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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.;
Guzmania hybrid

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 forty-ninth session, to be held in Gimcheon City, Republic of Korea,
from 2016-06-13 to 2016-06-17

Disclaimer: this document does not represent UPOV policies or guidance

Alternative names:*

Botanical name	*English*	*French*	*German*	*Spanish*
Guzmania Ruiz et Pav., *Guzmania* 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 ca. 1 month before flower induction treatment.

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 20 plants.

3.4.2 Single plot

Seed propagated varieties: Each test should be designed to result in a total of 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 10 plants or parts taken from each of 10 plants and any other observation made on all plants in the test, disregarding any off-type plants.

In the case of observations of parts taken from single fruit bodies, the number of parts to be taken from each of the fruit bodies should be 20.

In the case of seed propagated, 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.

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-types are 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, 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 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:

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

	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
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

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
7.	**(*)**	**QN MG/MS/VG**	**(+) (a), (b)**				
		Leaf blade: width					
		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					
		acuminate	acuminé	mit aufgesetzter Spitze	acuminado	Rana	1
		acute	aigu	spitz	agudo	Luna	2
		obtuse	obtus	stumpf	obtuso		3
9.	**(*)**	**PQ VG**	**(+) (a), (b), (d)**				
		Leaf blade: main color of upper side					
		light green				Victory	1
		medium green				Torch	2
		dark green				Ostara	3
		grey green					4
10.	**(*)**	**QL VG**	**(+) (a), (b), (d)**				
		Leaf blade: secondary color of upper side					
		absent				Victory	1
		present				Durafire	9
11.	**(*)**	**QN VG**	**(a), (b), (d)**				
		Leaf blade: anthocyanin coloration of upper side					
		absent or very weak					1
		weak					3
		medium					5
		strong					7

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
12.		**PQ VG**	**(a), (b), (d)**				
		Leaf blade: main color of lower side					
		light green				Flava	1
		medium green				Torch	2
		dark green				Ostara	3
		grey green					4
13.	**(*)**	**QN VG**	**(a), (b)**				
		Leaf blade: anthocyanin coloration of lower side					
		absent or very weak				Manzana	1
		weak					3
		medium					5
		strong					7
14.		**PQ VG**	**(a), (b)**				
		Leaf blade: pattern of anthocyanin coloration of lower side					
		as a flush				Amoretto	1
		in stripes				Duranik	2
		as a flush and in stripes					3
15.		**QN MG/MS/VG**	**(a), (e)**				
		Peduncle: number of bracts					
		few					3
		medium					5
		many					7
16.	**(*)**	**QN MG/MS/VG**	**(a), (c), (e)**				
		Peduncle: length of bract					
		short					3
		medium					5
		long					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					3
		medium					5
		broad					7
18.		**QN VG**	**(a), (c)**				
		Peduncle: intensity of green color of bract					
		light					3
		medium					5
		dark					7
19.	**(*)**	**QN VG**	**(+) (a)**				
		Peduncle: position of first bi-colored bract					
		at basal third					1
		middle third					2
		at distal third					3
20.	**(*)**	**PQ VG**	**(a)**				
		Peduncle: secondary color of bract					
		RHS Colour Chart (indicate reference number)					
21.		**QN VG**	**(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
26.	**(*)**	**QN MG/MS/VG**	**(a)**				
		Inflorescence: number of floral bracts					
		few				Rana	3
		medium				Victory	5
		many				Manzana	7

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
27.		**QN MG/MS/VG**	**(a), (c), (e)**				
		Floral bract: length					
		short				Torch	3
		medium				Manzana	5
		long				Rana	7
28.	**(*)**	**QN MG/MS/VG**	**(a)**				
		Floral bract: width					
		narrow				Flava	3
		medium				Cherry	5
		broad				Manzana	7
29.		**QN VG**	**(+) (a)**				
		Floral bract: angle of apex					
		narrow				Victory	1
		medium				Cherry	2
		broad				Torch	3
30.	**(*)**	**PQ VS**	**(a), (d)**				
		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)		
31.	**(*)**	**PQ VS**	**(a), (d)**				
		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)**				
		Floral bract: main color of inner side					
		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
33.		**PQ VS**	**(a), (d)**				
		Floral bract: secondary color of inner side					
		RHS Colour Chart (indicate reference number)					
34.		**QN VG**	**(+) (a)**				
		Floral bract: shape in longitudinal section					
		straight					1
		slightly recurved					2
		moderately recurved					3
		strongly recurved					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
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					

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
	RHS Colour Chart (indicate reference number)					
40.	**PQ** **VG**	**(a)**				
	Ovary: color					
	white				Victory	1
	yellow				Duracla	2
	green				Torch	3
41.	**PQ** **VG**	**(a)**				
	Style: color of distal half					
	white				Manzana	1
	yellow				Kenbro4910	2
	green					3
42.	**PQ** **VS**	**(a)**				
	Style: color of stigma					
	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.

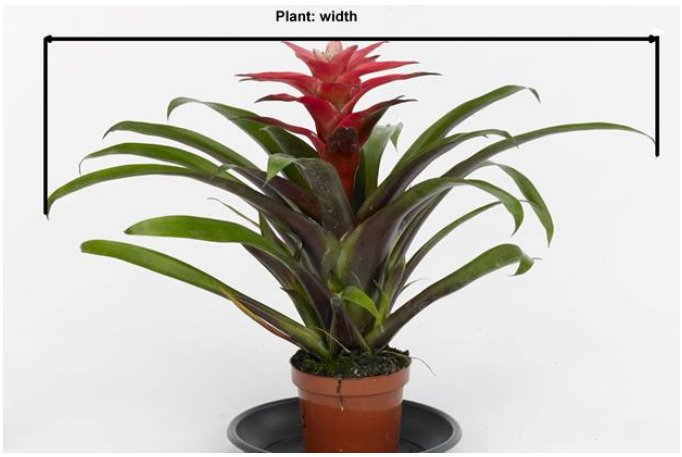
(e) Bracts are small scale-like leaves on the peduncle. Floral bracts are small scale-like leaves associated with a flower or flower cluster.

8.2 Explanations for individual characteristics

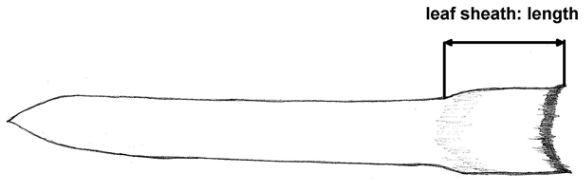
Ad. 1: Plant: height

Observations on plant height should be made without inflorescence.

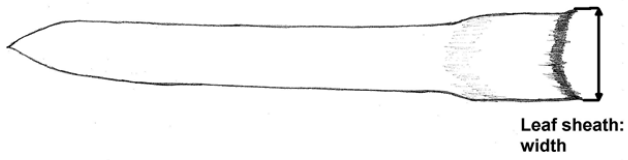
Ad. 2: Plant: width



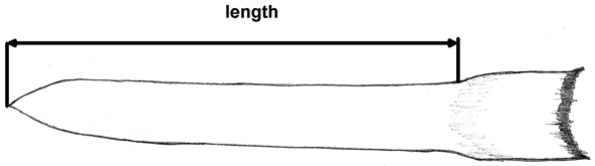
Ad. 4: Leaf sheath: length



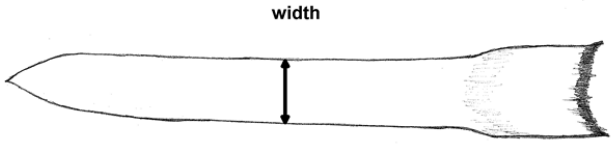
Ad. 5: Leaf sheath: width



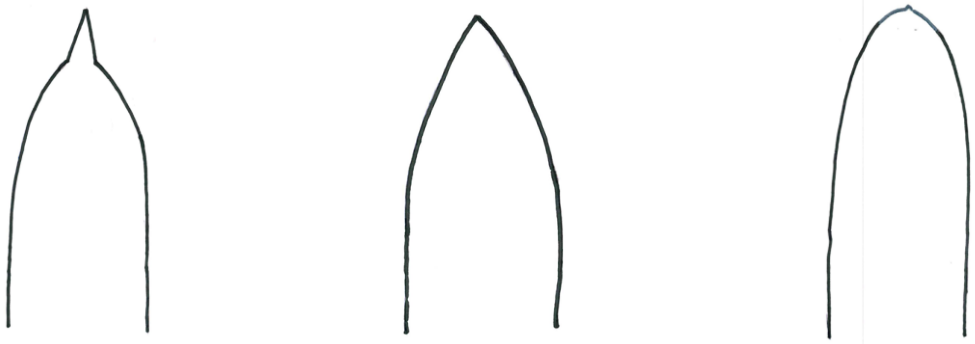
Ad. 6: Leaf blade: length



Ad. 7: Leaf blade: width



Ad. 8: Leaf blade: shape of apex



1
acuminate

2
acute

3
obtuse

Ad. 9: Leaf blade: main color of upper side

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.

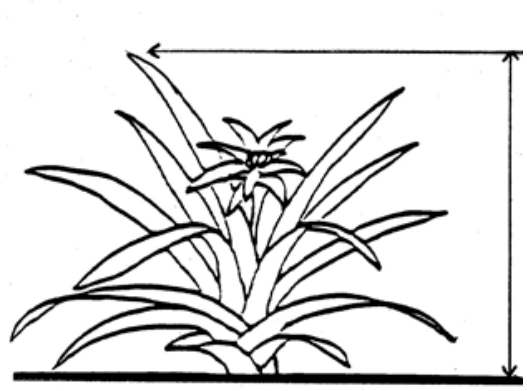
Ad. 10: Leaf blade: secondary color of upper side

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

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

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

Ad. 22: Inflorescence: position in relation to leaves

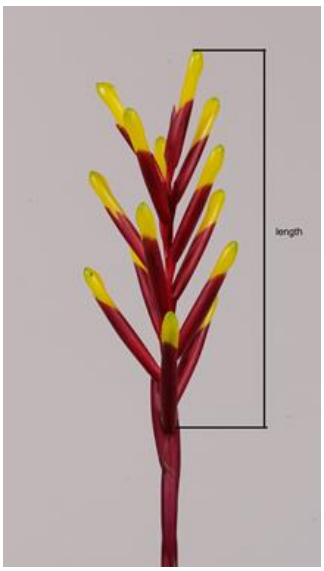


1
below

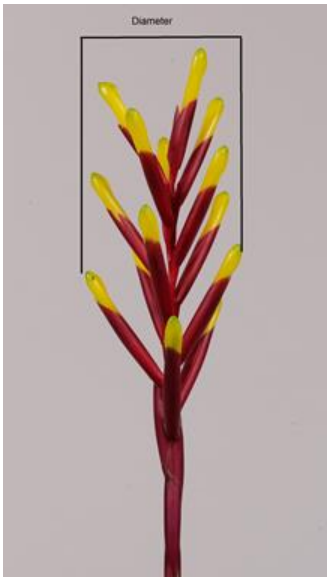
3
above

Ad. 23: inflorescence: length

Ad. 24: Inflorescence: length of flowering part



Ad. 25: inflorescence: diameter of flowering part



Ad. 29: Floral bract: angle of apex

1
narrow

2
medium

3
broad

Ad. 34: Floral bract: shape in longitudinal section

1
straight

2
moderately recurved

3
strongly recurved

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

3
few

7
many

9. Literature

Baensch, U., 1994: Blooming Bromeliads, Tropic Beauty Publishers, Nassau/Bahamas, x pp

Rauh, W., 1981: Bromelien, Verlag Eugen Ulmer, Stuttgart, Germany, x pp

Rauh, W., 1990: The Bromeliad Lexicon, Blandford, London, England, x pp

10. Technical Questionnaire

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

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

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

1. Subject of the Technical Questionnaire

1.1	Botanical name	*Guzmania* Ruiz et Pav.
1.2	Common name	Guzmania

2. Applicant

Name	
Address	
Telephone No.	
Fax No.	
E-mail address	
Breeder (if different from applicant)	

3. Proposed denomination and breeder's reference

Proposed denomination (if available)	
Breeder's reference	

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

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

4.1 Breeding scheme

Variety resulting from:

4.1.1 Crossing

(a) controlled cross [ ]

(please state parent varieties)

(……..……..…) x (……..……..…)

female parent male parent

(b) partially known cross [ ]

(please state known parent variety(ies))

(……..……..…) x (……..……..…)

female parent male parent

(c) unknown cross [ ]

4.1.2 Mutation [ ]

(please state parent variety)

4.1.3 Discovery and development [ ]

(please state where and when discovered and how developed)

4.1.4 Other [ ]

(please provide details)

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

4.2 Method of propagating the variety

4.2.1 Vegetative propagation

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

4.2.2 Other [ ]
(Please provide details)

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

5. Characteristics of the variety to be indicated (the number in brackets refers to the corresponding characteristic in Test Guidelines; please mark the note which best corresponds).

	Characteristics	Example Varieties	Note
5.1	**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:

6. Similar varieties and differences from these varieties

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

Denomination(s) of variety(ies) similar to your candidate variety	Characteristic(s) in which your candidate variety differs from the similar variety(ies)	Describe the expression of the characteristic(s) for the **similar** variety(ies)	Describe the expression of the characteristic(s) for **your** candidate variety
Example	*Plant: height*	*short (3)*	*medium (5)*

Comments:

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

#7. Additional information which may help in the examination of the variety

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

Yes [ ] No [ ]

(If yes, please provide details)

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

Yes [ ] No [ ]

(If yes, please provide details)

7.3 Other information

A representative color photograph of the variety 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.]

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

8. Authorization for release

(a) Does the variety require prior authorization for release under legislation concerning the protection of the environment, human and animal health?

Yes [ ] No [ ]

(b) Has such authorization been obtained?

Yes [ ] No [ ]

If the answer to (b) is yes, please attach a copy of the authorization.

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]