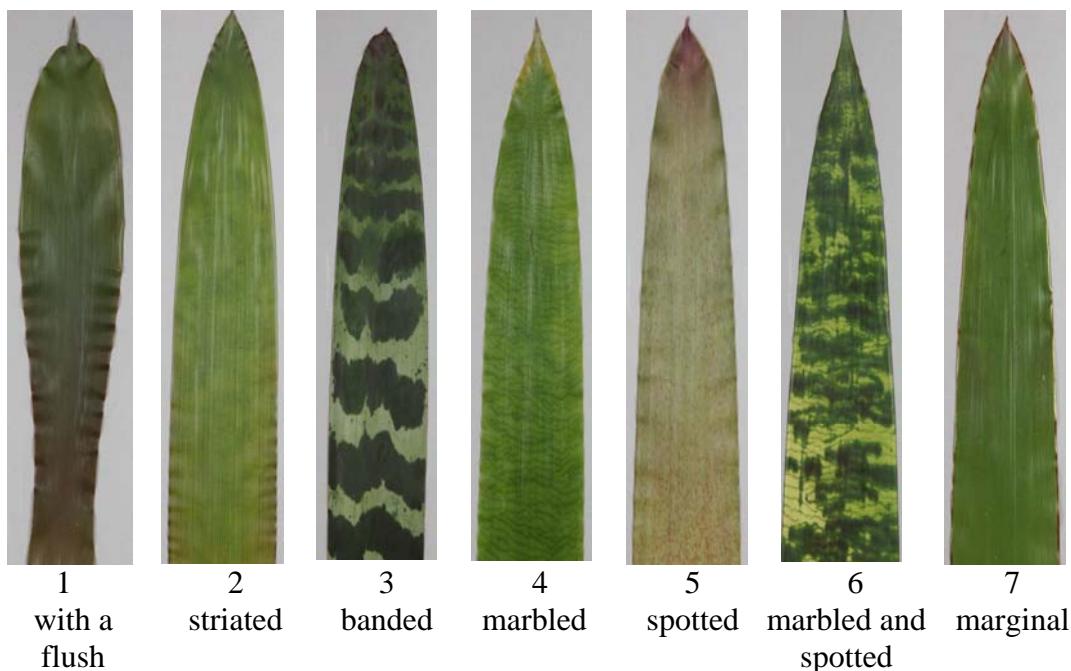
Ad. 16: Leaf blade: main color of upper side (excluding longitudinal variegation)

The main color is the color with the largest surface area.

Ad. 17: Leaf blade: type of longitudinal variegation

ILLUSTRATION TO BE PROVIDED

Ad. 18: Leaf blade: pattern of secondary color (excluding longitudinal variegation)



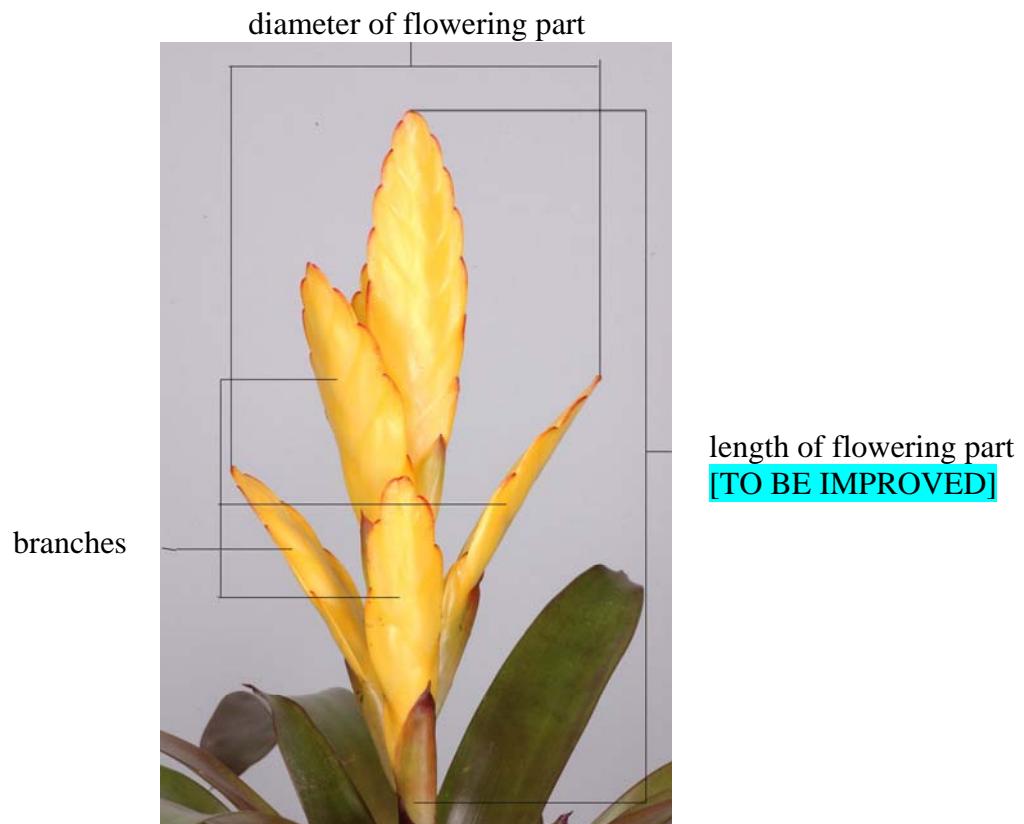
Ad. 22: Inflorescence: point of origin

ILLUSTRATION TO BE PROVIDED

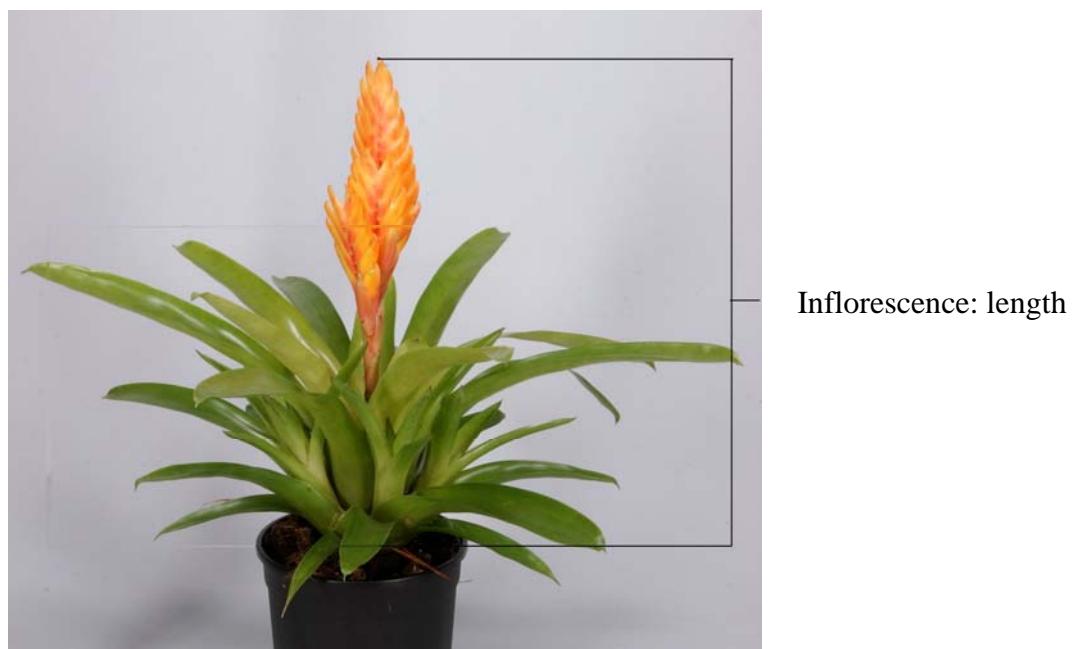
Ad. 25: Inflorescence: number of branches

Ad. 29: Inflorescence: length of flowering part

Ad. 30: Only varieties with inflorescence branching: present: Inflorescence: diameter of flowering part



Ad. 27: Inflorescence: length



Ad. 31: Only varieties with inflorescence branching: present: length of terminal branch

ILLUSTRATION TO BE PROVIDED

Ad. 32: Inflorescence: width of terminal branch

ILLUSTRATION TO BE PROVIDED

Ad. 33: Inflorescence: thickness of terminal branch

The thickness of the terminal branch should be observed in the middle third of the terminal branch.

Ad. 34: Inflorescence: shape of terminal branch

The shape of the terminal branch should be observed in ventral view.

Ad. 36: Floral bract: arrangement

ILLUSTRATION TO BE PROVIDED

Ad. 37: Floral bract: length

ILLUSTRATION TO BE PROVIDED

Ad. 38: Floral bract: width

ILLUSTRATION TO BE PROVIDED

Ad. 39: Floral bract: angle of apex

ILLUSTRATION TO BE PROVIDED

Ad. 40: Floral bract: main color of outer side

The main color may be the only color.

Ad. 41: Floral bract: secondary color of outer side

A secondary color may not be present.

Ad. 42: Floral bract: main color of inner side

The main color may be the only color.

9. Literature

Baensch, U. and Baensch, U., 1994: Blooming Bromeliads. Tropic Beauty Publishers, Nassau/Bahamas, ISBN 0-9641056-0-8, BS.

Rauh, W., 1981: Bromelien. Verlag Eugen Ulmer, Stuttgart, ISBN 3-8001-6029-3, DE.

Rauh, W., 1990: The Bromeliad Lexicon. Blandford, London, GB.

10. Technical Questionnaire

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
		Application date: (not to be filled in by the applicant)
<p style="text-align:center">TECHNICAL QUESTIONNAIRE to be completed in connection with an application for plant breeders' rights</p>		
1. Subject of the Technical Questionnaire		
1.1 Botanical name	Vriesea Lindl.	
1.2 Common name	Vriesea	
2. Applicant		
Name		
Address		
Telephone No.		
Fax No.		
E-mail address		
Breeder (if different from applicant)		
3. Proposed denomination and breeder's reference		
Proposed denomination (if available)		
Breeder's reference		

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

4.1 Breeding scheme

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 Vegetatively propagated varieties

- (a) cuttings []
- (b) seed propagation []
- (c) *in vitro* propagation []
- (d) other (state method) []

4.2.2 Seed-propagated varieties

- (a) Self-pollination []
- (b) Cross-pollination
 - (i) population []
 - (ii) synthetic variety []
- (c) Hybrid []
- (d) Other []

* 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:
Characteristics	Example Varieties	Note
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).		
5.1 Plant: height (inflorescence excluded) (1)		
very short		1[]
short	Pluto	3[]
medium	Clementine	5[]
tall	Enjoy	7[]
very tall	Evita	9[]
5.2 Leaf blade: main color of upper side (excluding longitudinal variegation) (16)		
light green	Draco	1[]
medium green	Era	2[]
dark green	Isabel	3[]
grey green	Kiwi Sunset	4[]
red purple		5[]
purple		6[]
red brown	Alcantarea Vinivolor	7[]
dark brown		8[]
5.3 Inflorescence: point of origin (22)		
from centre		1[]
from lateral leaf axil		2[]
5.4 Inflorescence: branching (24)		
absent	Era, Venus	1[]
present	Goldstar, Pluto	9[]

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
Characteristics	Example Varieties	Note
5.5(i) Floral bract: main color of outer side (40)	RHS Colour Chart (indicate reference number)	
5.5(ii) Floral bract: main color of outer side (40)		
white		1[]
green		2[]
yellow		3[]
orange		4[]
orange red		5[]
purple pink		6[]
red		7[]
red purple		8[]
purple		9[]

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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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
<i>Example</i>	<i>Plant: height</i>	<i>short</i>	<i>tall</i>
Comments:			

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 Are there any special conditions for growing the variety or conducting the examination?</p> <p>Yes [] No []</p> <p>(If yes, please provide details)</p> <p>7.3 Other information</p> <p>7.3.1 Main use</p> <p>(a) garden plant [] (b) pot plant [] (c) cut-flower [] (d) other []</p> <p>(please provide details)</p> <p>7.3.2 A representative color photograph 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>		

[#] 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:
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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”.

.....

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]