E

TG/ZINNIA(proj.9)
ORIGINAL: English
DATE: 2021-04-23

INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

Geneva

DRAFT

ZINNIA *

UPOV Code(s): ZINNI_AEL; ZINNI_ANG; ZINNI_ELE; ZINNI_HAA; ZINNI_PER

Zinnia × *marylandica* D. M. Spooner et al.;
Zinnia angustifolia Kunth;
Zinnia elegans Jacq.;
Zinnia haageana Regel;
Zinnia peruviana (L.) L.

GUIDELINES

FOR THE CONDUCT OF TESTS

FOR DISTINCTNESS, UNIFORMITY AND STABILITY

prepared by experts from Mexico
to be considered by the
Technical Working Party for Ornamental Plants and Forest Trees
at its fifty-third session, to be held in Roelofarendsveen, Netherlands,
from 2021-06-07 to 2021-06-11

Disclaimer: this document does not represent UPOV policies or guidance

Alternative names:*

Botanical name	*English*	*French*	*German*	*Spanish*
Zinnia ×*marylandica* D. M. Spooner et al.				
Zinnia angustifolia Kunth				Zinnia naranja
Zinnia elegans Jacq., *Zinnia violacea* Cav.	Youth and age, Youth-and-old-age	Zinnia élégant	Zinnie	Rascamoño, Zinnia, Miguelito
Zinnia haageana Regel				Zinnia Mexicana
Zinnia peruviana (L.) L.	Field zinnia, Peruvian zinnia, Wild zinnia			Mal de ojo

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.]

TABLE OF CONTENTS PAGE

1. Subject of these Test Guidelines

These Test Guidelines apply to all varieties of *Zinnia* ×*marylandica* D. M. Spooner et al., *Zinnia angustifolia* Kunth, *Zinnia elegans* Jacq., *Zinnia haageana* Regel and *Zinnia peruviana* (L.) L.

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 seeds.

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

The seed should be sufficient to produce a minimum of 15 plants for F1 hybrids and a minimum of 40 plants for cross-pollinated varieties

The seed should meet the minimum requirements for germination, species and analytical purity, health and moisture content, specified by the competent authority. In cases where the seed is to be stored, the germination capacity should be as high as possible and should, be stated by the applicant.

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

3.1.1 The minimum duration of tests should normally be a single growing cycle.

3.1.2 The testing of a variety may be concluded when the competent authority can determine with certainty the outcome of the test.

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

Each test should be designed to result in a total of at least 15 plants for F1 hybrids, and 40 plants for cross-pollinated varieties.

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

Unless otherwise indicated, for the purposes of distinctness, all observations on single plants should be made on 10 plants for F1 hybrids and at least 20 for cross-pollinated varieties or parts taken from each plant and any other observations made on all plants in the test, disregarding any off-type plants.

4.1.5 Method of Observation

The recommended method of observing the characteristic for the purposes of distinctness is indicated by the following key in the 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 These Test Guidelines have been developed for the examination of seed-propagated varieties. For varieties with other types of propagation, the recommendations in the General Introduction and document TGP/13 "Guidance for new types and species" Section 4.5 "Testing Uniformity" should be followed.

4.2.3 The assessment of uniformity for cross-pollinated should be according to the recommendations for cross-pollinated varieties in the General Introduction.

4.2.4 For the assessment of uniformity of F1 hybrid varieties, a population standard of 1% and an acceptance probability of at least 95% should be applied. In the case of a sample size of 15 plants, 1 off-type is allowed.

4.3 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 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: growth habit (characteristic 1)
(b) Plant: density of branches (characteristic 3)
(c) Leaf: area of anthocyanin coloration at base (characteristic 13)
(d) Peduncle: length (characteristic 14)
(e) Flower head: type (characteristic 16)

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 All relevant states of expression are presented in the characteristic.

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 Be ejemplo	Note
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)-(c) 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/
1.	**(*)**	**PQ VG**	**(+)**				
		Plant: growth habit					
		upright				Peppermint stick	1
		semi-upright				Profusion Red	2
		spreading				Solecito	3
2.	**(*)**	**QN MG/MS/VG**					
		Plant: height					
		very short					1
		very short to short					2
		short					3
		short to medium				Profusion Red	4
		medium				Witworna	5
		medium to tall					6
		tall				Inca, Peppermint stick	7
		tall to very tall					8
		very tall					9
3.	**(*)**	**QN VG**	**(+)**				
		Plant: density of branches					
		absent or very sparse				Witworna	1
		sparse					2
		medium				Peppermint Stick	3
		dense					4
		very dense				Profusion Red	5
4.		**QN VG**	**(+)**				
		Stem: density of pubescence					
		absent or very sparse				Zestr	1
		sparse					2
		medium				Uproar	3
		dense					4
		very dense				Short stuff coral	5

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/
5.	**(*)**	**QN VG**	**(+)**				
		Stem: anthocyanin coloration					
		absent or very weak				Profusion Fire	1
		weak				Lilliput salmon	2
		medium				Profusion Red	3
		strong					4
		very strong					5
6.	**(*)**	**QN MS/VG**		**(a)**			
		Leaf: length					
		very short				Zinnita	1
		short					2
		medium				Zahara Double Cherry	3
		long					4
		very long				State Fair	5
7.	**(*)**	**QN MS/VG**		**(a)**			
		Leaf: width					
		Very narrow				Starbright	1
		narrow					2
		medium				Yellow flame	3
		broad					4
		very broad				Short stuff coral	5
8.	**(*)**	**QN MS/VG**	**(+)**	**(a)**			
		Leaf: length/width ratio					
		very low				Crystal yellow	1
		low					2
		medium					3
		high					4
		very high				Dreamland rose	5

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/
9.		**QN VG**	**(a)**				
		Leaf: position of broadest part					
		slightly towards base				Dreamland rose	1
		moderately towards base					2
		at middle				Swizzle cherry ivory	3
		moderately towards apex					4
		strongly towards apex				Oklahoma	5
10	**(*)**	**QN VG**	**(+) (a)**				
		Leaf: profile in cross section					
		flat				Profusion Knee High Red	1
		moderately concave				Lilliput salmon	2
		strongly concave				State Fair	3
11		**QN VG**	**(+) (a)**				
		Leaf: undulation of margin					
		absent or weak					1
		absent or weak to medium					2
		medium					3
		medium to strong					4
		strong					5
12		**QN VG**	**(a)**				
		Leaf: intensity of green color					
		very light					1
		light				Oklahoma	2
		medium					3
		dark				Starbright	4
		very dark					5

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/
13	**(*)**	**QN VG**	**(+) (a)**				
		Leaf: area of anthocyanin coloration at base					
		absent or small				Oklahoma	1
		absent or small to medium					2
		medium				Uproar Rose	3
		medium to large					4
		large				State Fair	5
14	**(*)**	**QN MS/VG**					
		Peduncle: length					
		short				Zahara Coral Rose	1
		short to medium					2
		medium				Witworna	3
		medium to long					4
		long				Uproar Rose	5
15		**QN VG**					
		Flower head: position in relation to foliage					
		strongly below foliage					1
		below foliage					2
		same level as foliage					3
		above foliage					4
		stongly above foliage					5
16	**(*)**	**PQ VG**	**(+)**				
		Flower head: type					
		single				Crystal yellow, Star	1
		semi-double				Profusion Red, Yellow flame	2
		double				Lilliput salmon, Swizzle Scarlet Yellow	3
17		**QL VG**					
		Disc: type					
		daisy					1
		anemone				Candy mix	2

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/
18		**QN** **MS/VG**					
		Flower head: diameter					
		very small					1
		very small to small					2
		small				Lilliput salmon	3
		small to medium					4
		medium				Crystal yellow, Oklahoma	5
		medium to large					6
		large				Inca	7
		large to very large					8
		very large					9
19		**QN** **MS/VG**	**(+)**				
		Flower head: number of ray florets					
		very few				Crystal yellow, Star	1
		very few to few					2
		few				Profusion Red	3
		few to medium					4
		medium				Zowwie Yellow Flame	5
		medium to many					6
		many				Uproar Rose	7
		many to very many					8
		very many				Swizzle Scarlet Yellow	9
20	**(*)**	**QN** **MS/VG**	**(b)**				
		Ray floret: length					
		very short					1
		very short to short					2
		short				Lilliput salmon	3
		short to medium					4
		medium				Peppermint stick, Profussion knee	5
		medium to long					6
		long				Inca	7
		long to very long					8
		very long					9

		English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/
21	**(*)**	**QN**	**MS/VG**		**(b)**				
		Ray floret: width							
		very narrow						Star Starbright	1
		narrow							2
		medium						Ruffles	3
		broad							4
		very broad						Inca	5
22	**(*)**	**QN**	**MS/VG**		**(b)**				
		Ray floret: length/width ratio							
		very low						Profusion Knee High Red	1
		low							2
		medium						Ruffles	3
		high							4
		very high						Swizzle Scarlet Yellow	5
23		**QN**	**VG**	**(+)**	**(b)**				
		Ray floret: profile in cross section							
		strongly concave							1
		concave							2
		flat							3
		convex							4
		strongly convex							5
24		**PQ**	**VG**	**(+)**	**(b)**				
		Ray floret: curvature of longitudinal axis							
		incurving							1
		straight							2
		reflexing							3
		twisted							4
25		**QN**	**VG**	**(+)**	**(b)**				
		Ray floret: part of axis curved							
		distal quarter							1
		distal half							2
		distal three quarters							3

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/
26		**QN VG**	**(b)**				
		Ray floret: strength of curvature					
		very weak					1
		weak				Uproar Rose	2
		medium				Swizzle cherry ivory	3
		strong				Inca	4
		very strong					5
27	**(*)**	**PQ VG**	**(+) (b)**				
		Ray floret: shape of apex					
		pointed					1
		rounded					2
		truncate					3
		emarginate					4
		dentate					5
		mucronate					6
28	**(*)**	**PQ VG**	**(b), (c)**				
		Ray floret: main color of inner side					
		RHS Colour Chart (indicate reference number)					
29		**PQ VG**	**(c)**				
		Ray floret: secondary color of inner side					
		RHS Colour Chart (indicate reference number)					
30		**PQ VG**	**(+) (b)**				
		Ray floret: distribution of secondary color of inner side					
		none				Ruffles	1
		distal quarter					2
		distal half				Zowwie Yellow Flame	3
		basal half				Profusion Cherry Bicolor	4
		basal quarter				Zahara Rose Starlight	5
		on margins					6
		throughout				Peppermint Stick	7

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/
31	**PQ VG**	**(+) (b)**				
	Ray floret: pattern of secondary color of inner side					
	solid					1
	blotches					2
	stripes					3
32	**PQ VG**	**(b), (c)**				
	Ray floret: tertiary color of inner side					
	RHS colour chart (indicate reference number)					
33	**PQ VG**	**(+) (b)**				
	Ray floret: distribution of tertiary color of inner side					
	none					1
	distal quarter					2
	distal half					3
	basal half					4
	basal quarter				Peppermint Stick	5
	on margins					6
	throughout					7
34	**PQ VG**	**(b)**				
	Ray floret: pattern of tertiary color of inner side					
	solid					1
	blotches					2
	stripes					3
35	**PQ VG**	**(+)**				
	Only varieties with Flower head: type: single or semi-double: Disc: color					
	yellow green				Profussion Lemon	1
	yellow				Crystal yellow	2
	orange				Crystal Orange	3
	brown				Profusion Fire, Zahara Rose Starlight	4
	purple				Purple prince	5

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/
36	**QN VG**	**(+)**				
	Only varieties with Flower head: type: single or semi-double: Disc: diameter					
	very small					1
	small					2
	medium				Profusion Red	3
	large				Dreamland scarlet	4
	very large					5

8. Explanations on the Table of Characteristics

8.1 Explanations covering several characteristics

Unless otherwise indicated, observations should be made at the time of full flowering.

Characteristics containing the following key in the Table of Characteristics should be examined as indicated below:

(a) Observations on the leaf should be made on the upper side of a typical leaf from the middle third of the stem

(b) Observations on the ray floret should be made on the inner side in the first ray floret. For varieties with semi-double and double flower heads, observations should be made on the outermost whorl of ray florets

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

8.2 Explanations for individual characteristics

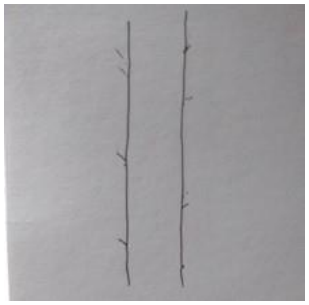
Ad. 1: Plant: growth habit

1 upright | 2 semi-upright | 3 spreading

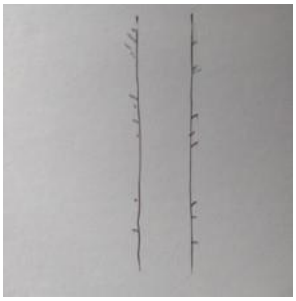
Ad. 3: Plant: density of branches

1 absent or very sparse | 2 sparse | 3 medium | 4 dense | 5 very dense

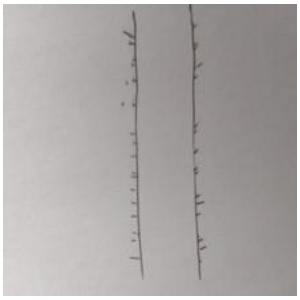
Ad. 4: Stem: density of pubescence



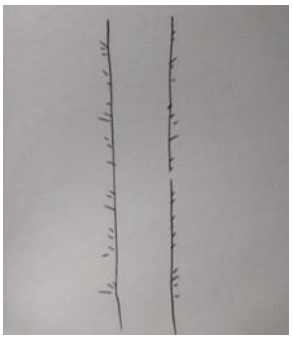
1
absent or very sparse



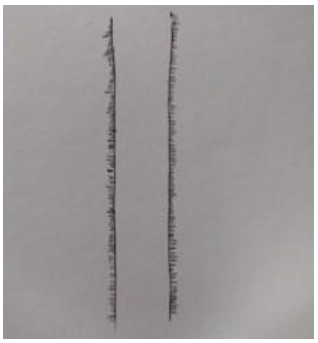
2
sparse



3
medium



4
dense



5
very dense

Ad. 5: Stem: anthocyanin coloration

to be observed on middle third of stem

Ad. 8: Leaf: length/width ratio

1
Low

3
medium

3
high

Ad. 10: Leaf: profile in cross section

1
flat

2
moderately concave

3
strongly concave

Ad. 11: Leaf: undulation of margin

1
absent or weak

2
medium

3
strong

Ad. 13: Leaf: area of anthocyanin coloration at base

1
absent or small

3
medium

5
large

Ad. 16: Flower head: type

Single flower head: has only one row of ray florets. Semi double flower head: has more than one rows of ray florets and a visible flower head disc. Double flower head: has no visible flower heads.

1
single

2
semi-double

3
double

Ad. 19: Flower head: number of ray florets

Observe the density of ray florets, the density depends on the number of rows and the number of ray florets per row.

Ad. 23: Ray floret: profile in cross section

Observations should be made at mid-point of ray floret

1
concave

2
moderately concave

3
flat

4
moderately convex

5
convex

Ad. 24: Ray floret: curvature of longitudinal axis

1
incurving

2
straight

3
reflexing

4
twisted

Ad. 25: Ray floret: part of axis curved

1
distal quarter

2
distal half

3
distal three quarters

Ad. 27: Ray floret: shape of apex

1
pointed

2
rounded

3
truncate

4
emarginate

5
dentate

6
mucronate

Ad. 30: Ray floret: distribution of secondary color of inner side

1 none | 2 distal quarter | 3 distal half | 4 basal half

5 basal quarter | 6 on margins | 7 throughout

Ad. 31: Ray floret: pattern of secondary color of inner side

1 solid | 2 blotches | 3 stripes

Ad. 33: Ray floret: distribution of tertiary color of inner side

1 none | 2 distal quarter | 3 distal half | 4 basal half

5 basal quarter | 6 on margins | 7 through

Ad. 35: Only varieties with Flower head: type: single or semi-double: Disc: color

That observations should be made before dehiscence

Ad. 36: Only varieties with Flower head: type: single or semi-double: Disc: diameter

This characteristics should be observed after the flower bud has opened, but before the disc florets begin to dehisce.

9. Literature

Calderón de Rzedowski, G. y J. Rzedowski. 2006. Flora Fanerogámica del Valle de México. Ed. Instituto de Ecología A.C. y Comisión Nacional para el Conocimiento y Uso de la Biodiversidad. México. 983 p.

Flora of North America. 2003. Flora of North America, North of Mexico. Editorial Committee. Vol 25. New York (NY): Oxford University Press.

Smith A. R. 226. *Zinnia* L. In: Flora of North America Vol.21. Oxford University Press.
Torres A. M. 1963. Taxonomy of *Zinnia*. Brittonia 15: 1-25.

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

1.1.1	Botanical name	*Zinnia* ×*marylandica* D. M. Spooner et al.	[ ]
1.1.2	Common name		
1.2.1	Botanical name	*Zinnia angustifolia* Kunth	[ ]
1.2.2	Common name		
1.3.1	Botanical name	*Zinnia elegans* Jacq.	[ ]
1.3.2	Common name	Youth and age, Youth-and-old-age	
1.4.1	Botanical name	*Zinnia haageana* Regel	[ ]
1.4.2	Common name		
1.5.1	Botanical name	*Zinnia peruviana* (L.) L.	[ ]
1.5.2	Common name	Field zinnia, Peruvian zinnia, Wild zinnia	
1.6.1	Botanical name	Species or hybrid (please indicate)	[ ]
1.6.2	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	

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 [ ]

(b) partially known cross [ ]

(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.

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

4.2 Method of propagating the variety

4.2.1 Seed-propagated varieties

(a) Self-pollination [ ]
(b) Cross-pollination [ ]
(c) F1-hybrid [ ]
(d) Other (please provide details) [ ]

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 (1)	**Plant: growth habit**		
	upright	Peppermint stick	1 [ ]
	semi-upright	Profusion Red	2 [ ]
	spreading	Solecito	3 [ ]
5.2 (3)	**Plant: density of branches**		
	absent or very sparse	Witworna	1 [ ]
	sparse		2 [ ]
	medium	Peppermint Stick	3 [ ]
	dense		4 [ ]
	very dense	Profusion Red	5 [ ]
5.3 (13)	**Leaf: area of anthocyanin coloration at base**		
	absent or small	Oklahoma	1 [ ]
	absent or small to medium		2 [ ]
	medium	Uproar Rose	3 [ ]
	medium to large		4 [ ]
	large	State Fair	5 [ ]
5.4 (14)	**Peduncle: length**		
	short	Zahara Coral Rose	1 [ ]
	short to medium		2 [ ]
	medium	Witworna	3 [ ]
	medium to long		4 [ ]
	long	Uproar Rose	5 [ ]
5.5 (28)	**Ray floret: main color of inner side**		
	RHS Colour Chart (indicate reference number)		
5.6 (35)	**Only varieties with Flower head: type: single or semi-double: Disc: color**		
	yellow green	Profussion Lemon	1 [ ]
	yellow	Crystal yellow	2 [ ]
	orange	Crystal Orange	3 [ ]
	brown	Profusion Fire, Zahara Rose Starlight	4 [ ]
	purple	Purple prince	5 [ ]

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

6. Similar varieties and differences from these varieties

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

Denomination(s) of variety(ies) similar to your candidate variety	Characteristic(s) in which your candidate variety differs from the similar variety(ies)	Describe the expression of the characteristic(s) for the **similar** variety(ies)	Describe the expression of the characteristic(s) for **your** candidate variety
Example	*Flower head: diameter*	*small*	*medium*

Comments:

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

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

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

Yes [ ] No [ ]

(If yes, please provide details)

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

Yes [ ] No [ ]

(If yes, please provide details)

7.3 Other information

A representative color 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.

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

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]