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## INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

Geneva

DRAFT

## POINSETTIA

UPOV Code(s): EUPHO\_PUL;  
EUPHO\_PCO

*Euphorbia pulcherrima* Willd. ex Klotzsch;  
*Euphorbia pulcherrima* Willd. ex Klotzsch x  
*Euphorbia coranstra* (Dressler) Radcl.-Sm.

## 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-sixth session, to be held virtually  
from 2024-04-29 to 2024-05-02*

*Disclaimer: this document does not represent UPOV policies or guidance*

Alternative names:\*

Botanical name	English	French	German	Spanish
<i>Euphorbia pulcherrima</i> Willd. ex Klotzsch	Poinsettia	Poinsettia	Poinsettie, Weihnachtsstern	Flor de Pascua, Cuetlaxochitl, Nochebuena
<i>Euphorbia pulcherrima</i> Willd. ex Klotzsch x <i>Euphorbia coranstra</i> (Dressler) Radcl.-Sm.				

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](http://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 *Euphorbia pulcherrima* Willd. ex Klotzsch × *Euphorbia coranstra* (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 cuttings. The plants should not be pinched.
- 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. 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)-(d) 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
<b>1. (*)</b>	<b>QL</b>   <b>VG</b>	<b>(c)</b>				
	<b>Plant: branching</b>					
	absent				QS47	1
	present				QS44	9
<b>2. (*)</b>	<b>QN</b>   <b>MG/VG</b>					
	<b>Only varieties with Plant: branching: present: Plant: number of branches</b>					
	very few					1
	very few to few					2
	few				EURZ0025, Lilo	3
	few to medium					4
	medium				Dueinfinity, Freedom	5
	medium to many					6
	many				Regina	7
	many to very many				BONPRI 9276	8
	very many					9
<b>3. (*)</b>	<b>QN</b>   <b>MG/MS/VG</b>					
	<b>Plant: height</b>					
	very short				BONPRIPAPCOM	1
	very short to short					2
	short				Duepremiapri	3
	short to medium					4
	medium				Fiscor	5
	medium to tall					6
	tall				Fismille, NPCW16260	7
	tall to very tall					8
	very tall				WEL20390	9



	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
<b>4.</b>	<b>QN</b>	<b>MG/MS/VG</b>				
	<b>Plant: width</b>					
	very narrow					1
	very narrow to narrow					2
	narrow				Duepremimpol, Eckalon	3
	narrow to medium					4
	medium				Allegra White, Red Angel	5
	medium to broad					6
	broad				EURZ0025, Fismille	7
	broad to very broad					8
	very broad					9
<b>5. (*)</b>	<b>QN</b>	<b>VG</b>				
	<b>Stem: intensity of green color on middle third</b>					
	light				BKPONRR	1
	light to medium				LAZZPO1531	2
	medium				Winpeach	3
	medium to dark					4
	dark				Duepremapri	5
<b>6. (*)</b>	<b>QN</b>	<b>VG</b>				
	<b>Stem: intensity of anthocyanin coloration on middle third</b>					
	weak				White Freedom	1
	weak to medium				NPCW19280	2
	medium				Fisson Orange, NPCW18087	3
	medium to strong				EURZ0019	4
	strong				Fisson	5
<b>7. (*)</b>	<b>QN</b>	<b>VG</b>				
	<b>Stem: intensity of anthocyanin coloration on upper third</b>					
	absent or very weak				Ice Punch, Red Fox	1
	medium				Freedom Marble, NPCW19282	2
	strong				LAZZPO1531	3

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
<b>8. (*)</b>	<b>QN</b>	<b>MG/MS/VG</b>	<b>(a)</b>			
	<b>Leaf blade: length</b>					
	very short					1
	very short to short					2
	short				Dueavant	3
	short to medium					4
	medium				Fiscor	5
	medium to long					6
	long				LAZZPO1531, Winterfest Red	7
	long to very long					8
	very long					9
<b>9. (*)</b>	<b>QN</b>	<b>MG/MS/VG</b>	<b>(a)</b>			
	<b>Leaf blade: width</b>					
	very narrow					1
	very narrow to narrow					2
	narrow				Fiscor	3
	narrow to medium					4
	medium				Duecowhite, Duepre	5
	medium to broad					6
	broad				LAZZPO1078, White Freedom	7
	broad to very broad					8
	very broad					9
<b>10</b>	<b>PQ</b>	<b>VG</b>	<b>(+)</b>	<b>(a)</b>		
	<b>Leaf blade: shape</b>					
	deltoid				Q102	1
	ovate				Duepre, NPCW13218	2
	lanceolate				Bonpri 974	3
	elliptic				Princettia Indian Red	4
	circular				Christmas Sensation, NPCW19280	5

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
<b>11</b>	<b>PQ</b> <b>VG</b>	<b>(+)</b> <b>(a)</b>				
	<b>Leaf blade: shape of base</b>					
	wedge-shaped				Dueavant	1
	rounded				Dopoinsayerf, Marblestar	2
	truncate				Dueinfinity	3
	cordate				Bright Red, Early Joy, Roccostar	4
<b>12 (*)</b>	<b>PQ</b> <b>VG</b>	<b>(+)</b> <b>(a)</b>				
	<b>Leaf blade: number of colors of <u>upper</u> side</b>					
	one				DUEPRIMDON, Fiscor	1
	two				Dueavant	2
	more than two				Fismarble Silver	3
<b>13 (*)</b>	<b>QN</b> <b>VG</b>	<b>(a)</b>				
	<b><u>Only varieties with Leaf blade: number of colors of upper side: one: Leaf blade: intensity of green color on upper side</u></b>					
	very light				Fiscor	1
	light					2
	medium					3
	dark				NPCW12200	4
	very dark				Peterstar	5
<b>14</b>	<b>PQ</b> <b>VG</b>	<b>(a), (d)</b>				
	<b><u>Only varieties with Leaf blade: number of colors on upper side: two or more than two: Leaf blade: main color of upper side</u></b>					
	yellowish					1
	yellowish green					2
	greyish green				Fismarble Silver	3
	light green				Bright Red Queen	4
	medium green				Dueavant	5
	dark green				Carousel Dark Red	6
	very dark green					7

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
<b>15</b>	<b>PQ</b> <b>VG</b>	<b>(a), (d)</b>				
	<b>Only varieties with Leaf blade: number of colors on upper side: two or more than two: Leaf blade: secondary color of upper side</b>					
	white				Fismarble Silver	1
	yellowish				Bright Red Queen	2
	yellowish green					3
	greyish green				Allegra Art Deco	4
	light green					5
	medium green					6
	dark green				Dueavant	7
	very dark green				Carousel Dark Red	8
<b>16</b>	<b>PQ</b> <b>VG</b>	<b>(a), (d)</b>				
	<b>Only varieties with Leaf blade: number of colors on upper side: more than two: Leaf blade: tertiary color of upper side</b>					
	white				Silverleaf	1
	yellowish					2
	yellowish green				Bright Red Queen	3
	greyish green				Fiswhite Silver	4
	light green				Fissilver	5
	medium green					6
	dark green					7
	very dark green					8
<b>17</b>	<b>PQ</b> <b>VG</b>	<b>(a)</b>				
	<b>Leaf blade: color of main vein of upper side</b>					
	only green				Freedom Marble	1
	green and red				Petoy	2
	only red				KLEW01063, WEL20390	3
<b>18</b>	<b>QN</b> <b>MG/VG</b>	<b>(+)</b>	<b>(a)</b>			
	<b>Leaf blade: number of lobes</b>					
	none or few				DUEPRIMDON, Regina	1
	medium				Allegra White, Fisdra	2
	many				Dueavant	3

	English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
<b>19</b>	<b>QN</b>	<b>MG/VG</b>	<b>(+)</b>	<b>(a)</b>				
	<b>Leaf blade: depth of deepest sinus</b>							
	absent or very shallow						Dueprempol	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
<b>20</b>	<b>QN</b>	<b>VG</b>	<b>(+)</b>	<b>(a)</b>				
	<b>Leaf blade: curvature along main vein</b>							
	absent or very weak						Fiscor, LAZZPO1047	1
	medium						Eckalverta, LAZZPO1078	2
	strong						Eckaddis	3
<b>21</b> (*)	<b>QN</b>	<b>MG/MS/VG</b>		<b>(a)</b>				
	<b>Petiole: length</b>							
	very short							1
	very short to short							2
	short						Duepremihopi	3
	short to medium							4
	medium						Fiscor, LAZZPO1615	5
	medium to long							6
	long						OS44, Purple Heart	7
	long to very long							8
	very long						NPCW21350	9
<b>22</b>	<b>QN</b>	<b>VG</b>		<b>(a)</b>				
	<b>Petiole: intensity of green color on <u>upper</u> side</b>							
	very light						White Freedom	1
	light							2
	medium						Allegra White	3
	dark							4
	very dark						Duepremiwi	5

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
<b>23</b>	<b>QN</b>	<b>VG</b>	<b>(a)</b>			
	<b>Petiole: intensity of anthocyanin coloration on <u>upper</u> side</b>					
	absent or very weak				SRPO140540	1
	very weak to weak					2
	weak				BONPRIDEPCOM, Ice Punch	3
	weak to medium					4
	medium				Fisdra	5
	medium to strong					6
	strong				Freedom, Valsu, WEL20390	7
	strong to very strong					8
	very strong					9
<b>24 (*)</b>	<b>QN</b>	<b>VG</b>	<b>(a)</b>			
	<b>Petiole: intensity of anthocyanin coloration on <u>lower</u> side</b>					
	absent or weak				Allegra White, Ice Punch	1
	medium				Early Red	2
	strong				Freedom, WEL20390	3
<b>25 (*)</b>	<b>QN</b>	<b>MG/MS/VG</b>	<b>(+)</b>	<b>(b)</b>		
	<b>Transitional leaves: number of <u>partly</u> bract-colored leaf blades</b>					
	very few				NPCW02044	1
	very few to few					2
	few				Fismille	3
	few to medium					4
	medium				Duearcwi	5
	medium to many					6
	many				Fuego, Renate	7
	many to very many					8
	very many					9

	English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
<b>26</b>	<b>(*)</b>	<b>QN</b>	<b>MG/MS/VG</b>	<b>(+)</b>	<b>(b)</b>			
		<b>Transitional leaves: number of fully bract-colored leaf blades</b>						
		very few					QS47	1
		very few to few						2
		few					NPCW02044, Renate	3
		few to medium						4
		medium					Duecitic, NPCW21350	5
		medium to many					Valenciana	6
		many					Fismille, LAZZPO1531	7
		many to very many						8
		very many					NPCW10164	9
<b>27</b>	<b>(*)</b>	<b>QN</b>	<b>VG</b>	<b>(+)</b>	<b>(b)</b>			
		<b>Transitional leaves: number of lobes</b>						
		none or few					Duepre, Duepremimpol	1
		medium					Christmas Angel	2
		many					Lazzporega	3
<b>28</b>		<b>QN</b>	<b>VG</b>	<b>(+)</b>	<b>(b)</b>			
		<b>Transitional leaves: curvature along main vein</b>						
		absent or weak					Fiscor	1
		medium					Eckalverta, LAZZPO1078	2
		strong					Winred	3
<b>29</b>	<b>(*)</b>	<b>QN</b>	<b>MG/VG</b>	<b>(+)</b>				
		<b>Bract: number</b>						
		very few					Bonpri 974	1
		very few to few						2
		few					BKPONVW, Duecitic	3
		few to medium						4
		medium					DUEPRIMDON, Renate	5
		medium to many						6
		many					Fismille	7
		many to very many						8
		very many						9

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
<b>30</b>	<b>(*)</b>	<b>QN</b>	<b>MG/MS/VG</b>	<b>(+)</b>	<b>(d)</b>	
	<b>Bract: length</b>					
	very short				BONPRI 9172	1
	very short to short					2
	short					3
	short to medium					4
	medium				LAZZPO1615, Stargazer	5
	medium to long					6
	long				Ice Punch	7
	long to very long					8
	very long					9
<b>31</b>	<b>(*)</b>	<b>QN</b>	<b>MG/MS/VG</b>		<b>(d)</b>	
	<b>Bract: width</b>					
	very narrow				BONPRI 9172	1
	very narrow to narrow					2
	narrow				Bonpri 974, Stargazer	3
	narrow to medium					4
	medium				Ice Punch, LAZZPO1201	5
	medium to broad					6
	broad				Duepreimhopi	7
	broad to very broad					8
	very broad				Duepremise	9
<b>32</b>	<b>(*)</b>	<b>PQ</b>	<b>VG</b>	<b>(+)</b>	<b>(d)</b>	
	<b>Bract: shape</b>					
	ovate				Eckalon, NPCW19254	1
	elliptic				Allegra White, Fiscor	2
	oblanceolate				Dueavant	3
	obovate					4
<b>33</b>	<b>(*)</b>	<b>PQ</b>	<b>VG</b>		<b>(c), (d)</b>	
	<b>Bract: main color of upper side</b>					
	RHS Colour Chart (indicate reference number)					



	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
<b>34</b>	<b>(*) PQ VG</b>	<b>(c), (d)</b>				
	<b>Bract: secondary color of <u>upper</u> side</b>					
	RHS Colour Chart (indicate reference number)					
<b>35</b>	<b>(*) PQ VG</b>	<b>(c), (d)</b>				
	<b>Bract: distribution of secondary color of <u>upper</u> side</b>					
	at center					1
	at veins					2
	at margin					3
	throughout					4
<b>36</b>	<b>(*) PQ VG</b>	<b>(+) (c), (d)</b>				
	<b>Bract: pattern of secondary color of <u>upper</u> side</b>					
	solid				Valenciana, Valsu	1
	irregular					2
	marbled					3
	flushed					4
<b>37</b>	<b>QN VG</b>	<b>(c), (d)</b>				
	<b>Bract: area of secondary color</b>					
	small					1
	medium					2
	large					3
<b>38</b>	<b>(*) PQ VG</b>	<b>(c), (d)</b>				
	<b>Bract: tertiary color of <u>upper</u> side</b>					
	RHS Colour Chart (indicate reference number)					
<b>39</b>	<b>(*) PQ VG</b>	<b>(c), (d)</b>				
	<b>Bract: distribution of tertiary color of <u>upper</u> side</b>					
	at center					1
	at veins					2
	at margin					3
	throughout					4

	English		français	deutsch	español	Example Varieties Exemples Bei ejemplo	Note/
<b>40</b>	<b>PQ</b>	<b>VG</b>	<b>(c), (d)</b>				
	<b>Bract: pattern of tertiary color of <u>upper</u> side</b>						
	solid						1
	irregular						2
	marbled						3
	flushed						4
<b>41 (*)</b>	<b>PQ</b>	<b>VG</b>	<b>(c), (d)</b>				
	<b>Bract: main color of <u>lower</u> side</b>						
	RHS Colour Chart (indicate reference number)						
<b>42 (*)</b>	<b>PQ</b>	<b>VG</b>	<b>(c), (d)</b>				
	<b>Bract: secondary color of <u>lower</u> side</b>						
	RHS Colour Chart (indicate reference number)						
<b>43 (*)</b>	<b>PQ</b>	<b>VG</b>	<b>(c), (d)</b>				
	<b>Bract: distribution of secondary color of <u>lower</u> side</b>						
	at center						1
	at veins						2
	at margin						3
	throughout						4
<b>44 (*)</b>	<b>PQ</b>	<b>VG</b>	<b>(c), (d)</b>				
	<b>Bract: pattern of secondary color of <u>lower</u> side</b>						
	solid						1
	irregular						2
	marbled						3
	flushed						4
<b>45 (*)</b>	<b>PQ</b>	<b>VG</b>	<b>(c), (d)</b>				
	<b>Bract: tertiary color of <u>lower</u> side</b>						
	RHS Colour Chart (indicate reference number)						

	English		français	deutsch	español	Example Varieties Exemples Bei ejemplo	Note/
<b>46</b> (*)	<b>PQ</b>	<b>VG</b>	<b>(c), (d)</b>				
	<b>Bract: distribution of tertiary color of <u>lower</u> side</b>						
	at center						1
	at veins						2
	at margin						3
	throughout						4
<b>47</b>	<b>PQ</b>	<b>VG</b>	<b>(c), (d)</b>				
	<b>Bract: pattern of tertiary color of <u>lower</u> side</b>						
	solid						1
	irregular						2
	marbled						3
	flushed						4
<b>48</b>	<b>QN</b>	<b>VG</b>	<b>(+)</b> <b>(d)</b>				
	<b>Bract: folding along main vein</b>						
	absent or very weak					Fiscor	1
	weak						2
	medium						3
	strong						4
	very strong					Duetwister	5
<b>49</b>	<b>QN</b>	<b>VG</b>	<b>(+)</b> <b>(d)</b>				
	<b>Bract: twisting</b>						
	absent or very weak					Fiscor, LAZZPO1623	1
	weak						2
	medium						3
	strong					Rehilete	4
	very strong					Future, QS47	5
<b>50</b>	<b>QN</b>	<b>VG</b>	<b>(d)</b>				
	<b>Bract: rugosity</b>						
	absent or very weak					Dopinsayerf, Ice Punch, Valenciana	1
	weak					Duearwi, NPCW18087	2
	medium					Eckalverta, Purple Heart	3
	strong					Winwhite	4
	very strong					Winred	5

	English	français	deutsch	español	Example Varieties Exemples Bei ejemplo	Note/
<b>51 (*)</b>	<b>QN</b>   <b>VG</b>	<b>(+)</b>				
	<b>Cyme: width</b>					
	narrow				Bonpri 974	1
	narrow to medium				BKPONVW	2
	medium				Duecitic	3
	medium to broad					4
	broad				Eckabud	5
<b>52 (*)</b>	<b>QN</b>   <b>VG</b>					
	<b>Cyathium: size of glands</b>					
	small				BONPRIPICOM	1
	small to medium					2
	medium				Purple Heart	3
	medium to large				Premiummarble, Red Fox	4
	large				Duepre, Fismars Marble	5
<b>53 (*)</b>	<b>PQ</b>   <b>VG</b>					
	<b>Cyathium: main color of gland</b>					
	yellow				Allegra White, Duepremimapri	1
	orange				BKPONVW, Peterstar	2
	red				Temptation Red, WEL20390	3
<b>54</b>	<b>QL</b>   <b>VG</b>	<b>(+)</b>				
	<b>Cyathium: deformation of glands</b>					
	absent				LAZZPO1623, Valsu	1
	present				EURZ0025, Valenciana	9
<b>55</b>	<b>QN</b>   <b>VG</b>	<b>(+)</b>				
	<b>Cyathium: intensity of red coloration</b>					
	absent or weak				JUBILEE WHITE	1
	weak to medium					2
	medium				LAZZPOFUBR	3
	medium to strong				WEL20390	4
	strong				BONPRI 9276	5

	English	français	deutsch	español	Example Varieties Exemples Bei ejemplo	Note/
<b>56</b>	<b>QN</b>	<b>MG/VG</b>	<b>(+)</b>			
	<b>Time of opening of cyathia</b>					
	very early					1
	very early to early				QS47	2
	early				Estrella Red, NPCW10164	3
	early to medium					4
	medium				EURZ0025, 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

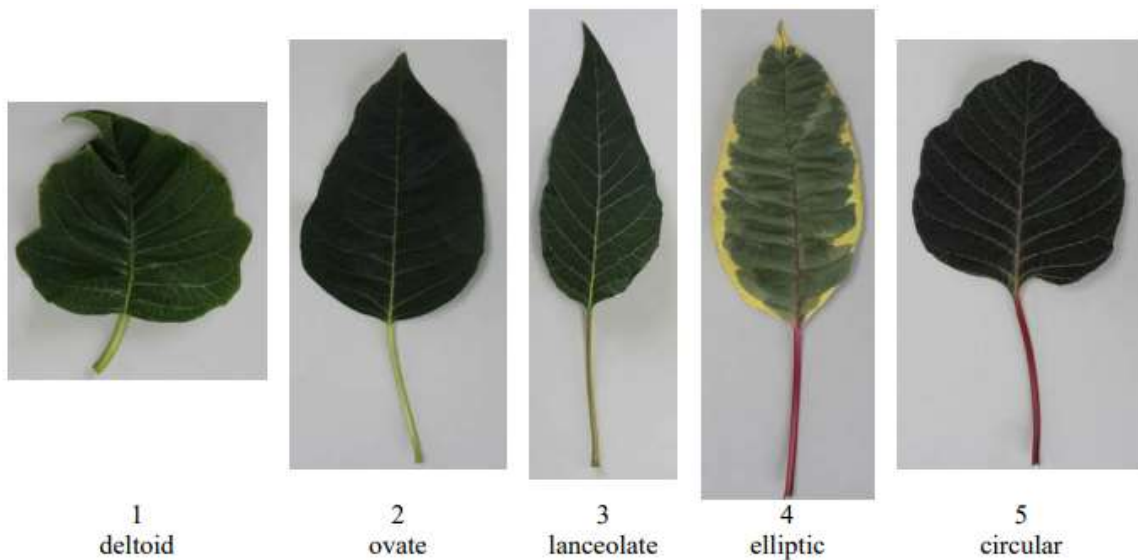
8.1 *Explanations covering several characteristics*

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

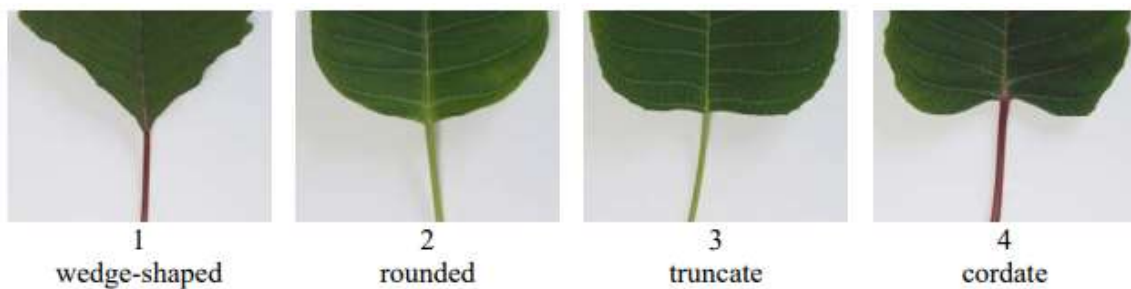
- (a) Observations on the leaf should be made on the second fully developed leaf from the top.
- (b) Transitional leaves are leaves with partly bract-colored or fully bract-colored leaf blades.
- (c) The main color is the color with the largest surface area. In cases where the areas of the main, secondary 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.
- (d) Observations on the bract should be made on the largest bract.

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 of upper side



1  
one



2  
two



3  
more than two

Ad. 18: Leaf blade: number of lobes



1  
none or few

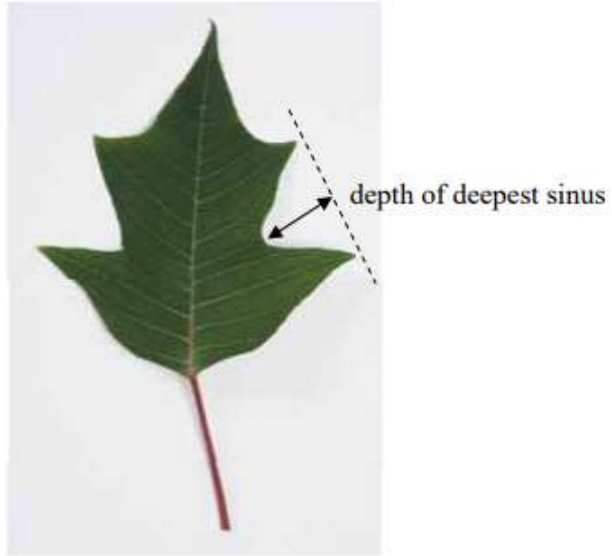


2  
medium



3  
many

Ad. 19: Leaf blade: depth of deepest sinus



3  
shallow



5  
medium



7  
deep

Ad. 20: Leaf blade: curvature along main vein



1  
Absent or very weak



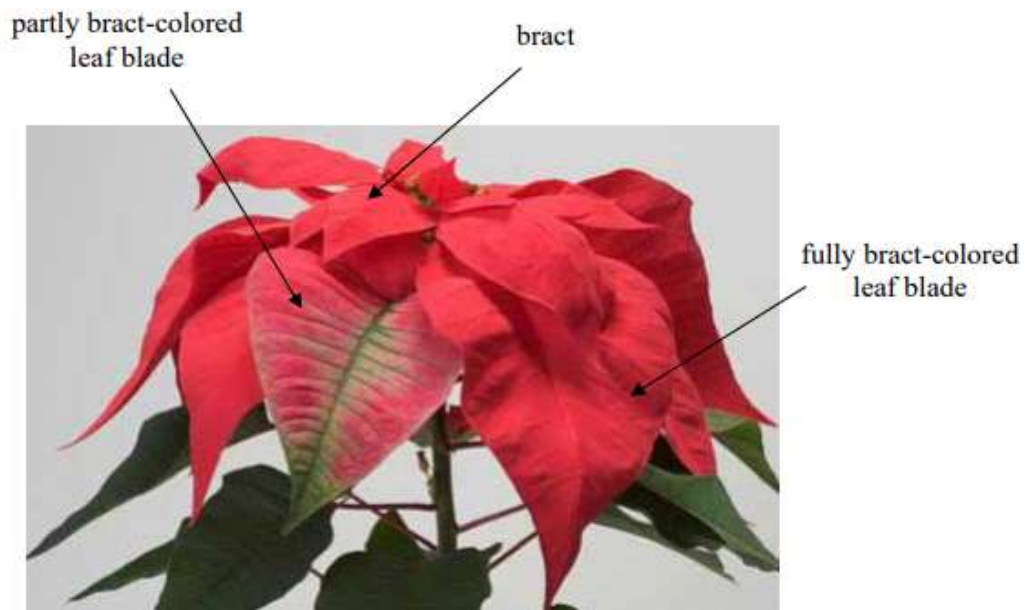
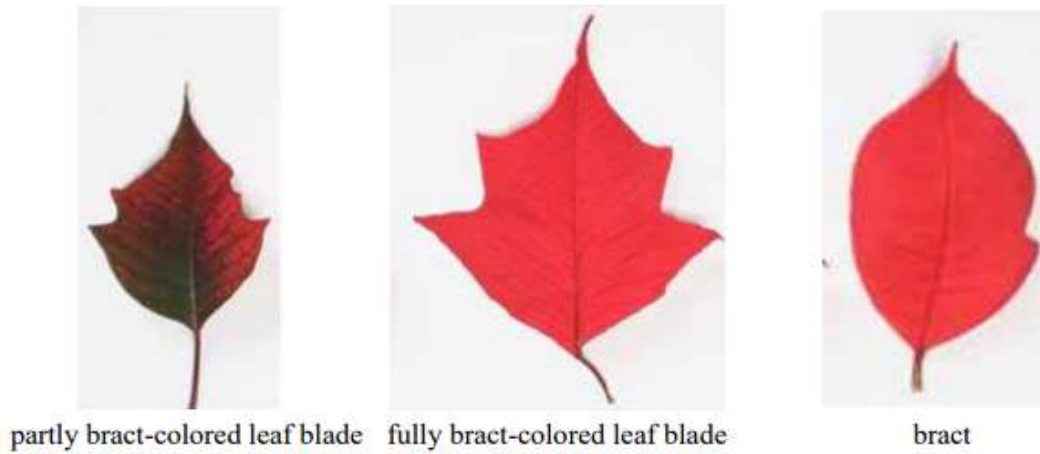
2  
Medium



3  
Strong



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



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

See Ad. 25

Ad. 27: Transitional leaves: number of lobes



1  
absent or weak



2  
medium



3  
strong

Ad. 28: Transitional leaves: curvature along main vein



1  
absent or weak



2  
medium



3  
strong

Ad. 29: Bract: number

See Ad. 25

Ad. 30: Bract: length

Observations should be made including petioles.

Ad. 32: Bract: shape



1  
ovate



2  
elliptic



3  
oblongate



4  
obovate

Ad. 36: Bract: pattern of secondary color of upper side



1  
solid



2  
spots



3  
marbled



4  
flushed

Ad. 48: Bract: folding along main vein



1  
absent or very  
weak

2  
weak

3  
medium

4  
strong

5  
very strong

Ad. 49: Bract: twisting



1  
absent or very weak



3  
medium



5  
very strong

Ad. 51: Cyme: width



cyme width

Ad. 54: Cyathium: deformation of glands



1  
absent



9  
present

Ad. 55: Cyathium: intensity of red coloration



Ad. 56: Time of opening of cyathia

Observations should be made at 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		
1.1.1 Botanical name	<input type="text" value="Euphorbia pulcherrima Willd. ex Klotzsch"/>	[ ]
1.1.2 Common name	<input type="text" value="Poinsettia"/>	
1.2.1 Botanical name	<input type="text" value="Euphorbia pulcherrima Willd. ex Klotzsch x Euphorbia cornastra (Dressler) Radcl.-Sm."/>	[ ]
1.2.2 Common name	<input type="text"/>	
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:
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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 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.



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:
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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
<b>5.1 Leaf blade: number of colors of <u>upper</u> side (12)</b>		
one	DUEPRIMDON, Fiscor	1 [ ]
two	Dueavant	2 [ ]
more than two	Fismarble Silver	3 [ ]
<b>5.2(i) Bract: main color of <u>upper</u> side (33)</b>		
RHS Colour Chart (indicate reference number)		
<b>5.2(ii) Bract: main color of <u>upper</u> side (33)</b>		
white		1 [ ]
yellow		2 [ ]
pink		3 [ ]
orange red		4 [ ]
red		5 [ ]
purple		6 [ ]
other (please specify)		[ ]
<b>5.3(i) Bract: secondary color of <u>upper</u> side (34)</b>		
RHS Colour Chart (indicate reference number)		
<b>5.3(ii) Bract: secondary color of <u>upper</u> side (34)</b>		
white		1 [ ]
yellow		2 [ ]
pink		3 [ ]
orange red		4 [ ]
red		5 [ ]
purple		6 [ ]
other (please specify)		[ ]
none		[ ]

	Characteristics	Example Varieties	Note
<b>5.4</b>	<b>Bract: distribution of secondary color of <u>upper</u> side</b>		
<b>(35)</b>	at center		1 [ ]
	at veins		2 [ ]
	at margin		3 [ ]
	throughout		4 [ ]
<b>5.5</b>	<b>Bract: pattern of secondary color of <u>upper</u> side</b>		
<b>(36)</b>	solid	Valenciana, Valsu	1 [ ]
	irregular		2 [ ]
	marbled		3 [ ]
	flushed		4 [ ]

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 <b>similar</b> variety(ies)	Describe the expression of the characteristic(s) for <b>your</b> candidate variety
<i>Example</i>	<i>Leaf blade: shape</i>	<i>deltoid</i>	<i>circular</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 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:
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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".

.....

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]