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| |  |  |  | | --- | --- | --- | |  |  | **E** | |  |  |  | |  | wordml://75.png | |  | | --- | | **TG/24/7(proj.2)** | | **ORIGINAL:** English | | **DATE:** 2023-04-28 | | | **INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS** | | | |  | Geneva |  | |  | |  |  |  | | --- | --- | --- | |  |  |  | |  | DRAFT |  | |  |  |  | |  | |  |  |  | |  | |  | | --- | |  | | **POINSETTIA** | |  | | |  | | --- | |  | | |  | | --- | | UPOV Code(s): EUPHO\_PUL | | |  | | |  | | |  |  | | --- | --- | | |  | | --- | | *Euphorbia pulcherrima* Willd. ex Klotzsch | | |  | | |  | | |  | | --- | | \* | | |  |  |  | | |  | | --- | | **GUIDELINES** | |  | | **FOR THE CONDUCT OF TESTS** | |  | | **FOR DISTINCTNESS, UNIFORMITY AND STABILITY** | | | | |  |  |  | | |  | | --- | | *prepared by experts from the European Union* | | *to be considered by the* | | |  | | --- | | *Technical Working Party for Ornamental Plants and Forest Trees* | | | *at its fifty-fifth session, to be held virtually* | | |  | | --- | | *from 2023-06-12 to 2023-06-16* | | | | | | *Disclaimer: this document does not represent UPOV policies or guidance* | | | | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  | | --- | | Alternative names:\* | | | | | | | |  | | --- | |  | | | | | | | *Botanical name* | *English* | *French* | *German* | *Spanish* | | |  | | --- | | *Euphorbia pulcherrima* Willd. ex Klotzsch | | |  | | --- | | Poinsettia | | |  | | --- | | Poinsettia | | |  | | --- | | Poinsettie, Weihnachtsstern | | |  | | --- | | Flor de Pascua, Cuetlaxochitl, Nochebuena | | | | | |  |  |  | | The purpose of these guidelines (“Test Guidelines”) is to elaborate the principles contained in the General Introduction (document TG/1/3), and its associated TGP documents, into detailed practical guidance for the harmonized examination of distinctness, uniformity and stability (DUS) and, in particular, to identify appropriate characteristics for the examination of DUS and production of harmonized variety descriptions. | | | |  | | | |
| **ASSOCIATED DOCUMENTS** |
| These Test Guidelines should be read in conjunction with the General Introduction and its associated TGP documents. |

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| |  |  | | --- | --- | | TABLE OF CONTENTS | PAGE | |  |  | | |  |  |  | | --- | --- | --- | | 1. | SUBJECT OF THESE TEST GUIDELINES.......................................................................................................... | [4](#Section1) | |  |  |  | | 2. | MATERIAL REQUIRED..................................................................................................................... | [4](#Section2) | |  |  |  | | 3. | METHOD OF EXAMINATION............................................................................................................... | [4](#Section3) | |  |  |  | |  | |  |  |  | | --- | --- | --- | | 3.1 | Number of Growing Cycles................................................................................................................. | [4](#Section3-1) | | 3.2 | Testing Place................................................................................................................... | [4](#Section3-2) | | 3.3 | Conditions for Conducting the Examination............................................................................................... | [4](#Section3-3) | | 3.4 | Test Design................................................................................................................. | [5](#Section3-4) | | 3.5 | Additional Tests................................................................................................................... | [5](#Section3-5) | | | |  |  |  | | 4. | ASSESSMENT OF DISTINCTNESS, UNIFORMITY AND STABILITY................................................................. | [5](#Section4) | |  |  |  | |  | |  |  |  | | --- | --- | --- | | 4.1 | Distinctness.......................................................................................................... | [5](#Section4-1) | | 4.2 | Uniformity............................................................................................................ | [6](#Section4-2) | | 4.3 | Stability............................................................................................................... | [6](#Section4-3) | | | |  |  |  | | 5. | GROUPING OF VARIETIES AND ORGANIZATION OF THE GROWING TRIAL................................................ | [7](#Section5) | |  |  |  | | 6. | INTRODUCTION TO THE TABLE OF CHARACTERISTICS................................................................................ | [7](#Section6) | |  |  |  | |  | |  |  |  | | --- | --- | --- | | 6.1 | Categories of Characteristics...................................................................................................... | [7](#Section6-1) | | 6.2 | States of Expression and Corresponding Notes........................................................................................ | [8](#Section6-2) | | 6.3 | Types of Expression............................................................................................................ | [8](#Section6-3) | | 6.4 | Example Varieties.............................................................................................................. | [8](#Section6-4) | | 6.5 | Legend................................................................................................................. | [9](#Section6-5) | | | |  |  |  | | 7. | TABLE OF CHARACTERISTICS/TABLEAU DES CARACTÈRES/MERKMALSTABELLE/TABLA DE CARACTERES.................................................................................................................. | [10](#Section7) | |  |  |  | | 8. | EXPLANATIONS ON THE TABLE OF CHARACTERISTICS............................................................................... | [31](#Section8) | |  | |  |  |  | | --- | --- | --- | | 8.1 | Explanations covering several characteristics........................................................................................... | [31](#Section8-1) | | |  | | --- | | 8.2 | | Explanations for individual characteristics................................................................................................. | [31](#Section8-2) | | | |  |  |  | | 9. | LITERATURE................................................................................................................... | [32](#Section9) | |  |  |  | | 10 | TECHNICAL QUESTIONNAIRE............................................................................................................ | [33](#Section10) | |  |  |  | |  | |  | | --- | |  | |  | | | |

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| --- | --- |
| 1. | Subject of these Test Guidelines |
|  |  |
|  | |  | | --- | | These Test Guidelines apply to all varieties of *Euphorbia pulcherrima* Willd. ex Klotzsch and hybrids between *Euphorbia pulcherrima* Willd. ex Klotzsch and *Euphorbia cornastra* (Dressler) Radcl.-Sm. | |

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| 2. | Material Required |
|  |  |
| 2.1 | |  | | --- | | The competent authorities decide on the quantity and quality of the plant material required for testing the variety and when and where it is to be delivered. Applicants submitting material from a State other than that in which the testing takes place must ensure that all customs formalities and phytosanitary requirements are complied with. | |
|  |  |
| 2.2 | |  | | --- | | The material is to be supplied in the form of rooted cutting with known phytoplasma status. The plants should not be pinched. | |
|  |  |
| 2.3 | |  | | --- | | The minimum quantity of plant material, to be supplied by the applicant, should be: | |
|  |  |
|  | |  | | --- | | 10 | |
|  |  |
| 2.4 | |  | | --- | | The plant material supplied should be visibly healthy, not lacking in vigor, nor affected by any important pest or disease. | |
|  |  |
| 2.5 | |  | | --- | | The plant material should not have undergone any treatment which would affect the expression of the characteristics of the variety, unless the competent authorities allow or request such treatment. If it has been treated, full details of the treatment must be given. | |

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| 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. |

|  |  |
| --- | --- |
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|  |  |
| 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. |

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| 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”. |

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| 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. |

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| *6.5* | *Legend* |
|  |  |
| |  |  | English | | français | | deutsch | español | Example Varieties Exemples Beispielssorten Variedades ejemplo | Note/ Nota | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | | **1** | | |  | | --- | | **2** | | |  | | --- | | **3** | | |  | | --- | | **4** | | |  | | --- | | **5** | | |  | | --- | | **6** | | |  | | --- | | **7** | | | | | |  |  | |  | | --- | | **Name of characteristics in English** | | | |  | | --- | | **Nom du caractère en français** | | | |  | | --- | | **Name des Merkmals auf Deutsch** | | |  | | --- | | **Nombre del carácter en español** | |  |  | |  |  | |  | | --- | | states of expression | | | |  | | --- | | types d’expression | | | |  | | --- | | Ausprägungsstufen | | |  | | --- | | tipos de expresión | | |  | | --- | |  | |  | |  |  |  |  |  |  |  |  |  |  | | |
| |  |  |  |  | | --- | --- | --- | --- | | 1 | Characteristic number | | | |  |  |  |  | | 2 | (\*) | Asterisked characteristic | – see Chapter 6.1.2 | |  |  |  |  | | 3 | Type of expression | | | |  | QL | Qualitative characteristic | – see Chapter 6.3 | |  | QN | Quantitative characteristic | – see Chapter 6.3 | |  | PQ | Pseudo-qualitative characteristic | – see Chapter 6.3 | |  |  |  |  | | 4 | Method of observation (and type of plot, if applicable) | | | |  | MG, MS, VG, VS | | – see Chapter 4.1.5 | |  |  |  |  | | 5 | |  | | --- | | (+) | | |  |  | | --- | --- | | |  | | --- | | See Explanations on the Table of Characteristics in Chapter 8.2 | | | | |  |  |  |  | | 6 | |  | | --- | | (a)-(b) | | |  |  | | --- | --- | | |  | | --- | | See Explanations on the Table of Characteristics in Chapter 8.1 | | | | |  |  |  |  | | 7 | |  | | --- | | Not applicable | | | | | |

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

|  |  | English | | français | | deutsch | español | Example Varieties Exemples Beispielssorten Variedades ejemplo | Note/ Nota |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **1.** | **(\*)** | **QL** | **VG** |  |  |  | | | |
|  |  | |  | | --- | | **Plant: branching** | | |  | |  |  |  |  |
|  |  | absent | |  | |  |  |  | 1 |
|  |  | present | |  | |  |  |  | 9 |
| **2.** | **(\*)** | **QN** | **MG/VG** |  |  |  | | | |
|  |  | |  | | --- | | **Plant: number of branches** | | |  | |  |  |  |  |
|  |  | very few | |  | |  |  |  | 1 |
|  |  | very few to few | |  | |  |  |  | 2 |
|  |  | few | |  | |  |  | Lilo | 3 |
|  |  | few to medium | |  | |  |  |  | 4 |
|  |  | medium | |  | |  |  | Freedom | 5 |
|  |  | medium to many | |  | |  |  |  | 6 |
|  |  | many | |  | |  |  | Regina | 7 |
|  |  | many to very many | |  | |  |  |  | 8 |
|  |  | very many | |  | |  |  |  | 9 |
| **3.** | **(\*)** | **QN** | **MG/MS/VG** |  |  |  | | | |
|  |  | |  | | --- | | **Plant: height** | | |  | |  |  |  |  |
|  |  | very short | |  | |  |  |  | 1 |
|  |  | very short to short | |  | |  |  |  | 2 |
|  |  | short | |  | |  |  | Duepremimapri | 3 |
|  |  | short to medium | |  | |  |  |  | 4 |
|  |  | medium | |  | |  |  | Fiscor | 5 |
|  |  | medium to tall | |  | |  |  |  | 6 |
|  |  | tall | |  | |  |  | Fismille | 7 |
|  |  | tall to very tall | |  | |  |  |  | 8 |
|  |  | very tall | |  | |  |  |  | 9 |
| **4.** |  | **QN** | **MG/MS/VG** |  |  |  | | | |
|  |  | |  | | --- | | **Plant: width** | | |  | |  |  |  |  |
|  |  | very narrow | |  | |  |  |  | 1 |
|  |  | very narrow to narrow | |  | |  |  |  | 2 |
|  |  | narrow | |  | |  |  | Eckalon | 3 |
|  |  | narrow to medium | |  | |  |  |  | 4 |
|  |  | medium | |  | |  |  | Red Angel | 5 |
|  |  | medium to broad | |  | |  |  |  | 6 |
|  |  | broad | |  | |  |  | Fismille | 7 |
|  |  | broad to very broad | |  | |  |  |  | 8 |
|  |  | very broad | |  | |  |  |  | 9 |
| **5.** | **(\*)** | **QN** | **VG** |  |  |  | | | |
|  |  | |  | | --- | | **Stem: intensity of green color on middle third** | | |  | |  |  |  |  |
|  |  | very light | |  | |  |  |  | 1 |
|  |  | very light to light | |  | |  |  |  | 2 |
|  |  | light | |  | |  |  | Winpeach | 3 |
|  |  | light to medium | |  | |  |  |  | 4 |
|  |  | medium | |  | |  |  | Duepremimapri | 5 |
|  |  | medium to dark | |  | |  |  |  | 6 |
|  |  | dark | |  | |  |  | Duearcwi | 7 |
|  |  | dark to very dark | |  | |  |  |  | 8 |
|  |  | very dark | |  | |  |  |  | 9 |
| **6.** | **(\*)** | **QN** | **VG** |  |  |  | | | |
|  |  | |  | | --- | | **Stem: intensity of anthocyanin coloration on middle third** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | absent or very weak | |  | |  |  | White Freedom | 1 |
|  |  | very weak to weak | |  | |  |  |  | 2 |
|  |  | weak | |  | |  |  | Fisson Orange | 3 |
|  |  | weak to medium | |  | |  |  |  | 4 |
|  |  | medium | |  | |  |  | Fisson | 5 |
|  |  | medium to strong | |  | |  |  |  | 6 |
|  |  | strong | |  | |  |  | Freedom | 7 |
|  |  | strong to very strong | |  | |  |  |  | 8 |
|  |  | very strong | |  | |  |  |  | 9 |
| **7.** | **(\*)** | **QN** | **VG** |  |  |  | | | |
|  |  | |  | | --- | | **Stem: intensity of anthocyanin coloration on upper third** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | absent or very weak | |  | |  |  | Ice Punch | 1 |
|  |  | medium | |  | |  |  | Freedom Marble | 2 |
|  |  | strong | |  | |  |  |  | 3 |
| **8.** | **(\*)** | **QN** | **MG/MS/VG** |  | **(a)** |  | | | |
|  |  | |  | | --- | | **Leaf blade:  length** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | very short | |  | |  |  |  | 1 |
|  |  | very short to short | |  | |  |  |  | 2 |
|  |  | short | |  | |  |  | Dueavant | 3 |
|  |  | short to medium | |  | |  |  |  | 4 |
|  |  | medium | |  | |  |  | Fiscor | 5 |
|  |  | medium to long | |  | |  |  |  | 6 |
|  |  | long | |  | |  |  | Winterfest Red | 7 |
|  |  | long to very long | |  | |  |  |  | 8 |
|  |  | very long | |  | |  |  |  | 9 |
| **9.** | **(\*)** | **QN** | **MG/MS/VG** |  | **(a)** |  | | | |
|  |  | |  | | --- | | **Leaf blade: width** | | |  | |  |  |  |  |
|  |  | very narrow | |  | |  |  |  | 1 |
|  |  | very narrow to narrow | |  | |  |  |  | 2 |
|  |  | narrow | |  | |  |  | Fiscor | 3 |
|  |  | narrow to medium | |  | |  |  |  | 4 |
|  |  | medium | |  | |  |  | Duecowhite | 5 |
|  |  | medium to large | |  | |  |  |  | 6 |
|  |  | large | |  | |  |  | White Freedom | 7 |
|  |  | large to very large | |  | |  |  |  | 8 |
|  |  | very large | |  | |  |  |  | 9 |
| **10.** |  | **PQ** | **VG** |  | **(a)** |  | | | |
|  |  | |  | | --- | | **Leaf blade:  shape** | | |  | |  |  |  |  |
|  |  | deltoid | |  | |  |  | Q102 | 1 |
|  |  | ovate | |  | |  |  | Duepre | 2 |
|  |  | lanceolate | |  | |  |  | Bonpri 974 | 3 |
|  |  | elliptic | |  | |  |  | Princettia Indian Red | 4 |
|  |  | circular | |  | |  |  | NPCW19280 | 5 |
| **11.** |  | **PQ** | **VG** |  | **(a)** |  | | | |
|  |  | |  | | --- | | **Leaf blade: shape of base** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | wedge-shaped | |  | |  |  | Dueavant | 1 |
|  |  | rounded | |  | |  |  | Marblestar | 2 |
|  |  | truncate | |  | |  |  | Dueinfinity | 3 |
|  |  | cordate | |  | |  |  | Early Joy | 4 |
| **12.** | **(\*)** | **PQ** | **VG** |  | **(a)** |  | | | |
|  |  | |  | | --- | | **Leaf blade: number of colors of upper side** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | one | |  | |  |  | Fiscor | 1 |
|  |  | two | |  | |  |  | Dueavant | 2 |
|  |  | more than two | |  | |  |  | Fismarble Silver | 3 |
| **13.** | **(\*)** | **QN** | **VG** |  | **(a)** |  | | | |
|  |  | |  | | --- | | **Only varieties with Leaf blade: number of colors of upper side: one: Leaf blade: intensity of green color on upper side** | | |  | |  |  |  |  |
|  |  | very light | |  | |  |  | Fiscor | 1 |
|  |  | light | |  | |  |  |  | 2 |
|  |  | medium | |  | |  |  |  | 3 |
|  |  | dark | |  | |  |  |  | 4 |
|  |  | very dark | |  | |  |  | Peterstar | 5 |
| **14.** |  | **PQ** | **VG** |  | **(a), (b)** |  | | | |
|  |  | |  | | --- | | **Only varieties with Leaf blade: number of colors on upper side: two or more than two; Leaf blade: main color of upper side** | | |  | |  |  |  |  |
|  |  | yellowish | |  | |  |  |  | 1 |
|  |  | yellowish green | |  | |  |  |  | 2 |
|  |  | light green | |  | |  |  | Bright Red Queen | 3 |
|  |  | medium green | |  | |  |  | Dueavant | 4 |
|  |  | greyish green | |  | |  |  | Fismarble Silver | 5 |
|  |  | dark green | |  | |  |  | Carousel Dark Red | 6 |
|  |  | very dark green | |  | |  |  |  | 7 |
| **15.** |  | **PQ** | **VG** |  | **(a), (b)** |  | | | |
|  |  | |  | | --- | | **Only varieties with Leaf blade: number of colors on upper side: two or more than two: Leaf blade: secondary color of upper side** | | |  | |  |  |  |  |
|  |  | white | |  | |  |  | Fismarble Silver | 1 |
|  |  | yellowish | |  | |  |  | Bright Red Queen | 2 |
|  |  | yellowish green | |  | |  |  |  | 3 |
|  |  | light green | |  | |  |  |  | 4 |
|  |  | medium green | |  | |  |  |  | 5 |
|  |  | greyish green | |  | |  |  | Allegra Art Deco | 6 |
|  |  | dark green | |  | |  |  | Dueavant | 7 |
|  |  | very dark green | |  | |  |  | Carousel Dark Red | 8 |
| **16.** |  | **PQ** | **VG** |  | **(a), (b)** |  | | | |
|  |  | |  | | --- | | **Only varieties with Leaf blade: number of colors on upper side: two or more than two: Leaf blade: tertiary color of upper side** | | |  | |  |  |  |  |
|  |  | white | |  | |  |  | Silverleaf | 1 |
|  |  | yellowish | |  | |  |  |  | 2 |
|  |  | yellowish green | |  | |  |  | Bright Red Queen | 3 |
|  |  | light green | |  | |  |  | Fissilver | 4 |
|  |  | medium green | |  | |  |  |  | 5 |
|  |  | greyish green | |  | |  |  | Fiswhite Silver | 6 |
|  |  | dark green | |  | |  |  |  | 7 |
|  |  | very dark green | |  | |  |  |  | 8 |
| **17.** |  | **PQ** | **VG** |  | **(a)** |  | | | |
|  |  | |  | | --- | | **Leaf blade: color of main vein of upper side** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | only green | |  | |  |  | Freedom Marble | 1 |
|  |  | green and red | |  | |  |  | Petoy | 2 |
|  |  | only red | |  | |  |  | KLEW01063 | 3 |
| **18.** |  | **QN** | **MG/VG** |  | **(a)** |  | | | |
|  |  | |  | | --- | | **Leaf blade: number of lobes** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | none or few | |  | |  |  | Regina | 1 |
|  |  | medium | |  | |  |  | Fisdra | 2 |
|  |  | many | |  | |  |  | Dueavant | 3 |
| **19.** |  | **QN** | **MG/VG** |  | **(a)** |  | | | |
|  |  | |  | | --- | | **Leaf blade: depth of deepest sinus** | | |  | |  |  |  |  |
|  |  | very shallow | |  | |  |  |  | 1 |
|  |  | very shallow to shallow | |  | |  |  |  | 2 |
|  |  | shallow | |  | |  |  | KLEW01063 | 3 |
|  |  | shallow to medium | |  | |  |  |  | 4 |
|  |  | medium | |  | |  |  | Dueavant | 5 |
|  |  | medium to deep | |  | |  |  |  | 6 |
|  |  | deep | |  | |  |  | Duemerlot | 7 |
|  |  | deep to very deep | |  | |  |  |  | 8 |
|  |  | very deep | |  | |  |  |  | 9 |
| **20.** |  | **QN** | **VG** |  | **(a)** |  | | | |
|  |  | |  | | --- | | **Leaf blade: curvature along main vein** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | absent or very weak | |  | |  |  | Fiscor | 1 |
|  |  | medium | |  | |  |  | Eckalverta | 2 |
|  |  | strong | |  | |  |  | Eckaddis | 3 |
| **21.** | **(\*)** | **QN** | **MG/MS/VG** |  | **(a)** |  | | | |
|  |  | |  | | --- | | **Petiole: length** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | very short | |  | |  |  |  | 1 |
|  |  | very short to short | |  | |  |  |  | 2 |
|  |  | short | |  | |  |  | Duepremimhopi | 3 |
|  |  | short to medium | |  | |  |  |  | 4 |
|  |  | medium | |  | |  |  | Fiscor | 5 |
|  |  | medium to long | |  | |  |  |  | 6 |
|  |  | long | |  | |  |  | Purple Heart | 7 |
|  |  | long to very long | |  | |  |  |  | 8 |
|  |  | very long | |  | |  |  |  | 9 |
| **22.** |  | **QN** | **VG** |  | **(a)** |  | | | |
|  |  | |  | | --- | | **Petiole: intensity of green color on upper side** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | very light | |  | |  |  | White Freedom | 1 |
|  |  | light | |  | |  |  |  | 2 |
|  |  | medium | |  | |  |  |  | 3 |
|  |  | drak | |  | |  |  |  | 4 |
|  |  | very dark | |  | |  |  | Duepremwi | 5 |
| **23.** |  | **QN** | **VG** |  | **(a)** |  | | | |
|  |  | |  | | --- | | **Petiole: intensity of anthocyanin coloration on upper side** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | absent or very weak | |  | |  |  |  | 1 |
|  |  | very weak to weak | |  | |  |  |  | 2 |
|  |  | weak | |  | |  |  | Ice Punch | 3 |
|  |  | weak to medium | |  | |  |  |  | 4 |
|  |  | medium | |  | |  |  | Fisdra | 5 |
|  |  | medium to strong | |  | |  |  |  | 6 |
|  |  | strong | |  | |  |  | Freedom | 7 |
|  |  | strong to very strong | |  | |  |  |  | 8 |
|  |  | very strong | |  | |  |  |  | 9 |
| **24.** | **(\*)** | **QN** | **VG** |  | **(a)** |  | | | |
|  |  | |  | | --- | | **Petiole: intensity of anthocyanin coloration on lower side** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | absent or weak | |  | |  |  | Ice Punch | 1 |
|  |  | medium | |  | |  |  | Early Red | 2 |
|  |  | strong | |  | |  |  | Freedom | 3 |
| **25.** | **(\*)** | **QN** | **MG/MS/VG** |  |  |  | | | |
|  |  | |  | | --- | | **Transitional leaves: number of partly bract‑colored leaf blades** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | very few | |  | |  |  |  | 1 |
|  |  | very few to few | |  | |  |  |  | 2 |
|  |  | few | |  | |  |  | Fismille | 3 |
|  |  | few to medium | |  | |  |  |  | 4 |
|  |  | medium | |  | |  |  | Duearcwi | 5 |
|  |  | medium to many | |  | |  |  |  | 6 |
|  |  | many | |  | |  |  | Renate | 7 |
|  |  | many to very many | |  | |  |  |  | 8 |
|  |  | very many | |  | |  |  |  | 9 |
| **26.** | **(\*)** | **QN** | **MG/MS/VG** |  |  |  | | | |
|  |  | |  | | --- | | **Transitional leaves: number of fully bract‑colored leaf blades** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | very few | |  | |  |  |  | 1 |
|  |  | very few to few | |  | |  |  |  | 2 |
|  |  | few | |  | |  |  | Renate | 3 |
|  |  | few to medium | |  | |  |  |  | 4 |
|  |  | medium | |  | |  |  | Duecitric | 5 |
|  |  | medium to many | |  | |  |  |  | 6 |
|  |  | many | |  | |  |  | Fismille | 7 |
|  |  | many to very many | |  | |  |  |  | 8 |
|  |  | very many | |  | |  |  |  | 9 |
| **27.** | **(\*)** | **QN** | **VG** |  |  |  | | | |
|  |  | |  | | --- | | **Transitional leaves: degree of lobing** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | absent or weak | |  | |  |  | Duepre | 1 |
|  |  | medium | |  | |  |  | Christmas Angel | 2 |
|  |  | strong | |  | |  |  | Lazzporega | 3 |
| **28.** |  | **QN** | **VG** |  |  |  | | | |
|  |  | |  | | --- | | **Transitional leaves: curvature along main vein** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | absent or weak | |  | |  |  | Fiscor | 1 |
|  |  | medium | |  | |  |  | Eckalverta | 2 |
|  |  | strong | |  | |  |  | Winred | 3 |
| **29.** | **(\*)** | **QN** | **MG/VG** |  |  |  | | | |
|  |  | |  | | --- | | **Bract: number** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | very few | |  | |  |  |  | 1 |
|  |  | very few to few | |  | |  |  |  | 2 |
|  |  | few | |  | |  |  | Duecitric | 3 |
|  |  | few to medium | |  | |  |  |  | 4 |
|  |  | medium | |  | |  |  | Renate | 5 |
|  |  | medium to many | |  | |  |  |  | 6 |
|  |  | many | |  | |  |  | Fismille | 7 |
|  |  | many to very many | |  | |  |  |  | 8 |
|  |  | very many | |  | |  |  |  | 9 |
| **30.** | **(\*)** | **QN** | **MG/MS/VG** | **(+)** |  |  | | | |
|  |  | |  | | --- | | **Largest bract: length** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | very short | |  | |  |  |  | 1 |
|  |  | very short to short | |  | |  |  |  | 2 |
|  |  | short | |  | |  |  | Stargazer | 3 |
|  |  | short to medium | |  | |  |  |  | 4 |
|  |  | medium | |  | |  |  | Ice Punch | 5 |
|  |  | medium to long | |  | |  |  |  | 6 |
|  |  | long | |  | |  |  | Temptation Red | 7 |
|  |  | long to very long | |  | |  |  |  | 8 |
|  |  | very long | |  | |  |  |  | 9 |
| **31.** | **(\*)** | **QN** | **MG/MS/VG** | **(+)** |  |  | | | |
|  |  | |  | | --- | | **Largest bract: width** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | very narrow | |  | |  |  |  | 1 |
|  |  | very narrow to narrow | |  | |  |  |  | 2 |
|  |  | narrow | |  | |  |  | Stargazer | 3 |
|  |  | narrow to medium | |  | |  |  |  | 4 |
|  |  | medium | |  | |  |  | Ice Punch | 5 |
|  |  | medium to broad | |  | |  |  |  | 6 |
|  |  | broad | |  | |  |  | Duepremimhopi | 7 |
|  |  | broad to very broad | |  | |  |  |  | 8 |
|  |  | very broad | |  | |  |  |  | 9 |
| **32.** | **(\*)** | **PQ** | **VG** |  |  |  | | | |
|  |  | |  | | --- | | **Largest bract: shape** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | ovate | |  | |  |  | Eckalon | 1 |
|  |  | elliptic | |  | |  |  | Fiscor | 2 |
|  |  | oblanceolate | |  | |  |  | Dueavant | 3 |
|  |  | obovate | |  | |  |  |  | 4 |
| **33.** | **(\*)** | **PQ** | **VG** |  |  |  | | | |
|  |  | |  | | --- | | **Bract: main color of upper side** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | RHS Colour Chart (indicate reference number) | |  | |  |  |  |  |
| **34.** | **(\*)** | **PQ** | **VG** |  |  |  | | | |
|  |  | |  | | --- | | **Bract: secondary color of upper side** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | RHS Colour Chart (indicate reference number) | |  | |  |  |  |  |
| **35.** | **(\*)** | **PQ** | **VG** |  |  |  | | | |
|  |  | |  | | --- | | **Bract: distribution of secondary color of upper side** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | none | |  | |  |  |  | 1 |
|  |  | at the center | |  | |  |  |  | 2 |
|  |  | at the veins | |  | |  |  |  | 3 |
|  |  | at the margin | |  | |  |  |  | 4 |
|  |  | throughout | |  | |  |  |  | 5 |
| **36.** | **(\*)** | **PQ** | **VG** |  |  |  | | | |
|  |  | |  | | --- | | **Bract: pattern of secondary color of upper side** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | solid | |  | |  |  |  | 1 |
|  |  | spots | |  | |  |  |  | 2 |
|  |  | marbled | |  | |  |  |  | 3 |
|  |  | flushed | |  | |  |  |  | 4 |
| **37.** |  | **QN** | **VG** |  |  |  | | | |
|  |  | |  | | --- | | **Bract: area of secondary color** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | small | |  | |  |  |  | 1 |
|  |  | medium | |  | |  |  |  | 2 |
|  |  | large | |  | |  |  |  | 3 |
| **38.** | **(\*)** | **PQ** | **VG** |  |  |  | | | |
|  |  | |  | | --- | | **Bract: tertiary color of upper side** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | RHS Colour Chart (indicate reference number) | |  | |  |  |  |  |
| **39.** | **(\*)** | **PQ** | **VG** |  |  |  | | | |
|  |  | |  | | --- | | **Bract: distribution of tertiary color of upper side** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | none | |  | |  |  |  | 1 |
|  |  | at margin | |  | |  |  |  | 2 |
|  |  | at center | |  | |  |  |  | 3 |
|  |  | at veins | |  | |  |  |  | 4 |
|  |  | throughout | |  | |  |  |  | 5 |
| **40.** |  | **PQ** | **VG** |  |  |  | | | |
|  |  | |  | | --- | | **Bract: pattern of tertiary color of upper side** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | solid | |  | |  |  |  | 1 |
|  |  | spots | |  | |  |  |  | 2 |
|  |  | marbled | |  | |  |  |  | 3 |
|  |  | flushed | |  | |  |  |  | 4 |
| **41.** | **(\*)** | **PQ** | **VG** |  |  |  | | | |
|  |  | |  | | --- | | **Bract: main color of lower side** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | RHS Colour Chart (indicate reference number) | |  | |  |  |  |  |
| **42.** | **(\*)** | **PQ** | **VG** |  |  |  | | | |
|  |  | |  | | --- | | **Bract: secondary color of lower side** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | RHS Colour Chart (indicate reference number) | |  | |  |  |  |  |
| **43.** | **(\*)** | **PQ** | **VG** |  |  |  | | | |
|  |  | |  | | --- | | **Bract: distribution of secondary color of lower side** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | none | |  | |  |  |  | 1 |
|  |  | at the center | |  | |  |  |  | 2 |
|  |  | at the veins | |  | |  |  |  | 3 |
|  |  | at the margin | |  | |  |  |  | 4 |
|  |  | throughout | |  | |  |  |  | 5 |
| **44.** | **(\*)** | **PQ** | **VG** |  |  |  | | | |
|  |  | |  | | --- | | **Bract: pattern of secondary color of lower side** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | solid | |  | |  |  |  | 1 |
|  |  | spots | |  | |  |  |  | 2 |
|  |  | marbled | |  | |  |  |  | 3 |
|  |  | flushed | |  | |  |  |  | 4 |
| **45.** | **(\*)** | **PQ** | **VG** |  |  |  | | | |
|  |  | |  | | --- | | **Bract: tertiary color of lower side** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | RHS Colour Chart (indicate reference number) | |  | |  |  |  |  |
| **46.** | **(\*)** | **PQ** | **VG** |  |  |  | | | |
|  |  | |  | | --- | | **Bract: distribution of tertiary color of lower side** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | none | |  | |  |  |  | 1 |
|  |  | at the center | |  | |  |  |  | 2 |
|  |  | at the veins | |  | |  |  |  | 3 |
|  |  | at the margin | |  | |  |  |  | 4 |
|  |  | throughout | |  | |  |  |  | 5 |
| **47.** |  | **PQ** | **VG** |  |  |  | | | |
|  |  | |  | | --- | | **Bract: pattern of tertiary color of lower side** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | solid | |  | |  |  |  | 1 |
|  |  | spots | |  | |  |  |  | 2 |
|  |  | marbled | |  | |  |  |  | 3 |
|  |  | flushed | |  | |  |  |  | 4 |
| **48.** |  | **QN** | **VG** |  |  |  | | | |
|  |  | |  | | --- | | **Bract: folding along the main vein** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | absent or very weak | |  | |  |  | Fiscor | 1 |
|  |  | weak | |  | |  |  |  | 2 |
|  |  | medium | |  | |  |  |  | 3 |
|  |  | strong | |  | |  |  |  | 4 |
|  |  | very strong | |  | |  |  | Duetwister | 5 |
| **49.** |  | **QN** | **VG** |  |  |  | | | |
|  |  | |  | | --- | | **Bract: twisting** | | |  | |  |  |  |  |
|  |  | absent or very weak | |  | |  |  | Fiscor | 1 |
|  |  | weak | |  | |  |  |  | 2 |
|  |  | medium | |  | |  |  |  | 3 |
|  |  | strong | |  | |  |  |  | 4 |
|  |  | very strong | |  | |  |  | Future | 5 |
| **50.** |  | **QN** | **VG** |  |  |  | | | |
|  |  | |  | | --- | | **Bract: degree of rugosity** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | absent or very weak | |  | |  |  | Ice Punch | 1 |
|  |  | weak | |  | |  |  | Duearcwi | 3 |
|  |  | medium | |  | |  |  | Purple Heart | 5 |
|  |  | strong | |  | |  |  | Winwhite | 7 |
|  |  | very strong | |  | |  |  | Winred | 9 |
| **51.** | **(\*)** | **QN** | **VG** |  |  |  | | | |
|  |  | |  | | --- | | **Cyme: width** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | very narrow | |  | |  |  |  | 1 |
|  |  | very narrow to narrow | |  | |  |  |  | 2 |
|  |  | narrow | |  | |  |  | Duecitric | 3 |
|  |  | narrow to medium | |  | |  |  |  | 4 |
|  |  | medium | |  | |  |  | Eckabud | 5 |
|  |  | medium to broad | |  | |  |  |  | 6 |
|  |  | broad | |  | |  |  | Purple Heart | 7 |
|  |  | broad to very broad | |  | |  |  |  | 8 |
|  |  | very broad | |  | |  |  |  | 9 |
| **52.** | **(\*)** | **QN** | **VG** |  |  |  | | | |
|  |  | |  | | --- | | **Cyathium: size of glands** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | very small | |  | |  |  |  | 1 |
|  |  | very small to small | |  | |  |  |  | 2 |
|  |  | small | |  | |  |  | Purple Heart | 3 |
|  |  | small to medium | |  | |  |  |  | 4 |
|  |  | medium | |  | |  |  | Fismars Marble | 5 |
|  |  | medium to large | |  | |  |  |  | 6 |
|  |  | large | |  | |  |  | Peterstar | 7 |
|  |  | large to very large | |  | |  |  |  | 8 |
|  |  | very large | |  | |  |  |  | 9 |
| **53.** | **(\*)** | **PQ** | **VG** |  |  |  | | | |
|  |  | |  | | --- | | **Cyathium: main color of gland** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | yellow | |  | |  |  | Duepremimapri | 1 |
|  |  | orange | |  | |  |  | Peterstar | 2 |
|  |  | red | |  | |  |  | Temptation Red | 3 |
| **54.** |  | **QL** | **VG** |  |  |  | | | |
|  |  | |  | | --- | | **Cyathium:   deformation of glands** | | |  | |  |  |  |  |
|  |  | absent | |  | |  |  |  | 1 |
|  |  | present | |  | |  |  |  | 9 |
| **55.** |  | **QN** | **VG** | **(+)** |  |  | | | |
|  |  | |  | | --- | | **Cyathium: intensity of red coloration** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | absent or very weak | |  | |  |  |  | 1 |
|  |  | very weak to weak | |  | |  |  |  | 2 |
|  |  | weak | |  | |  |  |  | 3 |
|  |  | weak to medium | |  | |  |  |  | 4 |
|  |  | medium | |  | |  |  |  | 5 |
|  |  | medium to strong | |  | |  |  |  | 6 |
|  |  | strong | |  | |  |  |  | 7 |
|  |  | strong to very strong | |  | |  |  |  | 8 |
|  |  | very strong | |  | |  |  |  | 9 |
| **56.** |  | **QN** | **MG/VG** |  |  |  | | | |
|  |  | |  | | --- | | **Time of opening of cyathia** | | |  | |  |  |  |  |
|  |  | very early | |  | |  |  |  | 1 |
|  |  | very early to early | |  | |  |  |  | 2 |
|  |  | early | |  | |  |  | Estrella Red | 3 |
|  |  | early to medium | |  | |  |  |  | 4 |
|  |  | medium | |  | |  |  | Fismars Crème | 5 |
|  |  | medium to late | |  | |  |  |  | 6 |
|  |  | late | |  | |  |  | Duearcwi | 7 |
|  |  | late to very late | |  | |  |  |  | 8 |
|  |  | very late | |  | |  |  |  | 9 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  | | --- | --- | --- | --- | | 8. | Explanations on the Table of Characteristics | | | |  | | | | | *8.1* | *Explanations covering several characteristics* | | | |  | |  | | --- | |  | | | | |  |  |  |  | |  | Characteristics containing the following key in the Table of Characteristics should be examined as indicated below: | | | |  | | | | | |  | | --- | | (a) | | |  | | --- | | Observations on the leaf should be made on the second fully developed leaf from the top. | | | | |  |  |  |  | | |  | | --- | | (b) | | |  | | --- | | The main color is the color with the largest surface area. In cases where the areas of the main, secondary and tertiary colors are too similar to reliably decide which color has the largest area, the darkest color is considered to be the main color and the second darkest color is considered to be the secondary color.The main color is the color with the largest surface area. In cases where the areas of the main, secondary and tertiary colors are too similar to reliably decide which color has the largest area, the darkest color is considered to be the main color and the second darkest color is considered to be the secondary color. | | | | |
| |  |  | | --- | --- | |  | | | |  | | --- | | *8.2* | | *Explanations for individual characteristics* | |  | | | |  | | --- | | Ad. 30: Largest bract: length  including petioles | | | | |  | | --- | | Ad. 31: Largest bract: width  including petioles | | | | |  | | --- | | Ad. 55: Cyathium: intensity of red coloration  wordml://76.png | | | |
| |  |  | | --- | --- | |  | | | |  | | --- | | 8.3 | | |  | | --- | | The optimum stage of development for the assessment of the characteristics is the time of opening of three cyathia on the plants. | | |

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| |  |  |  |  |  | | --- | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  |  | | --- | --- | | 9. | Literature | | |  | | |

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| --- | --- | --- |
| |  |  | | --- | --- | | 10. | Technical Questionnaire | |
|  |
| |  |  |  | | --- | --- | --- | | TECHNICAL QUESTIONNAIRE | Page {x} of {y} | Reference Number: | |
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| |  |  | | --- | --- | |  | Application date: (not to be filled in by the applicant) | | TECHNICAL QUESTIONNAIRE to be completed in connection with an application for plant breeders' rights | | |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  |  |  |  | | 1. | Subject of the Technical Questionnaire | | | | |  |  |  |  |  | |  | |  | | --- | | 1.1 | | Botanical name | |  | | --- | | *Euphorbia pulcherrima* Willd. ex Klotzsch | | |  | | --- | |  | | |  |  |  |  |  | |  | |  | | --- | | 1.2 | | Common name | |  | | --- | | Poinsettia | |  | |  |  |  | |  | | --- | |  | |  | |  |  |  |  |  | |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  |  |  |  | | 2. | Applicant | | | | |  |  |  |  |  | |  | Name | |  |  | |  |  |  |  |  | |  | Address | |  |  | |  |  |  |  | |  |  |  |  | |  |  |  |  |  | |  | Telephone No. | |  |  | |  |  |  |  |  | |  | Fax No. | |  |  | |  |  |  |  |  | |  | E-mail address | |  |  | |  |  |  |  |  | |  | Breeder (if different from | |  |  | |  | applicant) | |  |  | |  |  |  |  |  | |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  |  |  |  | | 3. | Proposed denomination and breeder's reference | | | | |  |  |  |  |  | |  | Proposed denomination | |  |  | |  | (if available) | |  |  | |  |  |  |  |  | |  | Breeder's reference | |  |  | |  |  |  |  |  | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | | TECHNICAL QUESTIONNAIRE | | | Page {x} of {y} | Reference Number: | |  | | | | | | |  | | --- | | #4. | | Information on the breeding scheme and propagation of the variety | | | | |  |  |  | | | |  | 4.1 | Breeding scheme | | | |  | Variety resulting from: | | | | |  | |  |  |  |  |  | | --- | --- | --- | --- | --- | | |  | | --- | | 4.1.1 | | |  | | --- | | Crossing | |  | | |  | | --- | | (a) | | |  | | --- | | controlled cross | | [ ] | |  | |  | | --- | | (please state parent variety)  (…………………..……………..…)                          x        (……………..…………………..…)  female parent                                                                     male parent | | | | |  | | --- | | (b) | | |  | | --- | | partially known cross | | [ ] | |  | |  | | --- | | (please state known parent variety(ies))  (…………………..……………..…)                          x        (……………..…………………..…)  female parent                                                                     male parent | | | | |  | | --- | | (c) | | |  | | --- | | unknown cross | | [ ] | |  |  | | | |  | | --- | | 4.1.2 | | |  | | --- | | Mutation  (please state parent variety) | | [ ] | |  |  | | |  |  | | | |  | | --- | | 4.1.3 | | |  | | --- | | Discovery and development  (please state where and when discovered and how developed) | | [ ] | |  |  | | |  |  | | | |  | | --- | | 4.1.4 | | Other (Please provide details) | [ ] | |  |  | | |  |  | | | | | | |

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| |  |  |  | | --- | --- | --- | |  |  |  | |  | 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) | [ ] | |  |  |  | |  |  |  | |  |  |  | | | |  | |  |  | | --- | --- | | |  | | --- | |  | | | | |

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

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

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| |  |  |  | | --- | --- | --- | | 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 | | | | | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | *Example* | |  | | --- | | *Leaf blade: shape* | | |  | | --- | | *deltoïd* | | |  | | --- | | *circular* | | |  |  |  |  | |  |  |  |  | |  |  |  |  | | | |  | Comments: | |

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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.] | | | | | |  |  |  |  |  | |

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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 |  |  | |  |  |  | |  |  | |  |  |  |  |  |  | | |
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