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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

Geneva

DRAFT

POINSETTIA

UPOV Code(s): EUPHO_PUL

Euphorbia pulcherrima Willd. ex Klotzsch

GUIDELINES

FOR THE CONDUCT OF TESTS

FOR DISTINCTNESS, UNIFORMITY AND STABILITY

prepared by experts from the European Union
to be considered by the
Technical Working Party for Ornamental Plants and Forest Trees
at its fifty-fifth session, to be held virtually
from 2023-06-12 to 2023-06-16

Disclaimer: this document does not represent UPOV policies or guidance

Alternative names:*

Botanical name	*English*	*French*	*German*	*Spanish*
Euphorbia pulcherrima Willd. ex Klotzsch	Poinsettia	Poinsettia	Poinsettie, Weihnachtsstern	Flor de Pascua, Cuetlaxochitl, Nochebuena

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 *Euphorbia pulcherrima* Willd. ex Klotzsch and hybrids between *Euphorbia pulcherrima* Willd. ex Klotzsch and *Euphorbia cornastra* (Dressler) Radcl.-Sm.

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 rooted cutting with known phytoplasma status. The plants should not be pinched.

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

10

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

3.4.1 Each test should be designed to result in a total of at least 10 plants.

3.4.2 The design of the tests should be such that plants or parts of plants may be removed for measurement or counting without prejudice to the observations which must be made up to the end of the growing cycle.

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 9 plants or parts of plants taken from each of 9 plants and any other observations made on all plants in the test, disregarding any off-type plants.

In the case of observations of parts taken from single plants, the number of parts to be taken from each of the plants should be 1.

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 vegetatively 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 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 10 plants, 1 off-type is allowed.

4.3 Stability

4.3.1 In practice, it is not usual to perform tests of stability that produce results as certain as those of the testing of distinctness and uniformity. However, experience has demonstrated that, for many types of variety, when a variety has been shown to be uniform, it can also be considered to be stable.

4.3.2 Where appropriate, or in cases of doubt, stability may be further examined by testing a new 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) Leaf blade: number of colors of upper side (characteristic 12)
(b) Bract: main color of upper side (characteristic 33) with the following groups:
-Gr.1: white
-Gr.2: yellow
-Gr.3: pink
-Gr.4: orange red
-Gr.5 : red
-Gr.6: purple
(c) Bract: secondary color of upper side (characteristic 34) with the following groups:
-Gr.1: white
-Gr.2: yellow
-Gr.3: pink
-Gr.4: orange red
-Gr.5 : red
-Gr.6: purple
(d) Bract: distribution of secondary color of upper side (characteristic 35)
(e) Bract: pattern of secondary color of upper side (characteristic 36)

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 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)-(b) 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.	**(*)**	**QL** **VG**					
		Plant: branching					
		absent					1
		present					9
2.	**(*)**	**QN** **MG/VG**					
		Plant: number of branches					
		very few					1
		very few to few					2
		few				Lilo	3
		few to medium					4
		medium				Freedom	5
		medium to many					6
		many				Regina	7
		many to very many					8
		very many					9
3.	**(*)**	**QN** **MG/MS/VG**					
		Plant: height					
		very short					1
		very short to short					2
		short				Duepremimapri	3
		short to medium					4
		medium				Fiscor	5
		medium to tall					6
		tall				Fismille	7
		tall to very tall					8
		very tall					9

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
4.		**QN MG/MS/VG**					
		Plant: width					
		very narrow					1
		very narrow to narrow					2
		narrow				Eckalon	3
		narrow to medium					4
		medium				Red Angel	5
		medium to broad					6
		broad				Fismille	7
		broad to very broad					8
		very broad					9
5.	**(*)**	**QN VG**					
		Stem: intensity of green color on middle third					
		very light					1
		very light to light					2
		light				Winpeach	3
		light to medium					4
		medium				Duepremimapri	5
		medium to dark					6
		dark				Duearcwi	7
		dark to very dark					8
		very dark					9
6.	**(*)**	**QN VG**					
		Stem: intensity of anthocyanin coloration on middle third					
		absent or very weak				White Freedom	1
		very weak to weak					2
		weak				Fisson Orange	3
		weak to medium					4
		medium				Fisson	5
		medium to strong					6
		strong				Freedom	7
		strong to very strong					8
		very strong					9

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
7. (*)	**QN VG**					
	Stem: intensity of anthocyanin coloration on upper third					
	absent or very weak				Ice Punch	1
	medium				Freedom Marble	2
	strong					3
8. (*)	**QN MG/MS/VG**		**(a)**			
	Leaf blade: length					
	very short					1
	very short to short					2
	short				Dueavant	3
	short to medium					4
	medium				Fiscor	5
	medium to long					6
	long				Winterfest Red	7
	long to very long					8
	very long					9
9. (*)	**QN MG/MS/VG**		**(a)**			
	Leaf blade: width					
	very narrow					1
	very narrow to narrow					2
	narrow				Fiscor	3
	narrow to medium					4
	medium				Duecowhite	5
	medium to large					6
	large				White Freedom	7
	large to very large					8
	very large					9
10.	**PQ VG**		**(a)**			
	Leaf blade: shape					
	deltoid				Q102	1
	ovate				Duepre	2
	lanceolate				Bonpri 974	3
	elliptic				Princettia Indian Red	4
	circular				NPCW19280	5

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
11.		**PQ VG**	**(a)**				
		Leaf blade: shape of base					
		wedge-shaped				Dueavant	1
		rounded				Marblestar	2
		truncate				Dueinfinity	3
		cordate				Early Joy	4
12.	(*)	**PQ VG**	**(a)**				
		Leaf blade: number of colors of <u>upper</u> side					
		one				Fiscor	1
		two				Dueavant	2
		more than two				Fismarble Silver	3
13.	(*)	**QN VG**	**(a)**				
		<u>Only varieties with Leaf blade: number of colors of upper side: one</u>: Leaf blade: intensity of green color on upper side					
		very light				Fiscor	1
		light					2
		medium					3
		dark					4
		very dark				Peterstar	5
14.		**PQ VG**	**(a), (b)**				
		<u>Only varieties with Leaf blade: number of colors on upper side: two or more than two:</u> Leaf blade: main color of upper side					
		yellowish					1
		yellowish green					2
		light green				Bright Red Queen	3
		medium green				Dueavant	4
		greyish green				Fismarble Silver	5
		dark green				Carousel Dark Red	6
		very dark green					7

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
15.	**PQ** **VG**	**(a), (b)**				
	<u>Only varieties with Leaf blade: number of colors on upper side: two or more than two:</u> Leaf blade: secondary color of upper side					
	white				Fismarble Silver	1
	yellowish				Bright Red Queen	2
	yellowish green					3
	light green					4
	medium green					5
	greyish green				Allegra Art Deco	6
	dark green				Dueavant	7
	very dark green				Carousel Dark Red	8
16.	**PQ** **VG**	**(a), (b)**				
	<u>Only varieties with Leaf blade: number of colors on upper side: two or more than two:</u> Leaf blade: tertiary color of upper side					
	white				Silverleaf	1
	yellowish					2
	yellowish green				Bright Red Queen	3
	light green				Fissilver	4
	medium green					5
	greyish green				Fiswhite Silver	6
	dark green					7
	very dark green					8
17.	**PQ** **VG**	**(a)**				
	Leaf blade: color of main vein of <u>upper</u> side					
	only green				Freedom Marble	1
	green and red				Petoy	2
	only red				KLEW01063	3

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
18.		**QN MG/VG**	**(a)**				
		Leaf blade: number of lobes					
		none or few				Regina	1
		medium				Fisdra	2
		many				Dueavant	3
19.		**QN MG/VG**	**(a)**				
		Leaf blade: depth of deepest sinus					
		very shallow					1
		very shallow to shallow					2
		shallow				KLEW01063	3
		shallow to medium					4
		medium				Dueavant	5
		medium to deep					6
		deep				Duemerlot	7
		deep to very deep					8
		very deep					9
20.		**QN VG**	**(a)**				
		Leaf blade: curvature along main vein					
		absent or very weak				Fiscor	1
		medium				Eckalverta	2
		strong				Eckaddis	3
21.	**(*)**	**QN MG/MS/VG**	**(a)**				
		Petiole: length					
		very short					1
		very short to short					2
		short				Duepremimhopi	3
		short to medium					4
		medium				Fiscor	5
		medium to long					6
		long				Purple Heart	7
		long to very long					8
		very long					9

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
22.		**QN VG**	**(a)**				
		Petiole: intensity of green color on <u>upper</u> side					
		very light				White Freedom	1
		light					2
		medium					3
		drak					4
		very dark				Duepremwi	5
23.		**QN VG**	**(a)**				
		Petiole: intensity of anthocyanin coloration on <u>upper</u> side					
		absent or very weak					1
		very weak to weak					2
		weak				Ice Punch	3
		weak to medium					4
		medium				Fisdra	5
		medium to strong					6
		strong				Freedom	7
		strong to very strong					8
		very strong					9
24.	**(*)**	**QN VG**	**(a)**				
		Petiole: intensity of anthocyanin coloration on <u>lower</u> side					
		absent or weak				Ice Punch	1
		medium				Early Red	2
		strong				Freedom	3

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
25. (*)	**QN MG/MS/VG**					
	Transitional leaves: number of <u>partly</u> bract- colored leaf blades					
	very few					1
	very few to few					2
	few				Fismille	3
	few to medium					4
	medium				Duearcwi	5
	medium to many					6
	many				Renate	7
	many to very many					8
	very many					9
26. (*)	**QN MG/MS/VG**					
	Transitional leaves: number of <u>fully</u> bract- colored leaf blades					
	very few					1
	very few to few					2
	few				Renate	3
	few to medium					4
	medium				Duecitric	5
	medium to many					6
	many				Fismille	7
	many to very many					8
	very many					9
27. (*)	**QN VG**					
	Transitional leaves: degree of lobing					
	absent or weak				Duepre	1
	medium				Christmas Angel	2
	strong				Lazzporega	3
28.	**QN VG**					
	Transitional leaves: curvature along main vein					
	absent or weak				Fiscor	1
	medium				Eckalverta	2
	strong				Winred	3

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
29.	**(*)**	**QN** **MG/VG**					
		Bract: number					
		very few					1
		very few to few					2
		few				Duecitric	3
		few to medium					4
		medium				Renate	5
		medium to many					6
		many				Fismille	7
		many to very many					8
		very many					9
30.	**(*)**	**QN** **MG/MS/VG**	**(+)**				
		Largest bract: length					
		very short					1
		very short to short					2
		short				Stargazer	3
		short to medium					4
		medium				Ice Punch	5
		medium to long					6
		long				Temptation Red	7
		long to very long					8
		very long					9
31.	**(*)**	**QN** **MG/MS/VG**	**(+)**				
		Largest bract: width					
		very narrow					1
		very narrow to narrow					2
		narrow				Stargazer	3
		narrow to medium					4
		medium				Ice Punch	5
		medium to broad					6
		broad				Duepremimhopi	7
		broad to very broad					8
		very broad					9

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
32. **(*)**	**PQ** **VG**					
	Largest bract: shape					
	ovate				Eckalon	1
	elliptic				Fiscor	2
	oblanceolate				Dueavant	3
	obovate					4
33. **(*)**	**PQ** **VG**					
	Bract: main color of <u>upper</u> side					
	RHS Colour Chart (indicate reference number)					
34. **(*)**	**PQ** **VG**					
	Bract: secondary color of <u>upper</u> side					
	RHS Colour Chart (indicate reference number)					
35. **(*)**	**PQ** **VG**					
	Bract: distribution of secondary color of <u>upper</u> side					
	none					1
	at the center					2
	at the veins					3
	at the margin					4
	throughout					5
36. **(*)**	**PQ** **VG**					
	Bract: pattern of secondary color of <u>upper</u> side					
	solid					1
	spots					2
	marbled					3
	flushed					4
37.	**QN** **VG**					
	Bract: area of secondary color					
	small					1
	medium					2
	large					3

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
38.	**(*)**	**PQ** **VG**					
		Bract: tertiary color of <u>upper</u> side					
		RHS Colour Chart (indicate reference number)					
39.	**(*)**	**PQ** **VG**					
		Bract: distribution of tertiary color of <u>upper</u> side					
		none					1
		at margin					2
		at center					3
		at veins					4
		throughout					5
40.		**PQ** **VG**					
		Bract: pattern of tertiary color of <u>upper</u> side					
		solid					1
		spots					2
		marbled					3
		flushed					4
41.	**(*)**	**PQ** **VG**					
		Bract: main color of <u>lower</u> side					
		RHS Colour Chart (indicate reference number)					
42.	**(*)**	**PQ** **VG**					
		Bract: secondary color of <u>lower</u> side					
		RHS Colour Chart (indicate reference number)					

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
43. (*)	**PQ** **VG**					
	Bract: distribution of secondary color of <u>lower</u> side					
	none					1
	at the center					2
	at the veins					3
	at the margin					4
	throughout					5
44. (*)	**PQ** **VG**					
	Bract: pattern of secondary color of <u>lower</u> side					
	solid					1
	spots					2
	marbled					3
	flushed					4
45. (*)	**PQ** **VG**					
	Bract: tertiary color of <u>lower</u> side					
	RHS Colour Chart (indicate reference number)					
46. (*)	**PQ** **VG**					
	Bract: distribution of tertiary color of <u>lower</u> side					
	none					1
	at the center					2
	at the veins					3
	at the margin					4
	throughout					5
47.	**PQ** **VG**					
	Bract: pattern of tertiary color of <u>lower</u> side					
	solid					1
	spots					2
	marbled					3
	flushed					4

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
48.	**QN VG**					
	Bract: folding along the main vein					
	absent or very weak				Fiscor	1
	weak					2
	medium					3
	strong					4
	very strong				Duetwister	5
49.	**QN VG**					
	Bract: twisting					
	absent or very weak				Fiscor	1
	weak					2
	medium					3
	strong					4
	very strong				Future	5
50.	**QN VG**					
	Bract: degree of rugosity					
	absent or very weak				Ice Punch	1
	weak				Duearcwi	3
	medium				Purple Heart	5
	strong				Winwhite	7
	very strong				Winred	9
51. **(*)**	**QN VG**					
	Cyme: width					
	very narrow					1
	very narrow to narrow					2
	narrow				Duecitric	3
	narrow to medium					4
	medium				Eckabud	5
	medium to broad					6
	broad				Purple Heart	7
	broad to very broad					8
	very broad					9

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
52.	**(*)**	**QN VG**					
		Cyathium: size of glands					
		very small					1
		very small to small					2
		small				Purple Heart	3
		small to medium					4
		medium				Fismars Marble	5
		medium to large					6
		large				Peterstar	7
		large to very large					8
		very large					9
53.	**(*)**	**PQ VG**					
		Cyathium: main color of gland					
		yellow				Duepremimapri	1
		orange				Peterstar	2
		red				Temptation Red	3
54.		**QL VG**					
		Cyathium: deformation of glands					
		absent					1
		present					9
55.		**QN VG**	**(+)**				
		Cyathium: intensity of red coloration					
		absent or very weak					1
		very weak to weak					2
		weak					3
		weak to medium					4
		medium					5
		medium to strong					6
		strong					7
		strong to very strong					8
		very strong					9

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
56.	**QN** **MG/VG**					
	Time of opening of cyathia					
	very early					1
	very early to early					2
	early				Estrella Red	3
	early to medium					4
	medium				Fismars Crème	5
	medium to late					6
	late				Duearcwi	7
	late to very late					8
	very late					9

8. Explanations on the Table of Characteristics

8.1 Explanations covering several characteristics

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 second fully developed leaf from the top.

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

8.2 Explanations for individual characteristics

Ad. 30: Largest bract: length

including petioles

Ad. 31: Largest bract: width

including petioles

Ad. 55: Cyathium: intensity of red coloration

8.3 The optimum stage of development for the assessment of the characteristics is the time of opening of three cyathia on the plants.

9. Literature

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	*Euphorbia pulcherrima* Willd. ex Klotzsch
1.2	Common name	Poinsettia

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 variety)

(……..……..…) 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.

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

4.2 Method of propagating the variety

4.2.1 Seed-propagated varieties

4.2.2 Vegetative propagation

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

4.2.3 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 (12)	**Leaf blade: number of colors of <u>upper</u> side**		
	one	Fiscor	1 [ ]
	two	Dueavant	2 [ ]
	more than two	Fismarble Silver	3 [ ]
5.2(i) (33)	**Bract: main color of <u>upper</u> side**		
	RHS Colour Chart (indicate reference number)		
5.2(ii) (33)	**Bract: main color of <u>upper</u> side**		
	Gr.1: white		1 [ ]
	Gr.2: yellow		2 [ ]
	Gr.3: pink		3 [ ]
	Gr.4: orange red		4 [ ]
	Gr.5: red		5 [ ]
	Gr.6: purple		6 [ ]
	other (please specify)		[ ]
5.3(i) (34)	**Bract: secondary color of <u>upper</u> side**		
	RHS Colour Chart (indicate reference number)		
5.3(ii) (34)	**Bract: secondary color of <u>upper</u> side**		
	Gr.1: white		1 [ ]
	Gr.2: yellow		2 [ ]
	Gr.3: pink		3 [ ]
	Gr.4: orange red		4 [ ]
	Gr.5: red		5 [ ]
	Gr.6: purple		6 [ ]
	other (please specify)		[ ]

	Characteristics	Example Varieties	Note
5.4 (35)	**Bract: distribution of secondary color of <u>upper</u> side**		
	none		1 [ ]
	at the center		2 [ ]
	at the veins		3 [ ]
	at the margin		4 [ ]
	throughout		5 [ ]
5.5 (36)	**Bract: pattern of secondary color of <u>upper</u> side**		
	solid		1 [ ]
	spots		2 [ ]
	marbled		3 [ ]
	flushed		4 [ ]

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	*Leaf blade: shape*	*deltoïd*	*circular*

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”.

.....

9.3 Please provide details on the phytoplasma status of the material.

……

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]