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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 Committee at its forty-fourth session,
to be held in Geneva, from April 7 to 9, 2008*

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, 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.]

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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 with known phytoplasma status.

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.

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 the time of opening of three cyathia on the plants.

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) Leaf blade: number of colors on upper side (characteristic 12)
- (b) Bract: number of colors of upper side (characteristic 33)
- (c) Only varieties with one colored bracts: Bract: color of upper side (characteristic 34)
with the following groups:
 - Group 1: white
 - Group 2: yellow
 - Group 3: orange red
 - Group 4: red
 - Group 5: purple
 - Group 6: pink
- (d) Only varieties with more than one colored bracts: Bract: marbling of upper side (characteristic 35)

- (e) Only varieties with marbled bracts: Bract: main color of upper side (characteristic 36)
with the following groups:
Group 1: white
Group 2: red
Group 3: purple
Group 4: pink
- (f) Bract: color of spots of upper side (characteristic 40)
with the following groups:
Group 1: white
Group 2: yellow
Group 3: orange red
Group 4: red
Group 5: purple
Group 6: 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*

(*) Asterisk 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	Planta: ramificación		
QL	absent	absentes	fehlend	ausente		1
	present	présentes	vorhanden	presente		9
2. (*)	Plant: number of branches	Plante: nombre de ramifications	Planze: Anzahl der Verzweigungen	Planta: número de ramificaciones		
QN	few	petit	gering	bajo	Lilo	3
	medium	moyen	mittel	medio	Freedom	5
	many	grand	gross	alto	Regina	7
3. (*)	Plant: height	Plante: hauteur	Pflanze: Höhe	Planta: altura		
QN	short	basse	niedrig	baja	Duepremapri	3
	medium	moyenne	mittel	media	Fiscor	5
	tall	haute	hoch	alta	Fismille	7
4.	Plant: width	Plante: largeur	Pflanze: Breite	Planta: anchura		
QN	narrow	étroite	schmal	estrecha	Eckalon	3
	medium	moyenne	mittel	media	Red Angel	5
	broad	large	breit	ancha	Fismille	7
5. (*)	Stem: intensity of green color on middle third	Tige : intensité de la couleur verte au tiers médian	Stengel: Intensität der Grünfärbung im mittleren Drittel	Tallo: intensidad del color verde en el tercio medio		
QN	weak	faible	hell	débil	Winpeach	3
	medium	moyenne	mittel	media	Duepremapri	5
	strong	forte	dunkel	fuerte	Duearcwi	7

	English	français	Deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
6. (*)	Stem: intensity of color on middle third	Tige : intensité de la couleur au tiers médian	Stengel: Intensität der Farbe im mittleren Drittel	Tallo: intensidad del color en el tercio medio		
QN	absent or very weak	nulle ou très faible	fehlend oder sehr hell	ausente o muy débil	White Freedom	1
	weak	faible	hell	débil	Fisson Orange	3
	medium	moyenne	mittel	media	Fisson	5
	strong	forte	dunkel	fuerte	Freedom	7
7. (*)	Stem: anthocyanin coloration on upper third	Tige : pigmentation anthocyanique au tiers supérieur	Stengel: Anthocyanfärbung im oberen Drittel	Tallo: pigmentación antociánica del tercio superior		
QN	absent or weak	nulle ou faible	fehlend oder gering	ausente o débil	Ice Punch	1
	medium	moyenne	mittel	media	Freedom Marble	2
	strong	forte	stark	fuerte		3
8. (*)	Leaf blade: length	Limbe: longueur	Blattspreite: Länge	Limbo: longitud		
QN	(a) short	court	kurz	corta	Dueavant	3
	medium	moyen	mittel	media	Fiscor	5
	long	long	lang	larga	Winterfest Red	7
9. (*)	Leaf blade: width	Limbe: largeur	Blattspreite: Breite	Limbo: anchura		
QN	(a) narrow	étroit	schmal	estrecha	Fiscor	3
	medium	moyen	mittel	media	Duecowwhite	5
	broad	large	breit	ancha	White Freedom	7
10. (+)	Leaf blade: shape	Limbe : forme	Blattspreite: Form	Limbo: forma		
PQ	(a) deltoid	deltoïde	deltaförmig	deltoide		1
	ovate	ovale	eiförmig	oval		2
	lanceolate	lancéolé	lanzettlich	lanceolada	Fiscor	3
	elliptic	elliptique	elliptisch	elíptica		4
	circular	circulaire	rund	circular		5

	English	français	Deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
11. (+)	Leaf blade: shape of base	Limbe: forme de la base	Blattspreite: Form der Basis	Limbo: forma de la base		
PQ (a)	wedge-shaped	cunéiforme	keilförmig	cuneiforme	Dueavant	1
	rounded	arrondie	abgerundet	redondeada	Marblestar	2
	truncate	droite	gerade	truncada	Dueinfinity	3
	cordate	cordiforme	herzförmig	cordiforme	Early Joy	4
12. (*) (+)	Leaf blade: number of colors on <u>upper</u> side	Limbe : nombre de couleurs de la face <u>supérieure</u>	Blattspreite: Anzahl Farben an der <u>Oberseite</u>	Limbo: número de colores del <u>haz</u>		
QL (a)	one	une	eine	uno	Fiscor	1
	two	deux	zwei	dos	Dueavant	2
	more than two	plus de deux	mehr als zwei	más de dos	Fismarble Silver	3
13. (*)	<u>Only varieties with one-colored leaves:</u> Leaf blade: intensity of green color	<u>Seulement les variétés à feuilles unicolores :</u> Limbe : intensité de la couleur verte	<u>Nur Sorten mit einfarbigen Blättern:</u> Blattspreite: Intensität der Grünfärbung	<u>Exclusivamente variedades que presentan hojas de color uniforme:</u> Limbo: intensidad del color verde		
QN (a)	light	claire	hell	claro		3
	medium	moyenne	mittel	medio	Peterstar	5
	strong	foncée	dunkel	oscuro	Fiscor	7
14. (+)	<u>Only varieties with more than one-colored leaves:</u> Leaf blade: main color	<u>Seulement les variétés à feuilles de plus d'une couleur :</u> Limbe : couleur principale	<u>Nur Sorten mit Blättern mit mehr als einer Farbe:</u> Blattspreite: Hauptfarbe	<u>Exclusivamente variedades que presentan hojas de más de un color:</u> Limbo: color principal		
PQ (a)	yellowish	jaunâtre	gelblich	amarillento		1
	yellowish green	vert jaunâtre	gelblichgrün	verde amarillento		2
	light green	vert clair	hellgrün	verde claro	Bright Red Queen	3
	medium green	vert moyen	mittelgrün	verde medio	Dueavant	4
	greyish green	vert grisâtre	gräulichgrün	verde grisáceo	Fismarble Silver	5
	dark green	vert foncé	dunkelgrün	verde oscuro	Carousel Dark Red	6
	very dark green	vert très foncé	sehr dunkelgrün	verde muy oscuro		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: secondary color	<u>Seulement les variétés à feuilles de plus d'une couleur :</u> Limbe : couleur secondaire	<u>Nur Sorten mit Blättern mit mehr als einer Farbe:</u> Blattspreite: Sekundärfarbe	<u>Exclusivamente variedades que presentan hojas de más de un color:</u> Limbo: color secundario		
PQ (a)	white	blanc	weiß	blanco	Fismarble Silver	1
	yellowish	jaunâtre	gelblich	amarillento	Bright Red Queen	2
	yellowish green	vert jaunâtre	gelblichgrün	verde amarillento		3
	light green	vert clair	hellgrün	verde claro		4
	medium green	vert moyen	mittelgrün	verde medio		5
	greyish green	vert grisâtre	gräulichgrün	verde grisáceo		6
	dark green	vert foncé	dunkelgrün	verde oscuro	Dueavant	7
	very dark green	vert très foncé	sehr dunkelgrün	verde muy oscuro	Carousel Dark Red	8
16. (+)	<u>Only varieties with more than two-colored leaves:</u> Leaf blade: tertiary color	<u>Seulement les variétés à feuilles de plus de deux couleurs :</u> Limbe : couleur tertiaire	<u>Nur Sorten mit Blättern mit mehr als zwei Farben:</u> Blattspreite: Tertiärfarbe	<u>Exclusivamente variedades que presentan hojas de más de dos colores:</u> Limbo: color terciario		
PQ (a)	white	blanc	weiß	blanco	Silverleaf	1
	yellowish	jaunâtre	gelblich	amarillento		2
	yellowish green	vert jaunâtre	gelblichgrün	verde amarillento	Bright Red Queen	3
	light green	vert clair	hellgrün	verde claro		4
	medium green	vert moyen	mittelgrün	verde medio		5
	greyish green	vert grisâtre	gräulichgrün	verde grisáceo		6
	dark green	vert foncé	dunkelgrün	verde oscuro		7
	very dark green	vert très foncé	sehr dunkelgrün	verde muy oscuro		8

	English	français	Deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
17.	Leaf blade: color of main vein on <u>upper</u> side	Limbe : couleur de la nervure principale sur la face <u>supérieure</u>	Blattspreite: Farbe der Hauptader an der <u>Oberseite</u>	Limbo: color del nervio principal del <u>haz</u>		
PQ	(a)					
	only green	seulement verte	nur grün	solo verde	Freedom Marble	1
	green and red	verte et rouge	grün und rot	verde y rojo	Petoy	2
	only red	seulement rouge	nur rot	solo rojo	KLEW01063	3
18.	Leaf blade: number of lobes	Limbe : nombre de lobes	Blattspreite: Anzahl Lappen	Limbo: número de lóbulos		
(+)						
QN	(a)					
	none or very few	nul ou très petit	fehlend oder sehr gering	ninguno o muy pocos	Regina	1
	medium	moyen	mittel	medio	Fisson Piz	2
	many	grand	groß	muchos	Dueavant	3
19.	Leaf blade: depth of deepest sinus	Limbe : profondeur du sinus le plus profond	Blattspreite: Tiefe der tiefsten Ausbuchtung	Limbo: profundidad del seno más profundo		
(+)						
QN	(a)					
	shallow	peu profond	flach	poco profunda	KLEW01063	3
	medium	moyen	mittel	media	Dueavant	5
	deep	profond	tief	profunda	Fisson Piz	7
20.	Leaf blade: curvature of main vein	Limbe : courbure de la nervure principale	Blattspreite: Biegung der Hauptader	Limbo: curvatura del nervio principal		
(+)						
QN						
	absent or weak	nulle ou faible	fehlend oder gering	ausente o débil	Fiscor	1
	medium	moyenne	mittel	media	Eckalverta	2
	strong	forte	stark	fuerte	Eckaddis	3
21.	Petiole: length	Pétiole : longueur	Blattstiel: Länge	Pecíolo: longitud		
(*)						
QN	(a)					
	short	court	kurz	corta	Duepremimhopi	3
	medium	moyen	mittel	media	Fiscor	5
	long	long	lang	larga	Purple Heart	7

	English	français	Deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
22.	Petiole: intensity of green color on <u>upper</u> side	Pétiole : intensité de la couleur verte de la face <u>supérieure</u>	Blattstiel: Intensität der Grünfärbung an der <u>Oberseite</u>	Pecíolo: intensidad del color verde del <u>haz</u>		
QN (a)	weak	faible	hell	débil	White Freedom	3
	medium	moyenne	mittel	media	Blizzard	5
	strong	forte	dunkel	fuerte		7
23.	Petiole: anthocyanin coloration on upper side	Pétiole : pigmentation anthocyanique de la face <u>supérieure</u>	Blattstiel: Anthocyanfärbung an der Oberseite	Pecíolo: pigmentación antocianica del haz		
QN (a)	absent or very weak	nulle ou très faible	fehlend oder sehr gering	ausente o muy débil		1
	weak	faible	gering	débil	Ice Punch	3
	medium	moyenne	mittel	media	Fisdra	5
	strong	forte	stark	fuerte	Freedom	7
24. (*)	Petiole: anthocyanin coloration on <u>lower</u> side	Pétiole : pigmentation anthocyanique de la face <u>inférieure</u>	Blattstiel: Anthocyanfärbung an der <u>Unterseite</u>	Pecíolo: pigmentación antocianica del <u>envés</u>		
QN (a)	absent or weak	nulle ou faible	fehlend oder sehr gering	ausente o débil	Ice Punch	1
	medium	moyenne	mittel	media	Early Red	2
	strong	forte	stark	fuerte	Freedom	3
25. (*) (+)	Transitional leaves: number of partly bract-colored leaf blades	Feuilles transitoires: nombre de limbes ayant partiellement la couleur de la bractée	Zwischenblätter: Anzahl teilweise wie Hochblatt gefärbter Blattspreiten	Hojas de transición: número de limbos parcialmente coloreados como las brácteas		
QN	few	petit	gering	escaso	Fismille	3
	medium	moyen	mittel	medio	Dueacwi	5
	many	grand	groß	elevado	Renate	7

	English	français	Deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
26. (*) (+)	Transitional leaves: number of fully bract-colored leaf blades	Feuilles transitoires: nombre de limbes ayant complètement la couleur de la bractée	Zwischenblätter: Anzahl vollständig wie Hochblatt gefärbter Blatt- spreiten	Hojas de transición: número de limbos totalmente coloreados como las brácteas		
QN	few	petit	gering	escaso	Renate	3
	medium	moyen	mittel	medio	Duecitric	5
	many	grand	groß	elevado	Fismille	7
27. (*) (+)	Transitional leaves: lobing	Feuilles transitoires: découpage des bords	Zwischenblätter: Lappung	Hojas de transición: lobulado		
QL (a)	absent or weak	nulle ou faible	fehlend oder gering	ausente o débil	Duepre	1
	medium	moyenne	mittel	medio	Christmas Angel	2
	strong	forte	stark	fuerte	Fisson Piz	3
28. (+)	Transitional leaves: curvature along main vein of fully bract-colored leaf blades	Feuilles transitoires: courbure de la nervure principale des limbes ayant complètement la couleur de la bractée	Zwischenblätter: Biegung entlang der Hauptader der Blattspreiten mit vollständig wie Hochblatt gefärbter Blattspreiten	Hojas de transición: curvatura del nervio principal de los limbos totalmente coloreados como las brácteas		
QN	absent or weak	nulle ou faible	fehlend oder gering	ausente o débil	Fiscor	1
	medium	moyenne	mittel	media	Eckalverta	2
	strong	forte	stark	fuerte	Winred	3
29. (*) (+)	Bract: number	Bractées : nombre	Hochblatt: Anzahl	Brácteas: número		
QN	few	petit	gering	pocas	Duecitric	3
	medium	moyen	mittel	medio	Renate	5
	many	grand	groß	muchas	Fismille	7
30. (*)	Largest bract: length (including petiole)	Bractée la plus grande : longueur (pétiole compris)	Größtes Hochblatt: Länge (einschließ- lich Blattstiel)	Bráctea mayor: longitud (incluido el peciolo)		
QN	short	courte	kurz	corta	Stargazer	3
	medium	moyenne	mittel	media	Ice Punch	5
	long	longue	lang	larga	Temptation Red	7

	English	français	Deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
31. (*)	Largest bract: width (including petiole)	Bractée la plus grande : largeur (pétiole compris)	Größtes Hochblatt: Breite (einschließ- lich Blattstiel)	Bráctea mayor: anchura (incluido el peciolo)		
QN	narrow	étroite	schmal	estrecha	Stargazer	3
	medium	moyenne	mittel	media	Ice Punch	5
	broad	large	breit	ancha	Duepreminhopi	7
32. (*) (+)	Largest bract: shape	Bractée la plus grande : forme	Größtes Hochblatt: Form	Bráctea mayor: forma		
PQ	ovate	ovale	eiförmig	oval	Eckalon	1
	elliptic	elliptique	elliptisch	elíptica	Fiscor	2
	lanceolate	lancéolée	lanzettlich	lanceolada	TO BE PROVIDED	3
	oblanceolate	oblancéolée	verkehrt lanzettlich	ovolanceolada	Dueavant	4
	obovate	obovale	verkehrt eiförmig	oboval	Dueavant	5
33. (*) (+)	Bract: number of colors of <u>upper</u> side	Bractée : nombre de couleurs de la face <u>supérieure</u>	Hochblatt: Anzahl Farben der <u>Oberseite</u>	Bráctea: número de colores del <u>haz</u>		
QL	one	une	eine	uno	Fiscor	1
	two	deux	zwei	dos	Ice Punch	2
	more than two	plus de deux	mehr als zwei	más de dos	Marblestar	3
34. (*)	<u>Only varieties with one colored bracts:</u> Bract: color of <u>upper</u> side	<u>Seulement les variétés à bractées unicolores :</u> Bractée : couleur de la face <u>supérieure</u>	<u>Nur Sorten mit Hochblättern mit einer Farbe:</u> Hochblatt: Farbe der <u>Oberseite</u>	<u>Exclusivamente variedades que presentan brácteas de color uniforme:</u> Bráctea: color del <u>haz</u>		
PQ	RHS Colour Chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)	Carta de Colores RHS (indíquese el número de referencia)		
35. (*) (+)	<u>Only varieties with more than one colored bracts:</u> Bract: marbling of <u>upper</u> side	<u>Seulement les variétés à bractées de plus d'une couleur :</u> Bractée : marbrure de la face <u>supérieure</u>	<u>Nur Sorten mit Hochblättern mit mehr als einer Farbe:</u> Hochblatt: Marmorierung der <u>Oberseite</u>	<u>Exclusivamente variedades que presentan brácteas de más de un color:</u> Bráctea: jaspeado del <u>haz</u>		
QL	absent	absente	fehlend	ausente	Marblestar	1
	present	présente	vorhanden	presente	Monet	9

	English	français	Deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
36. (*) (+)	<u>Only varieties with marbled bracts:</u> Bract: main color of upper side	<u>Seulement les variétés à bractées marbrées :</u> Bractée : couleur principale de la face <u>supérieure</u>	<u>Nur Sorten mit marmorierten Hochblättern:</u> Hochblatt: Hauptfarbe der <u>Oberseite</u>	<u>Exclusivamente variedades que presentan brácteas con jaspeado:</u> Bráctea: color principal del <u>haz</u>		
PQ	RHS Colour Chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)	Carta de Colores RHS (indíquese el número de referencia)		
37. (*) (+)	<u>Only varieties with marbled bracts:</u> Bract: secondary color of upper side	<u>Seulement les variétés à bractées marbrées :</u> Bractée : couleur secondaire de la face <u>supérieure</u>	<u>Nur Sorten mit marmorierten Hochblättern:</u> Hochblatt: Sekundärfarbe der <u>Oberseite</u>	<u>Exclusivamente variedades que presentan brácteas con jaspeado:</u> Bráctea: color secundario del <u>haz</u>		
PQ	RHS Colour Chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)	Carta de Colores RHS (indíquese el número de referencia)		
38. (*) (+)	<u>Only varieties with marbled bracts with more than two colors:</u> Bract: tertiary color of <u>upper side</u>	<u>Seulement les variétés à bractées marbrées de plus de deux couleurs :</u> Bractée : couleur tertiaire de la face <u>supérieure</u>	<u>Nur Sorten mit marmorierten Hochblättern mit mehr als zwei Farben:</u> Hochblatt: Tertiärfarbe der <u>Oberseite</u>	<u>Exclusivamente variedades que presentan brácteas de más de dos colores:</u> Bráctea: color terciario del <u>haz</u>		
PQ	RHS Colour Chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)	Carta de Colores RHS (indíquese el número de referencia)		
39.	Bract: spotting of upper side	Bractée : taches de la face supérieure	Hochblatt: Fleckung der Oberseite	Bráctea: presencia de manchas en el haz		
	absent or very weak	absentes ou très faibles	fehlend oder sehr gering	ausente o muy débil	Marble Star	1
	medium	moyennes	mittel	media	Pink Peppermint	3
	very strong	très fortes	stark	muy fuertes	Pepmondic	5
40. (*)	Bract: color of spots of upper side	Bractée : couleur des taches de la face <u>supérieure</u>	Hochblatt: Farbe der Flecken der <u>Oberseite</u>	Bráctea: color de las manchas del <u>haz</u>		
PQ	RHS Colour Chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)	Carta de Colores RHS (indíquese el número de referencia)		

	English	français	Deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
41. (*)	<u>Only varieties with one colored bracts:</u> Bract: color of <u>lower</u> side	<u>Seulement les variétés à bractées unicolores :</u> Bractée : couleur de la face <u>inférieure</u>	<u>Nur Sorten mit Hochblättern mit einer Farbe:</u> Hochblatt: Farbe der <u>Unterseite</u>	<u>Exclusivamente variedades que presentan brácteas de color uniforme:</u> Bráctea: color del <u>envés</u>		
PQ	RHS Colour Chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)	Carta de Colores RHS (indíquese el número de referencia)		
42. (*) (+)	<u>Only varieties with marbled bracts:</u> Bract: main color of <u>lower</u> side	<u>Seulement les variétés à bractées marbrées :</u> Bractée : couleur principale de la face <u>inférieure</u>	<u>Nur Sorten mit marmorierten Hochblättern:</u> Hochblatt: <u>Hauptfarbe</u> der <u>Unterseite</u>	<u>Exclusivamente variedades que presentan brácteas con jaspeado:</u> Bráctea: color principal del <u>envés</u>		
PQ	RHS Colour Chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)	Carta de Colores RHS (indíquese el número de referencia)		
43. (*) (+)	<u>Only varieties with marbled bracts:</u> Bract: secondary color of <u>lower</u> side	<u>Seulement les variétés à bractées marbrées :</u> Bractée : couleur secondaire de la face <u>inférieure</u>	<u>Nur Sorten mit marmorierten Hochblättern:</u> Hochblatt: <u>Sekundärfarbe</u> der <u>Unterseite</u>	<u>Exclusivamente variedades que presentan brácteas con jaspeado:</u> Bráctea: color secundario del <u>envés</u>		
PQ	RHS Colour Chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)	Carta de Colores RHS (indíquese el número de referencia)		
44. (*) (+)	<u>Only varieties with marbled bracts with more than two colors:</u> Bract: tertiary color of <u>lower</u> side	<u>Seulement les variétés à bractées marbrées de plus de deux couleurs :</u> Bractée : couleur tertiaire de la face <u>inférieure</u>	<u>Nur Sorten mit marmorierten Hochblättern mit mehr als zwei Farben:</u> Hochblatt: <u>Tertiärfarbe</u> der <u>Unterseite</u>	<u>Exclusivamente variedades que presentan brácteas de más de dos colores:</u> Bráctea: color terciario del <u>envés</u>		
PQ	RHS Colour Chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)	Carta de Colores RHS (indíquese el número de referencia)		
45. (*)	<u>Only varieties with spotted bracts:</u> Bract: color of spots of <u>lower</u> side	<u>Seulement les variétés à bractées tachetées :</u> Bractée : couleur des taches de la face <u>inférieure</u>	<u>Nur Sorten mit gefleckten Hochblättern:</u> Hochblatt: Farbe der <u>Flecken</u> der <u>Unterseite</u>	<u>Exclusivamente variedades que presentan brácteas manchadas:</u> Bráctea: color de las <u>manchas</u> del <u>envés</u>		
PQ	RHS Colour Chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)	Carta de Colores RHS (indíquese el número de referencia)		

	English	français	Deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
46. (+)	Bract: folding along the main vein	Bractée : pliure de la nervure principale	Hochblatt: Faltung entlang der Hauptader	Bráctea: doblamiento a lo largo del nervio principal		
QL	absent	absente	fehlend	ausente	Fiscor	1
	present	présente	vorhanden	presente	Duetwister	9
47. (+)	Bract: twisting	Bractée : torsion	Hochblatt: Verdrehung	Bráctea: torsión		
QL	absent	absente	fehlend	ausente	Fiscor	1
	present	présente	vorhanden	presente	Future	9
48.	Bract: rugosity between veins	Bractée : rugosité entre les nervures	Hochblatt: Blasigkeit zwischen den Adern	Bráctea: rugosidad entre los nervios		
QN	absent or very weak	absente ou très faible	fehlend oder gering	ausente o muy débil	Ice Punch	1
	weak	faible	gering	débil	Duearcwi	3
	medium	moyenne	mittel	media	Purple Heart	5
	strong	forte	stark	fuerte	Winwhite	7
	very strong	très forte	sehr stark	muy fuerte	Winred	9
49. (*) (+)	Cyme: width	Cyme : largeur	Trugdolde: Breite	Cima: anchura		
QN	narrow	étroite	schmal	estrecha	Duecitric	3
	medium	moyenne	mittel	media	Eckabud	5
	broad	large	breit	ancha	Purple Heart	7
50. (*)	Cyathium: size of glands	Cyathium : taille des glandes	Cyathium: Größe der Drüsen	Ciatio: tamaño de las glándulas		
QN	small	petites	klein	pequeñas	Purple Heart	3
	medium	moyennes	mittel	medias	Fismars Marble	5
	large	grandes	groß	grandes	Peterstar	7

	English	français	Deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
51. (*) (+)	Cyathium: main color of gland	Cyathium : couleur principale de la glande	Cyathium: Hauptfarbe der Drüse	Ciatio: color principal de las glándulas		
PQ	yellow	jaune	gelb	amarillo	Duepremimapri	1
	orange	orange	orange	naranja	Peterstar	2
	red	rouge	rot	rojo	Temptation red	3
52. (+)	Cyathium: deformation of glands	Cyathium : déformation des glandes	Cyathium: Verformung der Drüsen	Ciatio: deformación de las glándulas		
QL	absent	absente	fehlend	ausente		1
	present	présente	vorhanden	presente		9
53. (+)	Time of opening of cyathia	Époque d'épanouissement des cyathiums	Zeitpunkt der Öffnung der Cyathien	Época de apertura de los ciatios		
QN	early	précoce	früh	precoz	Estrella Red	3
	medium	moyenne	mittel	media	Fismars White	5
	late	tardive	spät	tardía	Duearcwi	7

8. Explanations on the Table of Characteristics

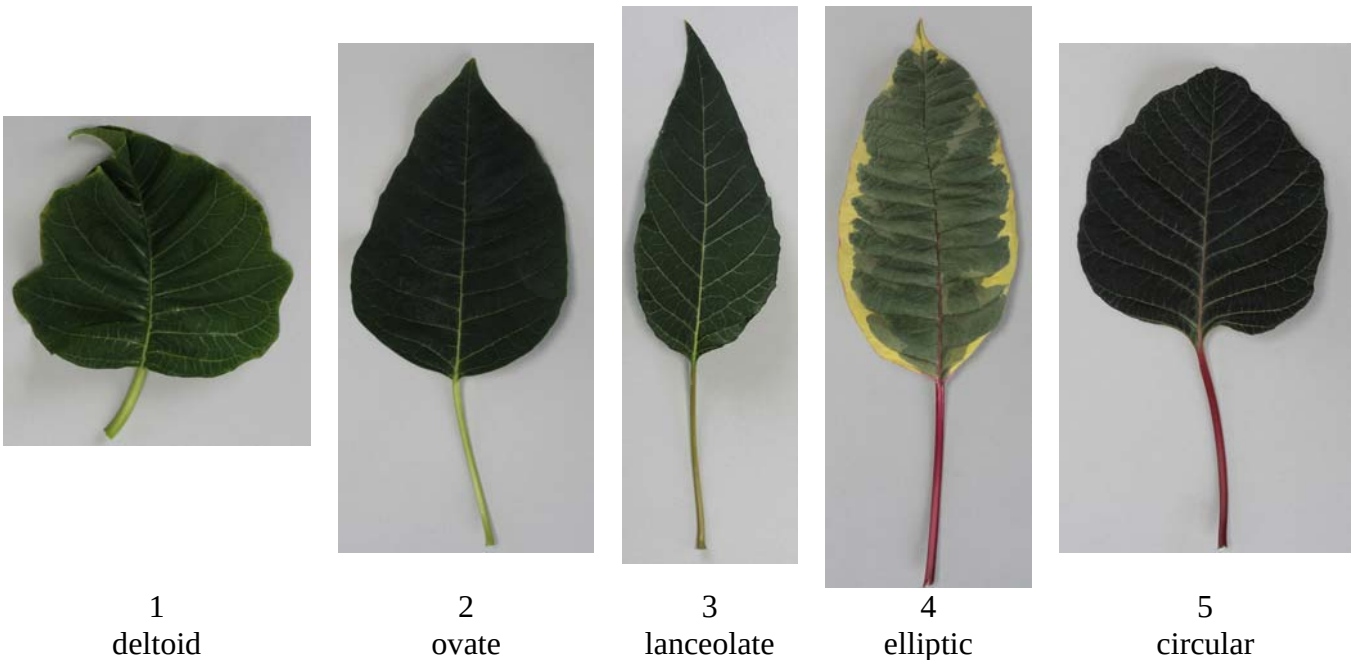
8.1 *Explanations covering several characteristics*

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

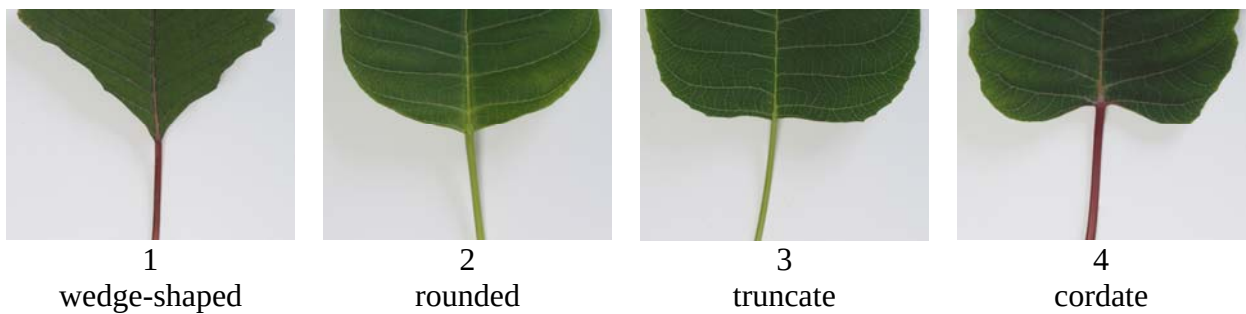
- (a) Leaf and petiole: observations on the leaf should be made on the second fully developed leaf from the top.

8.2 *Explanations for individual characteristics*

Ad.10: Leaf blade: shape



Ad.11: Leaf blade: shape of base



Ad. 12: Leaf blade: number of colors on upper side



1
one



2
two



3
more than two

Ad. 14: Only varieties with more than one-colored leaves: Leaf blade: main color

Ad. 15: Only varieties with more than one-colored leaves: Leaf blade: secondary color

Ad. 16: Only varieties with more than two-colored leaves: Leaf blade: tertiary color

The main color is the color with the largest surface area. The secondary color is the color with the second largest surface area. If the area of the color is nearly equal, the darker color is the main color. The tertiary color is the color with the third largest surface area.

Ad. 18: Leaf blade: number of lobes



1
none or very few

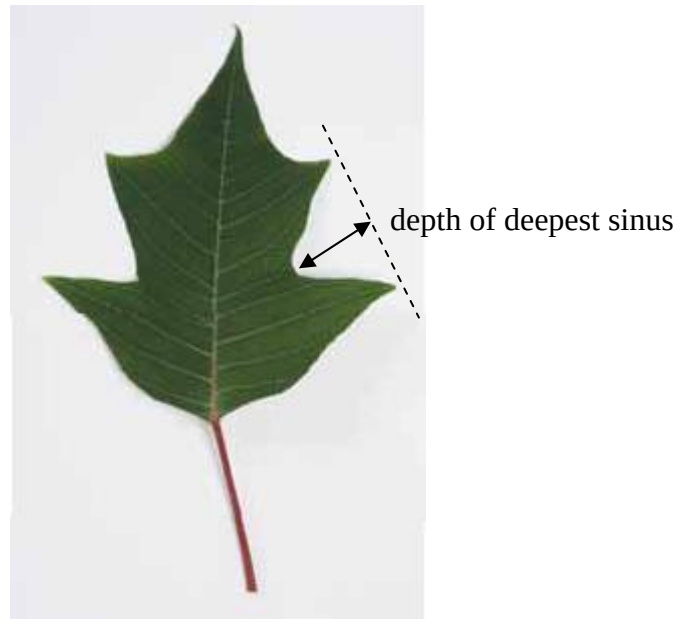


2
medium



3
many

Ad. 19: Leaf blade: depth of deepest sinus



3
shallow



5
medium



7
deep

Ad. 20: Leaf blade: curvature of main vein



3
strong

Ad. 25: Transitional leaves: number of partly bract-colored leaf blades

Ad. 26: Transitional leaves: number of fully bract-colored leaf blades

Ad. 29: Bract: number



1
few



2
medium



3
many

partly bract-colored
leaf blade

bract



fully bract-colored
leaf blade

Ad. 27: Transitional leaves: lobing



1
absent or weak



2
medium



3
strong

Ad. 28: Transitional leaves: curvature along main vein of fully bract-colored leaf blades



1
absent or weak



2
medium



3
strong

Ad. 32: Largest bract: shape



1
ovate



2
elliptic

TO BE PROVIDED

3
lanceolate



4
oblanceolate



5
obovate

Ad. 33: Bract: number of colors of upper side



1
one



2
two



3
more than two

Ad. 35: Only varieties with more than one colored bracts: Bract: marbling of upper side



1
absent



9
present

Marbling concerns areas of color which have clearly defined, angular margins.

Ad. 36: Only varieties with marbled bracts: Bract: main color of upper side

Ad. 37: Only varieties with marbled bracts: Bract: secondary color of upper side

Ad. 38: Only varieties with marbled bracts with more than two colors: Bract: tertiary color of upper side

The main color is the color with the largest surface area. The secondary color is the color with the second largest surface area. If the area of the color is nearly equal, the darker color is the main color. The tertiary color is the color with the third largest surface area.

Ad. 42: Only varieties with marbled bracts: Bract: main color of lower side

Ad. 43: Only varieties with marbled bracts: Bract: secondary color of lower side

Ad. 44: Only varieties with marbled bracts with more than two colors: Bract: tertiary color of lower side

The main color is the color with the largest surface area. The secondary color is the color with the second largest surface area. If the area of the color is nearly equal, the darker color is the main color. The tertiary color is the color with the third largest surface area.

Ad. 46: Bract: folding along the main vein



1
absent



9
present

Ad. 47: Bract: twisting



1
absent



9
present

Ad. 49: Cyme: width



cyme width

Ad. 51: Cyathium: main color of gland

The main color of the gland should be observed from above.

Ad. 52: Cyathium: deformation of glands



1
absent



9
present

Ad. 53: Time of opening of cyathia

The time of opening of cyathia is when the plants have three cyathia open.

9. Literature

Ecke, P. et al., 2004: The Ecke Poinsettia Manual. Ball Publishing.

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 Euphorbia pulcherrima Willd. ex Klotzsch 1.1.2 Common name Poinsettia Hybrid: please indicate name(s) of species used in the crossing 1.2.1 Botanical name 1.2.2 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:
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#4. Information on the breeding scheme and propagation of the variety

4.1 Breeding scheme

Variety resulting from:

4.1.1 Crossing

(a) controlled cross
(please state parent varieties)

(b) partially known cross
(please state known parent variety(ies))

(c) unknown cross

[]

[]

[]

4.1.2 Mutation []
(please state parent variety)

4.1.3 Discovery and development []
(please state where and when discovered and how developed)

4.1.4 Other []
(please provide details)

4.2 Method of propagating the variety

4.2.1 Vegetative propagation

(a) cuttings

(b) *in vitro* propagation

(c) other (state method)

[]

[]

[]

4.2.2 Seed []

4.2.3 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:
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5. Characteristics of the variety to be indicated (the number in brackets refers to the corresponding characteristic in Test Guidelines; please mark the note which best corresponds).

Characteristics	Example Varieties	Note
5.1 Leaf blade: number of colors of <u>upper</u> side (12)		
one	Fiscor	1[]
two	Dueavant	2[]
more than two	Fismarble Silver	3[]
5.2 Bract: number of colors of <u>upper</u> side (33)		
one	Fiscor	1[]
two	Ice Punch	2[]
more than two	Marblestar	3[]
5.3i <u>Only varieties with one colored bract:</u> Bract: color of <u>upper</u> side (34)		
RHS Colour Chart (indicate reference number)		
5.3ii <u>Only varieties with one colored bract:</u> Bract: color of <u>upper</u> side (34)		
white		1[]
yellow		2[]
orange red		3[]
red		4[]
purple		5[]
pink		6[]
other		7[]
5.4 <u>Only varieties with more than one colored bract:</u> Bract marbling of <u>upper</u> side (35)		
absent		1[]
present		9[]

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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Characteristics	Example Varieties	Note
5.5i <u>Only varieties with marbled bracts:</u> Bract: main color of <u>upper</u> side (36)		
RHS Colour Chart (indicate reference number)		
5.5ii <u>Only varieties with marbled bracts:</u> Bract: main color of <u>upper</u> side (36)		
white		1[]
red		2[]
purple		3[]
pink		4[]
other		5[]
5.6i Bract: color of spots of <u>upper</u> side (40)		
RHS Colour Chart (indicate reference number)		
5.6ii Bract: color of spots of <u>upper</u> side (40)		
white		1[]
yellow		2[]
orange red		3[]
red		4[]
purple		5[]
pink		6[]
other		7[]

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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6. Similar varieties and differences from these varieties

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

Denomination(s) of variety(ies) similar to your candidate variety	Characteristic(s) in which your candidate variety differs from the similar variety(ies)	Describe the expression of the characteristic(s) for the similar variety(ies)	Describe the expression of the characteristic(s) for your candidate variety
<i>Example</i>	<i>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

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

8. Authorization for release

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

Yes ☐ No ☐

(b) Has such authorization been obtained?

Yes ☐ No ☐

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

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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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)	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			

[End of document]