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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS
 GENEVA

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Euphorbia pulcherrima Willd. ex Klotzsch
 and its hybrids

GUIDELINES

FOR THE CONDUCT OF TESTS

FOR DISTINCTNESS, UNIFORMITY AND STABILITY

prepared by an expert from Denmark

*to be considered by the
 Technical Working Party for Ornamental Plants and Forest Trees
 at its fortieth session, to be held in Kunming, China, from July 2 to July 6, 2007*

Alternative Names:*

<i>Botanical name</i>	<i>English</i>	<i>French</i>	<i>German</i>	<i>Spanish</i>
<i>Euphorbia pulcherrima</i> Willd. ex Klotzsch	Poinsettia	Poinsettia	Poinsettie, Weihnachtsstern	Flor de Pascua

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 *Euphorbia pulcherrima* Willd. ex Klotzsch and its hybrids.

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 cuttings.

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

10 rooted cuttings

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. However it is common use in the species to infect plants with phytoplasma. 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. Five weeks after propagation the plants should receive a short day treatment for 10 weeks. The day length during the short day treatment should be 10 hours.

3.3.2 Plants should not be pinched.

3.3.3 The optimum stage of development for the assessment of the characteristics is at the time of opening of three cyathia.

3.3.4 Because daylight varies, color determinations made against a color chart should be made either in a suitable cabinet providing artificial daylight or in the middle of the day in a room without direct sunlight. The spectral distribution of the illuminant for artificial daylight should conform with the CIE Standard of Preferred Daylight D 6500 and should fall within the tolerances set out in the British Standard 950, Part I. These determinations should be made with the plant part placed against a white background.

3.4 *Test Design*

3.4.1 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 *Number of Plants / Parts of Plants to be Examined*

Unless otherwise indicated, all observations should be made on 10 plants or parts taken from each of 10 plants.

3.6 *Additional Tests*

Additional tests, for examining relevant characteristics, may be established.

4. Assessment of Distinctness, Uniformity and Stability

4.1 *Distinctness*

4.1.1 General Recommendations

It is of particular importance for users of these Test Guidelines to consult the General Introduction prior to making decisions regarding distinctness. However, the following points are provided for elaboration or emphasis in these Test Guidelines.

4.1.2 Consistent Differences

The differences observed between varieties may be so clear that more than one growing cycle is not necessary. In addition, in some circumstances, the influence of the environment is not such that more than a single growing cycle is required to provide assurance that the differences observed between varieties are sufficiently consistent. One means of ensuring that a difference in a characteristic, observed in a growing trial, is sufficiently consistent is to examine the characteristic in at least two independent growing cycles.

4.1.3 Clear Differences

Determining whether a difference between two varieties is clear depends on many factors, and should consider, in particular, the type of expression of the characteristic being examined, i.e. whether it is expressed in a qualitative, quantitative, or pseudo-qualitative manner. Therefore, it is important that users of these Test Guidelines are familiar with the recommendations contained in the General Introduction prior to making decisions regarding distinctness.

4.2 *Uniformity*

4.2.1 It is of particular importance for users of these Test Guidelines to consult the General Introduction prior to making decisions regarding uniformity. However, the following points are provided for elaboration or emphasis in these Test Guidelines:

4.2.2 For the assessment of uniformity 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 tested, either by growing a further generation, or by testing a new plant stock to ensure that it exhibits the same characteristics as those shown by the previous material supplied.

5. Grouping of Varieties and Organization of the Growing Trial

5.1 The selection of varieties of common knowledge to be grown in the trial with the candidate varieties and the way in which these varieties are divided into groups to facilitate the assessment of distinctness are aided by the use of grouping characteristics.

5.2 Grouping characteristics are those in which the documented states of expression, even where produced at different locations, can be used, either individually or in combination with other such characteristics: (a) to select varieties of common knowledge that can be excluded from the growing trial used for examination of distinctness; and (b) to organize the growing trial so that similar varieties are grouped together.

5.3 The following have been agreed as useful grouping characteristics:

- (a) Stem: anthocyanin coloration on middle third (characteristic 5)
- (b) Leaf blade: number of colors of upper side (characteristic 13)
- (c) Bract: number of colors of upper side (characteristic 35)
- (d) Only varieties with one colored bracts:
Bract: color of upper side (characteristic 36) with the following groups:
White, yellow, orange red, red, purple, pink
- (e) Only varieties with more than one colored bracts:
Bract color pattern of upper side (characteristic 37)
- (f) Only varieties with marbled bracts:
Bract: main color of upper side (characteristic 38) with the following groups: White, red, purple, pink
- (g) Only varieties with spotted bracts:
Bract: main color of upper side (characteristic 42) with the following groups: White, yellow, orange-red, red, pink

- (h) Only varieties with spotted bracts:
Bract: color of spots of upper side (characteristic 43) with the following groups:
White, yellow, orange-red, red, purple pink

5.4 Guidance for the use of grouping characteristics, in the process of examining distinctness, is provided through the General Introduction.

6. Introduction to the Table of Characteristics

6.1 *Categories of Characteristics*

6.1.1 Standard Test Guidelines Characteristics

Standard Test Guidelines characteristics are those which are approved by UPOV for examination of DUS and from which members of the Union can select those suitable for their particular circumstances.

6.1.2 Asterisked Characteristics

Asterisked characteristics (denoted by *) are those included in the Test Guidelines which are important for the international harmonization of variety descriptions and should always be examined for DUS and included in the variety description by all members of the Union, except when the state of expression of a preceding characteristic or regional environmental conditions render this inappropriate.

6.2 *States of Expression and Corresponding Notes*

States of expression are given for each characteristic to define the characteristic and to harmonize descriptions. Each state of expression is allocated a corresponding numerical note for ease of recording of data and for the production and exchange of the description.

6.3 *Types of Expression*

An explanation of the types of expression of characteristics (qualitative, quantitative and pseudo-qualitative) is provided in the General Introduction.

6.4 *Example Varieties*

Where appropriate, example varieties are provided to clarify the states of expression of each characteristic.

6.5 *Legend*

- (*) Asterisked characteristic – see Chapter 6.1.2
 - QL Qualitative characteristic – see Chapter 6.3
 - QN Quantitative characteristic – see Chapter 6.3
 - PQ Pseudo-Qualitative characteristic – see Chapter 6.3
- (a), (b) See Explanations on the Table of Characteristics in Chapter 8.1.
- (+) See Explanations on the Table of Characteristics in Chapter 8.2.

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

	English	Français	Deutsch	Español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
1. (*)	Plant: branching	Plante: ramifications	Pflanze: Verzweigung			
QL	absent	absentes	fehlend			1
	present	présentes	vorhanden			9
2. (*)	Plant: number of branches	Plante: nombre de ramifications	Pflanze: Anzahl der Verzweigungen			
QN	few	petit	gering		Lilo	3
	medium	moyen	mittel		Freedom	5
	many	grand	gross		Regina	7
3. (*)	Plant: height	Plante : hauteur	Pflanze: Höhe			
QN	short	Basse	Neidrig		Duepremapri	3
	medium	Moyenne	Mittel		Fiscor	5
	tall	haute	hoch		Fismille	7
4.	Plant: width	Plante : largeur	Pflanze: Breite			
QN	narrow	étroite	schmal		Eckalon	3
	medium	moyenne	mittel		Red Angel	5
	broad	large	breit		Fismille	7
5. (*)	Stem: anthocyanin coloration on middle third					
QL	absent				White Freedom	1
	present				Freedom	9

	English	Français	Deutsch	Español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
6. (*)	<u>Only varieties without anthocyanin coloration on middle third: Stem: intensity of green color on middle third</u>					
QN	weak				Winpeach	3
	medium				Duepremapri	5
	strong				Duearcwi	7
7. (*)	<u>Only varieties with anthocyanin coloration on middle third: Stem: intensity of color on middle third</u>					
QN	weak				Fisson Orange	3
	medium				Fisson	5
	strong				Freedom	7
8. (*)	Stem: anthocyanin coloration on upper third					
QL	absent				Ice Punch	1
	present				Freedom Marble	9
9. (*)	Leaf blade: length	Limbe : longueur	Blattspreite: Länge			
QN (a)	short	court	kurz		Dueavant	3
	medium	moyen	mittel		Fiscor	5
	long	long	lang		Winterfest Red	7

	English	Français	Deutsch	Español	Example Varieties Exemples Beispielsorten Variedades ejemplo	Note/ Nota
10. (*)	Leaf blade: width	Limbe : largeur	Blattspreite: Breite			
QN (a)	narrow	étroit	schmal		Fiscor	3
	medium	moyen	mittel		Duecowwhite	5
	broad	large	breit		White Freedom	7
11.	Leaf blade: shape	Limbe : forme	Blattspreite: Form			
PQ (a)	deltoid					1
	ovate					2
	lanceolate				Fiscor	3
	elliptic					4
12. (+)	Leaf blade: shape of base	Limbe : forme de la base	Blattspreite: Form der Basis			
PQ (a)	truncate	droite	gerade		Dueinfinity	1
	rounded	arrondie	abgerundet		Marblestar	2
	wedge-shaped	cunéiforme	keilförmig		Dueavant	3
	cordate				Early Joy	4
13. (*) (+)	Leaf blade: number of colors on <u>upper</u> side					
QN (a)	one				Fiscor	1
	two				Dueavant	2
	more than two				Fismarble Silver	3
14. (*)	<u>Only varieties with one-colored leaves:</u> Leaf blade: green color					
QN (a)	light					3
	medium				Peterstar	5
	strong				Fiscor	7

	English	Français	Deutsch	Español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota	
15.	<u>Only varieties with more than one-colored leaves:</u> Leaf blade: main color						
PQ (a)	yellowish					1	
	light yellowish green					2	
	light green					3	
	medium green				Dueavant	4	
	greyish green				Fismarble Silver	5	
	dark green					6	
	very dark green					7	
16.	<u>Only varieties with more than one-colored leaves:</u> Leaf blade: secondary color						
PQ (a)	white				Fismarble Silver	1	
	yellowish				Bright Red Queen	2	
	light yellowish green					3	
	light green					4	
	medium green					5	
	greyish green					6	
	dark green				Dueavant	7	
	very dark green					8	

	English	Français	Deutsch	Español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota	
17.	<u>Only varieties with more than two-colored leaves:</u> Leaf blade: tertiary color						
PQ	(a) white				Silverleaf	1	
	yellowish					2	
	light yellowish green					3	
	light green					4	
	medium green					5	
	greyish green					6	
	dark green					7	
	very dark green					8	
18.	Leaf blade: color of main vein on <u>upper</u> side						
PQ	(a) only green				Freedom Marble	1	
	green and red				Petoy	2	
	only red				Klew01063	3	
19.	Leaf blade: number of lobes						
(+)							
PQ	(a) none or very few				Regina	1	
	medium				Fisson Piz	2	
	many				Dueavant	3	
20.	Leaf blade: depth of deepest sinus						
(+)							
QN	(a) shallow				Klew01063	3	
	medium				Dueavant	5	
	deep				Fisson Piz	7	

	English	Français	Deutsch	Español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
21.	Leaf blade: curvature of main vein					
(+)						
QN	absent or very weak				Fiscor	1
	medium				Eckalverta	2
	strong				Eckaddis	3
22.	Petiole: length	Pétiole : longueur	Blattstiel: Länge			
(*)						
QN	(a) short	court	kurz		Duepreminhopi	3
	medium	moyen	mittel		Fiscor	5
	long	long	lang		Purple Heart	7
23.	Petiole: anthocyanin coloration on <u>upper</u> side					
(*)						
QL	(a) absent				White Freedom	1
	present				Ice Punch	9
24.	<u>Only varieties without anthocyanin coloration on upper side of petiole:</u> Petiole: intensity of green color on <u>upper</u> side					
QN	(a) weak				White Freedom	3
	medium				Blizzard	5
	strong					7
25.	<u>Only varieties with anthocyanin coloration on upper side of petiole:</u> Petiole: intensity of color on <u>upper</u> side					
QN	(a) weak				Ice Punch	3
	medium				Fisdra	5
	strong				Freedom	7

	English	Français	Deutsch	Español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
26. (*)	Petiole: anthocyanin coloration on <u>lower</u> side					
QN	(a) absent				Ice Punch	1
	present				Freedom	9
27. (*) (+)	Transitional leaves: number of partly bract colored leaf blades					
QN	few				Fismille	3
	medium				Dueacwi	5
	many				Renate	7
28. (*) (+)	Transitional leaves: number of fully bract colored leaf blades					
QN	few				Renate	3
	medium				Duecitric	5
	many				Fismille	7
29. (*) (+)	Transitional leaves: lobes					
QL	absent				Duepre	1
	present				Liberty Red	9
30. (+)	Transitional leaves: curvature along main vein of fully bract colored leaf blades					
QN	absent or very weak				Fiscor	1
	medium				Eckalverta	2
	strong				Winred	3

	English	Français	Deutsch	Español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
31. (* (+)	Bracts: number					
QN	few				Duecitrif	3
	medium				Renate	5
	many				Fismille	7
32. (*	Bract: length of largest bract (including petiole)	Bractée la plus grande : longueur (pétiole compris)	Grösstes Hochblatt: Länge (einschliesslich des Stiels)			
QN	short	courte	kurz		Stargazer	3
	medium	moyenne	mittel		Ice Punch	5
	long	longue	lang		Temptation Red	7
33. (*	Bract: width of largest bract	Bractée la plus grande : largeur	Grösstes Hochblatt: Breite			
QN	narrow	étroite	schmal		Stargazer	3
	medium	moyenne	mittel		Ice Punch	5
	broad	large	breit		Duepreminhopi	7
34. (*	Largest bract: shape					
PQ	ovate				Eckalon	1
	elliptic				Fiscor	2
	lanceolate					3
	oblanceolate				Dueavant	4
	obovate				Dueavant	5
35. (* (+)	Bract: number of colors of <u>upper</u> side					
PQ	one				Fiscor	1
	two				Ice Punch	2
	more than two				Marblestar	3

	English	Français	Deutsch	Español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
36. (*)	<u>Only varieties with one colored bracts:</u> Bracts: color of <u>upper side</u>					
PQ	RHS Colour Chart (indicate reference number)					
37. (*) (+)	<u>Only varieties with more than one colored bracts:</u> Bract color pattern of <u>upper side</u>					
PQ	marbled				Marblestar	1
	spotted				Monet	2
38. (*) (+)	<u>Only varieties with marbled bracts:</u> Bract: main color of <u>upper side</u>					
PQ	RHS Colour Chart (indicate reference number)					
39. (*) (+)	<u>Only varieties with marbled bracts:</u> Bract: secondary color of <u>upper side</u>					
PQ	RHS Colour Chart (indicate reference number)					
40. (*)	<u>Only varieties with marbled bracts with more than two colors:</u> Bract: tertiary color of <u>upper side</u>					
PQ	RHS Colour Chart (indicate reference number)					

	English	Français	Deutsch	Español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
41.	<u>Only varieties with marbled bracts:</u>					
	Bract: distribution of secondary color of <u>upper side</u>					
QL	Near main vein					1
	Near margin				Marblestar	2
42. (*)	<u>Only varieties with spotted bracts:</u>					
	Bract: main color of <u>upper side</u>					
PQ	RHS Colour Chart (indicate reference number)					
43. (*)	<u>Only varieties with spotted bracts:</u>					
	Bract: color of spots of <u>upper side</u>					
PQ	RHS Colour Chart (indicate reference number)					
44. (*)	<u>Only varieties with one colored bracts:</u>					
	Bracts: color of <u>lower side</u>					
PQ	RHS Colour Chart (indicate reference number)					
45. (*) (+)	<u>Only varieties with marbled bracts:</u>					
	Bract: main color of <u>lower side</u>					
PQ	RHS Colour Chart (indicate reference number)					
46. (*) (+)	<u>Only varieties with marbled bracts:</u>					
	Bract: secondary color of <u>lower side</u>					
PQ	RHS Colour Chart (indicate reference number)					

	English	Français	Deutsch	Español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
47. (*)	<u>Only varieties with marbled bracts with more than two colors:</u> Bract: tertiary color of lower side					
PQ	RHS Colour Chart (indicate reference number)					
48. (*)	<u>Only varieties with spotted bracts:</u> Bract: main color of lower side					
PQ	RHS Colour Chart (indicate reference number)					
49. (*)	<u>Only varieties with spotted bracts:</u> Bract: color of spots of lower side					
PQ	RHS Colour Chart (indicate reference number)					
50. (+)	Bract: folding along the main vein					
QL	absent				Fiscor	1
	present				Duetwister	9
51. (+)	Bract: twisting	Bractée : torsion	Hochblatt: Drehung			
QL	absent	absent	fehlend		Fiscor	1
	present	présent	vorhanden		Future	9

	English	Français	Deutsch	Español	Example Varieties Exemples Beispielsorten Variedades ejemplo	Note/ Nota
52.	Bract: intensity of rugosity between veins	Bractée : intensité de la coloqûre entre les nervures	Hochblatt: Stärke der Wölgung zwischen den Nerven			
QN	absent or very weak				Ice Punch	1
	weak	faible	gering		Duearcwi	3
	medium	moyenne	mittel		Purple Heart	5
	strong	forte	stark		Winwhite	7
	very strong				Winred	9
53. (* (+)	Cyme: width	Cyme : largeur	Trugdolde: Breit			
QN	narrow	étroite	schmal		Duecitric	3
	medium	moyenne	mittel		Eckabud	5
	broad	large	breit		Purple Heart	7
54. (*	Cyathium: size of glands	Cyathium : taille des glandes	Cyathium: Grösse der Drüsen			
QN	small	petites	schmal		Purple Heart	3
	medium	moyennes	mittel		Fismars Marble	5
	large	grandes	gross		Peterstar	7
55. (*	Cyathium: predominant color of glande					
PQ	yellow				Duepremimapri	1
	orange				Peterstar	2
	red				Temptation red	3
56.	Time of opening of first three cyathia	Époque d'ouverture des trois premiers cyathiums	Zeitpunkt der Öffnung der ersten drei Cyathien			
QN	early	précoce	früh		Estrella Red	3
	medium	moyenne	mittel		Fismars White	5
	late	tardive	spät		Duearcwi	7

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) Leaf and petiole: observations on the leaf should be made on the second fully developed leaf from the top.

8.2 *Explanations for individual characteristics*

Ad.12: Leaf blade: shape of base



1
truncate

2
rounded

3
wedge-shaped

4
cordate

Ad. 13: Leaf blade: number of colors on upper side



1
one

2
two

3
more than two colors of
upper side

Ad. 19: Leaf blade: number of lobes



1
None or very few

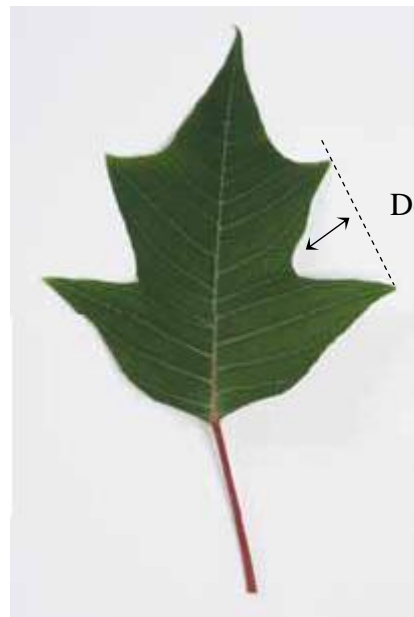


2
medium



3
many

Ad. 20: Leaf blade: depth of deepest sinus



Depth of deepest sinus

Ad. 21: Leaf blade: curvature of main vein



curvature of main vein (Note:
3- strong)

Ad. 27, 28 and 31:



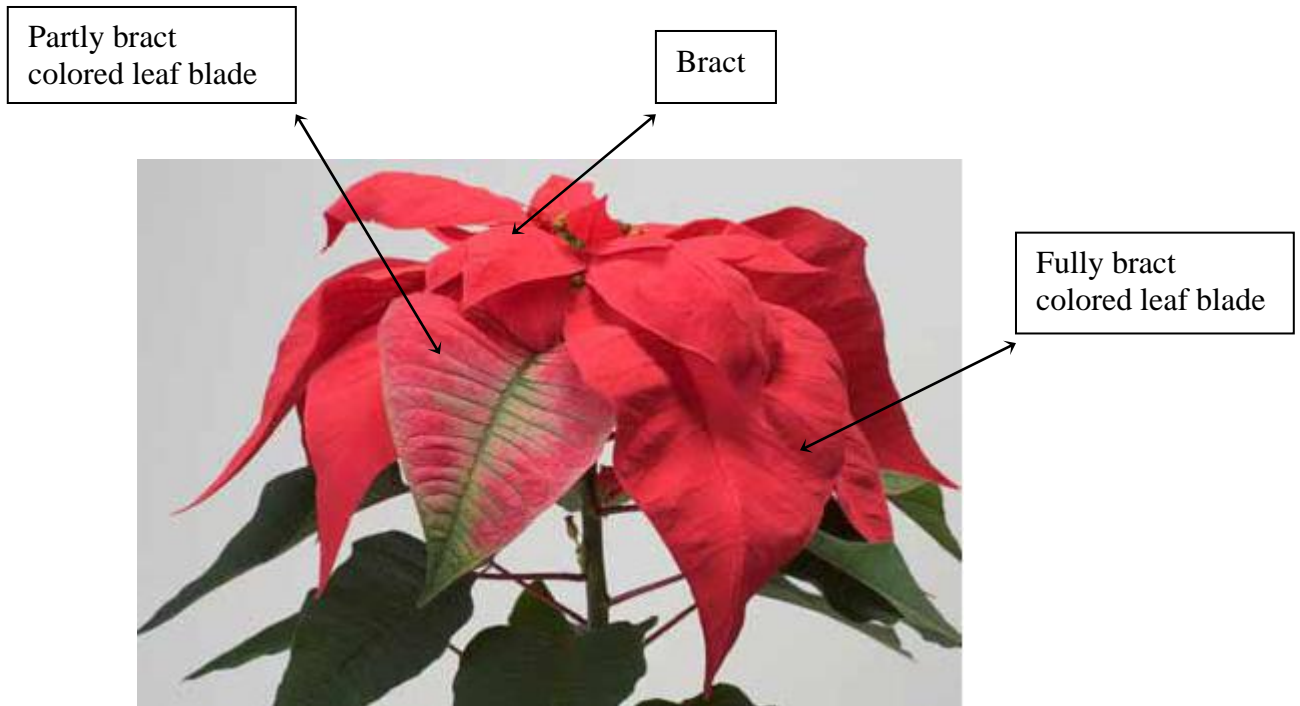
1
partly bract colored leaf blade



2
fully bract colored leaf blade



3
bract



Ad. 29. Transitional leaves: lobes



absent



present

Ad. 30. Transitional leaves: curvature along main vein of fully bract colored leaf blades



1
absent or very weak



2
medium



3
strong

Ad. 35. Bract: number of colors



1
one

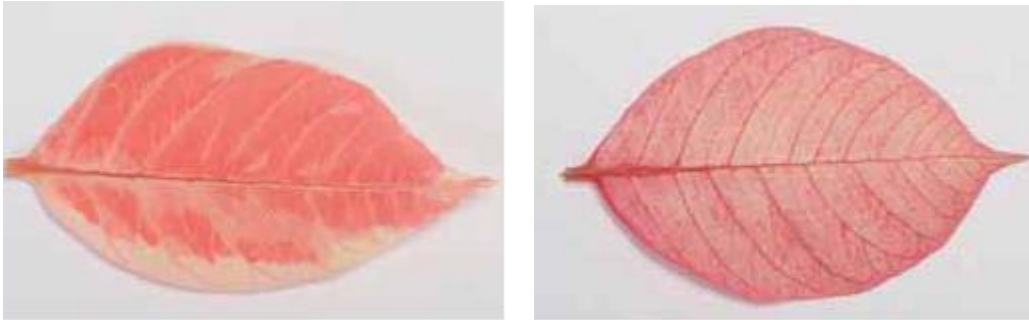


2
two



3
more than two colors of
upper side

Ad. 37. Only varieties with more than one collared bracts: Bract color pattern of upper side



1
marbled

2
spotted

Ad. 38: Only varieties with marbled bracts: Bract: main color of upper side

Main color: color of the largest area of the bract. If the area of the colors is nearly half and half, the darker color is the main color.

Ad. 39: Only varieties with marbled bracts: Bract: secondary color of upper side

Secondary color: color of the second largest area of the bract.

Ad. 45. Only varieties with marbled bracts: Bract: main color of lower side

Main color: color of the largest area of the bract. If the area of the colors is nearly half and half, the darker color is the main color.

Ad. 46. Only varieties with marbled bracts: Bract: secondary color of lower side

Secondary color: color of the second largest area of the bract.

Ad. 50. Bract: folding along the main vein



1
absent



2
present

Ad. 51. Bract: twisting



1
absent



2
present

Ad. 53. Cyme: width



1
Cyme width

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		
1.1.1 Botanical name	<input type="text" value="Euphorbia pulcherrima Willd. ex Klotzsch"/>	
1.1.2 Common name	<input type="text" value="Poinsettia"/>	
2. Applicant		
Name	<input type="text"/>	
Address	<input type="text"/>	
Telephone No.	<input type="text"/>	
Fax No.	<input type="text"/>	
E-mail address	<input type="text"/>	
Breeder (if different from applicant)	<input type="text"/>	
3. Proposed denomination and breeder's reference		
Proposed denomination (if available)	<input type="text"/>	
Breeder's reference	<input type="text"/>	

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
<p>#4. Information on the breeding scheme and propagation of the variety</p> <p>4.1 Breeding scheme</p> <p>Variety resulting from:</p> <p>4.1.1 Crossing</p> <p>(a) controlled cross <input type="checkbox"/> [] (please state parent varieties)</p> <p>(b) partially known cross <input type="checkbox"/> [] (please state known parent variety(ies))</p> <p>(c) unknown cross <input type="checkbox"/> []</p> <p>4.1.2 Mutation <input type="checkbox"/> [] (please state parent variety)</p> <p>4.1.3 Discovery and development <input type="checkbox"/> [] (please state where and when discovered and how developed)</p> <p>4.1.4 Other <input type="checkbox"/> [] (please provide details)</p> <div data-bbox="422 1216 1118 1312" style="border: 1px solid black; height: 43px; width: 436px;"></div> <p>4.2 Method of propagating the variety</p> <p>4.2.1 Vegetative propagation</p> <p>(a) cuttings <input type="checkbox"/> []</p> <p>(b) <i>in vitro</i> propagation <input type="checkbox"/> []</p> <p>(c) other (state method) <input type="checkbox"/> []</p> <p>4.2.2 Seed <input type="checkbox"/> []</p> <p>4.2.3 Other <input type="checkbox"/> [] (please provide details)</p> <div data-bbox="442 1830 1137 1926" style="border: 1px solid black; height: 43px; width: 436px;"></div>		

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:	
<p>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).</p>			
Characteristics	Example Varieties	Note	
<p>5.1 Stem: anthocyanin coloration on middle third (5)</p>			
<p>abset</p>	<p>White Freedom</p>	<p>1[]</p>	
<p>preset</p>	<p>Freedom</p>	<p>9[]</p>	
<p>5.2 Leaf blade: number of colors of <u>upper</u> side (13)</p>			
<p>one</p>	<p>Fiscor</p>	<p>1[]</p>	
<p>two</p>	<p>Dueavant</p>	<p>2[]</p>	
<p>more than two</p>	<p>Fismarble Silver</p>	<p>3[]</p>	
<p>5.3 Bracts: number of colors of <u>upper</u> side (35)</p>			
<p>one</p>	<p>Fiscor</p>	<p>1[]</p>	
<p>two</p>	<p>Ice Punch</p>	<p>2[]</p>	
<p>more than two</p>	<p>Marblestar</p>	<p>3[]</p>	
<p>5.4i <u>Only varieties with one colored bracts:</u> Bract: color of <u>upper</u> side (36)</p>			
<p>RHS Colour Chart (indicate reference number)</p>	<p>.....</p>		
<p>5.4ii <u>Only varieties with one colored bracts:</u> Bract: color of <u>upper</u> side (36)</p>			
<p>white</p>	<p>.....</p>	<p>1[]</p>	
<p>yellow</p>		<p>2[]</p>	
<p>orange-red</p>		<p>3[]</p>	
<p>red</p>		<p>4 []</p>	
<p>purple</p>		<p>5 []</p>	
<p>pink</p>		<p>6 []</p>	
<p>other</p>		<p>7 []</p>	

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
5.5 (37)	<u>Only varieties with more than one colored bracts: Bract color pattern of upper side</u>	
	marbled	1 []
	spotted	2 []
5.6i (38)	<u>Only varieties with marbled bracts: Bract: main color of upper side</u>	
	RHS Colour Chart (indicate reference number)	
5.6ii (38)	<u>Only varieties with marbled bracts: Bract: main color of upper side</u>	
	white	1 []
	red	2 []
	purple	3 []
	pink	4 []
	other	5 []
5.7i (42)	<u>Only varieties with spotted bracts: Bract: main color of upper side</u>	
	RHS Colour Chart (indicate reference number)	
5.7ii (42)	<u>Only varieties with spotted bracts: Bract: main color of upper side</u>	
	white	1 []
	yellow	2 []
	orange-red	3 []
	red	4 []
	pink	5 []
	other	6 []
5.8i (43)	<u>Only varieties with spotted bracts: Bract: color of spots of upper side</u>	
	RHS Colour Chart (indicate reference number)	

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:	
5.8ii <u>Only varieties with spotted bracts:</u> Bract: color of spots of <u>upper</u> side (43)			
white			1 []
yellow			2 []
orange-red			3 []
red			4 []
purple			5 []
pink			6 []
other			7 []
6. Similar varieties and differences from these varieties <i>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.</i>			
Denomination(s) of variety(ies) similar to your candidate variety	Characteristic(s) in which your candidate variety differs from the similar variety(ies)	Describe the expression of the characteristic(s) for the similar variety(ies)	Describe the expression of the characteristic(s) for your candidate variety
<i>Example</i>	<i>Bract: number of colors of upper side</i>	<i>one</i>	<i>two</i>
Comments:			

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

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

Yes [] No []

(If yes, please provide details)

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

Yes [] No []

(If yes, please provide details)

7.3 Other information

GN 34

Example 1

7.3.1 Main use

(a) seed	[]
(b) forage	[]
(c) other	[]

(please provide details)

Example 2

7.3.1 Main use

(a) garden plant	[]
(b) pot plant	[]
(c) cut-flower	[]
(d) other	[]

(please provide details)

ASW 16

“A representative color photograph of the variety should accompany the Technical Questionnaire.”

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

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