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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

Geneva

DRAFT

GUZMANIA

UPOV Code(s): GUZMA

Guzmania Ruiz et Pav.

GUIDELINES

FOR THE CONDUCT OF TESTS

FOR DISTINCTNESS, UNIFORMITY AND STABILITY

*prepared by experts from the Netherlands
 to be considered by the
 Technical Working Party for Ornamental Plants and Forest Trees
 at its fiftieth session, to be held in Victoria, British Columbia, Canada
 from 2017-09-11 to 2017-09-15*

Disclaimer: this document does not represent UPOV policies or guidance

Alternative names:*

<i>Botanical name</i>	<i>English</i>	<i>French</i>	<i>German</i>	<i>Spanish</i>
<i>Guzmania</i> Ruiz et Pav., <i>Guzmania</i> hybrid	Guzmania	Guzmania	Guzmania	Guzmania

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 *Guzmania* Ruiz et Pav.

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 .
- 2.3 The minimum quantity of plant material, to be supplied by the applicant, should be:
vegetative-propagated varieties, 20 plants, seed-propagated varieties 40 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. 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:
for vegetatively-propagated varieties, at least 20 plants
for seed-propagated varieties, at least 40 plants

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 or parts of plants to be Examined

In the case of vegetatively-propagated varieties, unless otherwise indicated, 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 observation made on all plants in the test, disregarding any off-type plants.

In the case of seed-propagated varieties, unless otherwise indicated, for the purposes of distinctness, all observations on single plants should be made on 40 plants or parts taken from each of 40 plants and any other observation 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 20 plants, 1 off-type is allowed.

4.2.3 For the assessment of uniformity of seed propagated varieties, a population standard of 1 % and a acceptance of at least 95 % should be applied. In the case of a sample size of 40 plants, 2 off-types 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 seed or 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 1)
- (b) Peduncle: secondary color of bract (characteristic 20)
- (c) Inflorescence: position in relation to leaves (characteristic 22)
- (d) Floral bract: main color of inner side (characteristic 32) with the following groups:
 - Gr 1. white;
 - Gr 2. yellow;
 - Gr 3. orange;
 - Gr 4. red;
 - Gr 5. purple red;
 - Gr 6. purple
- (e) Floral bract: number of flowers per bract (characteristic 35)

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:

<i>State</i>	<i>Note</i>
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*

English		français		deutsch		español		Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
1	2	3	4	5	6	7			
Name of characteristics in English		Nom du caractère en français		Name des Merkmals auf Deutsch		Nombre del carácter en español			
states of expression		types d'expression		Ausprägungsstufen		tipos de expresión			

1 Characteristic number

2 (*) Asterisked characteristic – see Chapter 6.1.2

3 Type of expression
 QL Qualitative characteristic – see Chapter 6.3
 QN Quantitative characteristic – see Chapter 6.3
 PQ Pseudo-qualitative characteristic – see Chapter 6.3

4 Method of observation (and type of plot, if applicable)
 MG, MS, VG, VS – see Chapter 4.1.5

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

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

7 Not applicable

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

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
1. (*)	QN	MG/MS/VG	(+)	(a)		
	Plant: height					
	short				Marcella	3
	medium				Torch	5
	tall				Magenta	7
2. (*)	QN	MG/MS/VG	(+)	(a)		
	Plant: width					
	small				Empire	3
	medium				Tatiana	5
	large				Rana	7
3.	QN	MG/MS/VG		(a)		
	Plant: number of leaves					
	few				Duranik	3
	medium				Rana	5
	many				Taiga	7
4.	QN	MG/MS/VG	(+)	(a), (b)		
	Leaf sheath: length					
	short				Cherry	1
	medium				Rana	2
	long				Manzana	3

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
5.	QN	MG/MS/VG	(+)	(a), (b)		
	Leaf sheath: width					
	narrow				Papilio	1
	medium				Cherry	2
	broad				Duracan	3
6. (*)	QN	MG/MS/VG	(+)	(a), (b)		
	Leaf blade: length					
	short				Victory	3
	medium				Torch	5
	long				Taiga	7
7. (*)	QN	MG/MS/VG	(+)	(a), (b)		
	Leaf blade: width	Limbe : largeur	Blattspreite: Breite	Limbo: anchura		
	narrow	étroit	schmal	estrecho	Freeze	3
	medium	moyen	mittel	mediano	Luna	5
	broad	large	breit	ancho	Durafire	7
8. (*)	PQ	VG	(+)	(a), (b)		
	Leaf blade: shape of apex	Limbe : forme du sommet	Blattspreite: Form der Spitze	Limbo: forma del ápice		
	acuminate	acuminé	mit aufgesetzter Spitze	acuminado	Rana	1
	acute	aigu	spitz	agudo	Luna	2
	obtuse	obtus	stumpf	obtuso	neptunes	3

	English		français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
9. (*)	PQ	VG	(a), (b), (d)				
	Leaf blade: main color of inner side						
	light green					Victory	1
	medium green					Torch	2
	dark green					Ostara	3
	grey green						4
10. (*)	QN	VG	(a), (b), (d)				
	Leaf blade: anthocyanin coloration of basal half of inner side						
	absent or very weak					Hilda	1
	weak					Flo	3
	medium					Francesca	5
	strong					Red Moon	7
11. (*)	QL	VG	(+)	(a), (b), (d)			
	Leaf blade: variegation of inner side						
	absent					Victory	1
	present					Durafire, Sue Anne	9
12.	PQ	VG	(a), (b), (d)				
	Leaf blade: main color of outer side						
	light green					Flava	1
	medium green					Torch	2
	dark green					Ostara	3
	grey green						4

	English		français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
13. (*)	QN	VG	(a), (b)				
	Leaf blade: anthocyanin coloration of outer side						
	absent or very weak					Manzana	1
	weak					Sky	3
	medium					Fall	5
	strong					Francesca	7
14.	PQ	VG	(a), (b)				
	Leaf blade: pattern of anthocyanin coloration of outer side						
	as a flush					Amoretto	1
	in stripes					Duranik	2
	as a flush and in stripes					Combi	3
15.	QN	MG/MS/VG	(+)	(a), (e)			
	Peduncle: number of bracts						
	few					Misty	3
	medium						5
	many					Mirador	7
16. (*)	QN	MG/MS/VG	(a), (c), (e)				
	Peduncle: length of bract						
	short					Misty	3
	medium					GUZ 008	5
	long					G9197	7

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
17.	QN	MG/MS/VG	(a), (c)			
	Peduncle: width of bract					
	narrow				Misty	3
	medium				GUZ 008	5
	broad				Sky	7
18.	QN	VG	(a), (c)			
	Peduncle: intensity of green color of bract					
	light				Tinto	3
	medium				Rostara	5
	dark				Durajen	7
19. (*)	QN	VS	(+)	(a)		
	Peduncle: position of first bi-colored bract					
	at basal third				Revolution	1
	middle third				Rock	2
	at distal third				Tropix	3
20. (*)	PQ	VS	(a)			
	Peduncle: secondary color of bract					
	RHS Colour Chart (indicate reference number)					
21.	QN	VS	(a)			
	Peduncle: area of secondary color of bract					
	small					1
	medium					2
	large					3

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
22.	(*) QN VG	(a)				
	Inflorescence: position in relation to leaves					
	below				Glossita	1
	same level				Durabel	2
	above				Torch	3
23.	(*) QN MG/MS/VG	(+)	(a)			
	inflorescence: length					
	short				Victory	3
	medium				Continental	5
	long				Amoretto	7
24.	(*) QN MG/MS/VG	(+)	(a)			
	Inflorescence: length of flowering part					
	short				Manzana	3
	medium				Amoretto	5
	long					7
25.	(*) QN MG/MS/VG	(+)	(a)			
	inflorescence: diameter of flowering part					
	small				Duranik	3
	medium				Manzana	5
	large				Durafire	7

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
26. (*)	QN	MG/MS/VG	(+)	(a)		
	Inflorescence: number of floral bracts					
	few				Rana	3
	medium				Victory	5
	many				Manzana	7
27. (*)	QN	MG/MS/VG	(+)	(a), (e)		
	Floral bract: length					
	short				Torch	3
	medium				Manzana	5
	long				Rana	7
28. (*)	QN	MG/MS/VG	(+)	(a), (e)		
	Floral bract: width					
	narrow				Flava	3
	medium				Cherry	5
	broad				Manzana	7
29. (*)	QN	VG	(+)	(a), (e)		
	Floral bract: width of apex					
	narrow				Victory	1
	medium				Cherry	2
	broad				Torch	3
30. (*)	PQ	VS		(a), (d), (e)		
	Floral bract: main color of outer side	Bractée : couleur principale de la face externe	Deckblatt: Hauptfarbe der Außenseite	Bráctea floral: color principal de la cara externa		
	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
31. (*)	PQ	VS	(a), (d), (e)					
	Floral bract: secondary color of outer side		Bractée : couleur secondaire de la face externe		Deckblatt: Sekundärfarbe der Außenseite	Bráctea floral: color secundario de la cara externa		
	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)		
32. (*)	PQ	VS	(a), (d), (e)					
	Floral bract: main color of inner side		Bractée : couleur principale de la face interne		Deckblatt: Hauptfarbe der Innenseite	Bráctea floral: color principal del envés		
	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)		
33.	PQ	VG	(a), (d), (e)					
	Floral bract: secondary color of inner side							
	RHS Colour Chart (indicate reference number)							
34.	QN	VG	(+)	(a)				
	Floral bract: curvature of longitudinal section							
	straight						Durajul	1
	slightly recurved						Techno	2
	moderately recurved						Hasta la Vista	3
	strongly recurved						Duratat	4
35. (*)	QN	MG/MS/VG	(+)	(a)				
	Floral bract: number of flowers per bract							
	few						Techno	3
	medium						Rana	5
	many						Continental	7
36.	QN	MG/VG	(+)	(a)				
	Prophyll: length							
	short						Soledo	1
	medium						Continental	2
	long						Cherry	3

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
37.	QN MG/VG	(+) (a)				
	Prophyll: width					
	narrow				Manzana	1
	medium				Rana	2
	broad				Continental	3
38.	PQ VG	(a)				
	Prophyll: main color					
	RHS Colour Chart (indicate reference number)					
39. (*)	PQ VG	(+) (a)				
	Flower: color of the apex of the corolla					
	RHS Colour Chart (indicate reference number)					
40.	PQ VS	(a)				
	Ovary: color					
	white				Victory	1
	yellow				Duracla	2
	green				Torch	3
41.	PQ VS	(a)				
	Style: color of distal half					
	white				Manzana	1
	yellow				Kenbro4910	2
	green					3
42.	PQ VS	(a)				
	Stigma: color					
	white				Victory	1
	yellow				Torch	2
	green				Soledo	3

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, leaf, inflorescence, peduncle and floral bracts should be made when the flowers are open in the middle third of the flowering part.
- (b) Observations on the leaf should be made on the largest fully expanded leaf
- (c) Observations of the bract should be made on the largest bract at the middle third of the peduncle
- (d) The main color is the color with the largest surface area. In cases where the areas of the main and secondary color are too similar to reliably decide which color has the largest surface area, the darkest color is considered to be the main color.
- (e) Bracts are small scale-like leaves on the peduncle. Floral bracts are small scale-like leaves associated with a flower or flower cluster.

8.2 *Explanations for individual characteristics*

Ad. 1: Plant: height

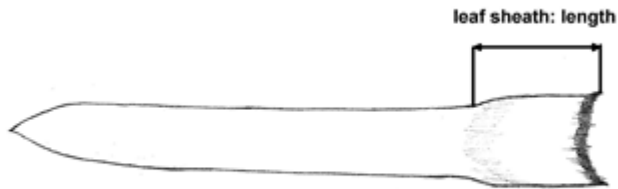
Observations on plant height should be made at highest level of the leaves without inflorescence .



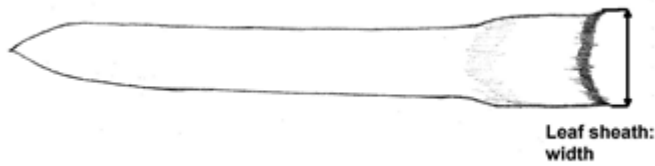
Ad. 2: Plant: width



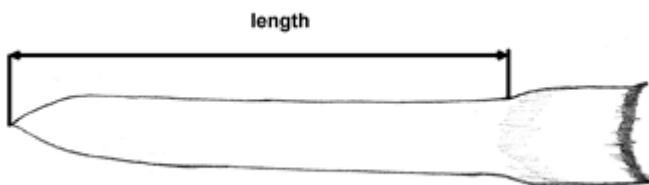
Ad. 4: Leaf sheath: length



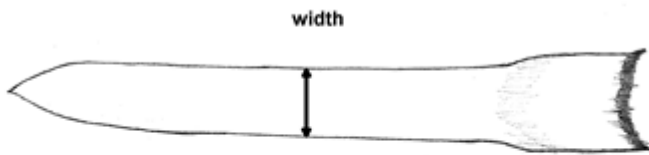
Ad. 5: Leaf sheath: width



Ad. 6: Leaf blade: length



Ad. 7: Leaf blade: width



Ad. 8: Leaf blade: shape of apex



acuminate (1)



acute (2)



obtuse (3)

Ad. 11: Leaf blade: variegation of inner side

Observations on the secondary color of upper side should be made without the anthocyanin coloration

Ad. 15: Peduncle: number of bracts

Bracts are leaves which are growing on the inflorescence without flowers or flower buds.

Ad. 19: Peduncle: position of first bi-colored bract

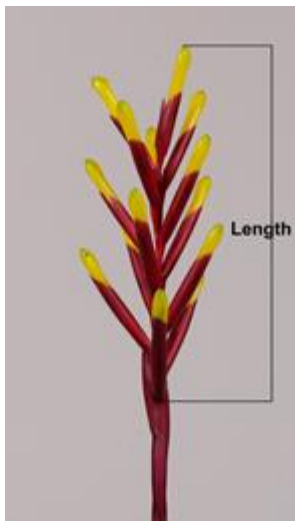
Bi-colored bracts are bracts with a secondary color excluding anthocyanin

Ad. 23: inflorescence: length



Ad. 24: Inflorescence: length of flowering part

Length of flowering part should be observed from the base of the first flowering bract to the top of the last flower



Ad. 25: inflorescence: diameter of flowering part

The diameter of the flowering part should be observed at the largest diameter



Ad. 26: Inflorescence: number of floral bracts

Floral bracts are bracts on the inflorescence with a flower or flower bud.

Ad. 27: Floral bract: length

Observations should be made on the longest floral bract

Ad. 28: Floral bract: width

Observations should be made on the longest floral bract

Ad. 29: Floral bract: width of apex



Ad. 34: Floral bract: curvature of longitudinal section



straight (1)



moderately recurved (2)



strongly recurved (4)

Ad. 35: Floral bract: number of flowers per bract



3
few



7
many

Ad. 36: Prophyll: length

Prophylls are the second level bracts covering more than one flower or flower bud. Should be observed when there more than one flower per bract is present.

Ad. 37: Prophyll: width

Prophylls are the second level bracts covering more than one flower or flower bud. Should be observed when there more than one flower per bract is present.

Ad. 39: Flower: color of the apex of the corolla



9. Literature

- Baensch, U., 1994: Blooming Bromeliads, Tropic Beauty Publishers, Nassau/Bahamas, pp 162, 174 to 176
Rauh, W., 1990: The Bromeliad Lexicon, Blandford, London, United Kingdom, x pp
Boonstra H., de Jong B., 1988: Teelt van Bromeliaceeën, WUR, Wageningen, pp 5, 6, 21, 47 to 53

10. Technical Questionnaire

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	Application date: (not to be filled in by the applicant)
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TECHNICAL QUESTIONNAIRE
to be completed in connection with an application for plant breeders' rights

1. Subject of the Technical Questionnaire

1.1 Botanical name

1.2 Common name

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

#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 Seed-propagated varieties

- (a) Cross-pollination []
 - (i) Population []
- (b) Other (please provide details) []

4.2.2 Vegetative propagation

- (a) *In vitro* propagation []
- (b) Other (state method) []

4.2.3 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: height (1)		
short	Marcella	3 []
medium	Torch	5 []
tall	Magenta	7 []
5.2 Peduncle: secondary color of bract (20)		
RHS Colour Chart (indicate reference number)		
5.3 Inflorescence: position in relation to leaves (22)		
below	Glossita	1 []
same level	Durabel	2 []
above	Torch	3 []
5.4 Floral bract: main color of outer side (30)		
RHS Colour Chart (indicate reference number)		
5.5 Floral bract: main color of inner side (32)		
RHS Colour Chart (indicate reference number)		
5.6 Floral bract: number of flowers per bract (35)		
few	Techno	3 []
medium	Rana	5 []
many	Continental	7 []

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 (3)</i>	<i>medium (5)</i>
Comments:			

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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#7. Additional information which may help in the examination of the variety

7.1 In addition to the information provided in sections 5 and 6, are there any additional characteristics which may help to distinguish the variety?

Yes No

(If yes, please provide details)

7.2 Are there any special conditions for growing the variety or conducting the examination?

Yes No

(If yes, please provide details)

7.3 Other information

A representative color photograph of the variety displaying its main distinguishing feature(s), should accompany the Technical Questionnaire. The photograph will provide a visual illustration of the candidate variety which supplements the information provided in the Technical Questionnaire.

The key points to consider when taking a photograph of the candidate variety are:

- Indication of the date and geographic location
- Correct labeling (breeder's reference)
- Good quality printed photograph (minimum 10 cm x 15 cm) and/or sufficient resolution electronic format version (minimum 960 x 1280 pixels)"

Further guidance on providing photographs with the Technical Questionnaire is available in document TGP/7 "Development of Test Guidelines", Guidance Note 35 (<http://www.upov.int/tgp/en/>).

[The link provided may be deleted by members of the Union when developing authorities' own test guidelines.]

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

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]