|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  | | --- | --- | --- | |  |  | **E** | |  |  |  | |  | wordml://75.png | |  | | --- | | **TG/83/5(proj.1)** | | **ORIGINAL:** English | | **DATE:** 2022-05-27 | | | **INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS** | | | |  | Geneva |  | |  | |  |  |  | | --- | --- | --- | |  |  |  | |  | DRAFT |  | |  |  |  | |  | |  |  |  | |  | |  | | --- | |  | | **TRIFOLIATE ORANGE** | |  | | |  | | --- | |  | | |  | | --- | | UPOV Code(s): PONCI\_TRI | | |  | | |  | | |  |  | | --- | --- | | |  | | --- | | *Citrus trifoliata* L. | | |  | | |  | | |  | | --- | | \* | | |  |  |  | | |  | | --- | | **GUIDELINES** | |  | | **FOR THE CONDUCT OF TESTS** | |  | | **FOR DISTINCTNESS, UNIFORMITY AND STABILITY** | | | | |  |  |  | | |  | | --- | | *prepared by experts from Spain* | | *to be considered by the* | | |  | | --- | | *Technical Working Party for Fruit Crops* | | | *at its fifty-third session, to be held virtually,* | | |  | | --- | | *from 2022-07-11 to 2022-07-15* | | | | | | *Disclaimer: this document does not represent UPOV policies or guidance* | | | | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  | | --- | | Alternative names:\* | | | | | | | |  | | --- | |  | | | | | | | *Botanical name* | *English* | *French* | *German* | *Spanish* | | |  | | --- | | *Citrus trifoliata* L. | | |  | | --- | | Trifoliate Orange | | |  | | --- | |  | | |  | | --- | | Dreiblättrige Orange | | |  | | --- | | Naranjo trifoliado | | | | | |  |  |  | | 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. | |  | | | | |

To be reviewed:

GROUP 5 – ALTERNATIVE NAMES AND CORRESPONDING SUBGROUPS[[1]](#footnote-1)\*

| *Latin* | *Sub­group* | *English* | *French* | *German* | *Spanish* |
| --- | --- | --- | --- | --- | --- |
| *Citrus clementina* Hort. ex Tan. x *Poncirus trifoliata* (L.) Raf. | HPO | Citrentin | Citrentin |  |  |
| *Citrus limon* (L.) Burm. x *Poncirus trifoliata* (L.) Raf. | CTL | Citremon | Citremon |  |  |
| *Citrus paradisi* Macf. x *Poncirus trifoliata* (L.) Raf. | CML | Citrumelo | Citrumelo |  |  |
| *Citrus reticulata* Blanco x *Poncirus trifoliata* (L.) Raf. | CTI | Citrandarin | Citrandarin |  |  |
| *Citrus sinensis* (L.) Osb. x *Poncirus trifoliata* (L.) Raf. | CTG | Citrange | Citrange |  |  |
| *Fortunella* sp. x *Poncirus trifoliata* (L.) Raf. | HPO | Citrumquat | Citrumquat |  |  |
| *Poncirus polyandra* S. Q. Ding et al. | PON |  |  |  |  |
| *Poncirus trifoliata* (L.) Raf. | PON | Golden Apple, Trifoliate Orange | Oranger trifolié | Dreiblättrige Orange, Dreiblättrige Bitterorange | Naranjo trifoliado |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  | | --- | --- | | TABLE OF CONTENTS | PAGE | |  |  | | |  |  |  | | --- | --- | --- | | 1. | SUBJECT OF THESE TEST GUIDELINES.......................................................................................................... | [3](#Section1) | |  |  |  | | 2. | MATERIAL REQUIRED..................................................................................................................... | [3](#Section2) | |  |  |  | | 3. | METHOD OF EXAMINATION............................................................................................................... | [3](#Section3) | |  |  |  | |  | |  |  |  | | --- | --- | --- | | 3.1 | Number of Growing Cycles................................................................................................................. | [3](#Section3-1) | | 3.2 | Testing Place................................................................................................................... | [1](#Section3-2) | | 3.3 | Conditions for Conducting the Examination............................................................................................... | [1](#Section3-3) | | 3.4 | Test Design................................................................................................................. | [1](#Section3-4) | | 3.5 | Additional Tests................................................................................................................... | [3](#Section3-5) | | | |  |  |  | | 4. | ASSESSMENT OF DISTINCTNESS, UNIFORMITY AND STABILITY................................................................. | [3](#Section4) | |  |  |  | |  | |  |  |  | | --- | --- | --- | | 4.1 | Distinctness.......................................................................................................... | [1](#Section4-1) | | 4.2 | Uniformity............................................................................................................ | [1](#Section4-2) | | 4.3 | Stability............................................................................................................... | [1](#Section4-3) | | | |  |  |  | | 5. | GROUPING OF VARIETIES AND ORGANIZATION OF THE GROWING TRIAL................................................ | [4](#Section5) | |  |  |  | | 6. | INTRODUCTION TO THE TABLE OF CHARACTERISTICS................................................................................ | [4](#Section6) | |  |  |  | |  | |  |  |  | | --- | --- | --- | | 6.1 | Categories of Characteristics...................................................................................................... | [4](#Section6-1) | | 6.2 | States of Expression and Corresponding Notes........................................................................................ | [4](#Section6-2) | | 6.3 | Types of Expression............................................................................................................ | [4](#Section6-3) | | 6.4 | Example Varieties.............................................................................................................. | [4](#Section6-4) | | 6.5 | Legend................................................................................................................. | [5](#Section6-5) | | | |  |  |  | | 7. | TABLE OF CHARACTERISTICS/TABLEAU DES CARACTÈRES/MERKMALSTABELLE/TABLA DE CARACTERES.................................................................................................................. | [6](#Section7) | |  |  |  | | 8. | EXPLANATIONS ON THE TABLE OF CHARACTERISTICS............................................................................... | [28](#Section8) | |  | |  |  |  | | --- | --- | --- | | |  | | --- | | 8.1 | | Explanations for individual characteristics................................................................................................. | [29](#Section8-2) | | | |  |  |  | | 9. | LITERATURE................................................................................................................... | [30](#Section9) | |  |  |  | | 10 | TECHNICAL QUESTIONNAIRE............................................................................................................ | [31](#Section10) | |  |  |  | |  | |  | | --- | |  | |  | | | |

|  |  |
| --- | --- |
| 1. | Subject of these Test Guidelines |
|  |  |
|  | |  | | --- | | These Test Guidelines apply to all varieties of *Citrus trifoliata* L. | |

|  |  |
| --- | --- |
|  |  |
|  |  |
| 2. | Material Required |
|  |  |

|  |  |
| --- | --- |
|  |  |
| 3. | Method of Examination |
|  |  |

|  |  |
| --- | --- |
|  |  |
| 4. | Assessment of Distinctness, Uniformity and Stability |

|  |  |
| --- | --- |
| 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: |
|  | |  |  |  | | --- | --- | --- | |  |  |  | | |  |  | | --- | --- | | |  | | --- | |  | | | | | |
| 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 8.1 | | | | |  |  |  |  | | 6 | |  | | --- | | Not applicable | | |  |  | | --- | --- | | |  | | --- | |  | | | | |  |  |  |  | | 7 | |  | | --- | | Not applicable | | | | | |

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

|  |  | English | | français | | deutsch | español | Example Varieties Exemples Bei ejemplo | Note/ |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **1.** | **(\*)** | **PQ** |  |  |  |  | | | |
|  |  | |  | | --- | | **Tree: growth habit** | | |  | |  |  |  |  |
|  |  | upright | |  | |  |  | Benecke (PON) | 1 |
|  |  | spreading | |  | |  |  | CPB 4475 (CML) | 2 |
|  |  | drooping | |  | |  |  |  | 3 |
| **2.** |  | **QN** | **VG** |  |  |  | | | |
|  |  | |  | | --- | | **Tree: density of spines** | | |  | |  |  |  |  |
|  |  | absent | |  | |  |  | C-35 (CTG) | 1 |
|  |  | sparse | |  | |  |  |  | 2 |
|  |  | intermediate | |  | |  |  |  | 3 |
|  |  | dense | |  | |  |  |  | 4 |
| **3.** |  | **QN** | **VG** |  |  |  | | | |
|  |  | |  | | --- | | **Tree: length of spines** | | |  | |  |  |  |  |
|  |  | short | |  | |  |  | CPB 4475 (CML) | 3 |
|  |  | medium | |  | |  |  |  | 5 |
|  |  | long | |  | |  |  | Benecke (PON) | 7 |
| **4.** | **(\*)** | **QL** | **VG** |  |  |  | | | |
|  |  | |  | | --- | | **Young leaf: presence of antho­cyanin coloration** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | absent | |  | |  |  | Troyer (CTG) | 1 |
|  |  | present | |  | |  |  | Forner Alcaide 5 (CTI) | 3 |
| **5.** |  | **QN** | **VG** |  |  |  | | | |
|  |  | |  | | --- | | **Young leaf: intensity of anthocyanin coloration** | | |  | |  |  |  |  |
|  |  | weak | |  | |  |  |  | 3 |
|  |  | medium | |  | |  |  |  | 5 |
|  |  | strong | |  | |  |  |  | 7 |
| **6.** | **(\*)** | **PQ** |  |  |  |  | | | |
|  |  | |  | | --- | | **Leaf: caducity** | | |  | |  |  |  |  |
|  |  | perennial | |  | |  |  | CPB 4475 (CML) | 1 |
|  |  | partially caducous | |  | |  |  | Troyer (CTG) | 2 |
|  |  | caducous | |  | |  |  | Benecke (PON) | 3 |

|  |  | English | | français | | deutsch | español | Example Varieties Exemples Bei ejemplo | Note/ |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **7.** | **(\*)** | **PQ** | **VG** |  |  |  | | | |
|  |  | |  | | --- | | **Leaf: number of leaflets** | | |  | |  |  |  |  |
|  |  | one only | |  | |  |  |  | 1 |
|  |  | variable | |  | |  |  | Troyer (CTG) | 2 |
|  |  | mostly three | |  | |  |  | Benecke (PON) | 3 |
| **8.** |  | **QN** | **MS** |  |  |  | | | |
|  |  | |  | | --- | | **Leaf blade: length (apical leaflet in case of compound leaf)** | | |  | |  |  |  |  |
|  |  | short | |  | |  |  |  | 3 |
|  |  | medium | |  | |  |  | Troyer (CTG) | 5 |
|  |  | long | |  | |  |  | CPB 4475 (CML) | 7 |
| **9.** |  | **QN** |  |  |  |  | | | |
|  |  | |  | | --- | | **Leaf blade: width (as for 9)** | | |  | |  |  |  |  |
|  |  | narrow | |  | |  |  |  | 3 |
|  |  | medium | |  | |  |  |  | 5 |
|  |  | broad | |  | |  |  |  | 7 |
| **10** |  | **QN** | **MS** |  |  |  | | | |
|  |  | |  | | --- | | **Leaf blade: ratio length/width (as for 9)** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | small | |  | |  |  | Benecke (PON) | 3 |
|  |  | medium | |  | |  |  | C-35 (CTG) | 5 |
|  |  | large | |  | |  |  |  | 7 |
| **11** |  | **QN** | **MS** |  |  |  | | | |
|  |  | |  | | --- | | **Leaf blade: length  (lateral leaflet in case of compound leaf)** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | short | |  | |  |  |  | 3 |
|  |  | medium | |  | |  |  | Troyer (CTG) | 5 |
|  |  | long | |  | |  |  | CPB 4475 (CML) | 7 |

|  |  | English | | français | | deutsch | español | Example Varieties Exemples Bei ejemplo | Note/ |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **12** |  | **QN** |  |  |  |  | | | |
|  |  | |  | | --- | | **Leaf blade: width (as for 12)** | | |  | |  |  |  |  |
|  |  | narrow | |  | |  |  |  | 3 |
|  |  | medium | |  | |  |  |  | 5 |
|  |  | broad | |  | |  |  |  | 7 |
| **13** |  | **QN** | **MS** |  |  |  | | | |
|  |  | |  | | --- | | **Leaf blade: ratio length/width (as for 12)** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | small | |  | |  |  | Benecke (PON) | 3 |
|  |  | medium | |  | |  |  |  | 5 |
|  |  | large | |  | |  |  | CPB 4475 (CML) | 7 |
| **14** |  | **QN** |  |  |  |  | | | |
|  |  | |  | | --- | | **Leaf blade: ratio length of blade of apical leaflet/length of blade of lateral leaflet** | | |  | |  |  |  |  |
|  |  | small | |  | |  |  |  | 3 |
|  |  | medium | |  | |  |  |  | 5 |
|  |  | large | |  | |  |  |  | 7 |
| **15** |  | **QN** |  |  |  |  | | | |
|  |  | |  | | --- | | **Leaf blade: shape in cross section (as for 9)** | | |  | |  |  |  |  |
|  |  | straight or weakly concave | |  | |  |  |  | 1 |
|  |  | intermediate | |  | |  |  |  | 2 |
|  |  | strongly concave | |  | |  |  |  | 3 |
| **16** |  | **QN** |  |  |  |  | | | |
|  |  | |  | | --- | | **Leaf blade: twisting** | | |  | |  |  |  |  |
|  |  | absent or weak | |  | |  |  |  | 1 |
|  |  | intermediate | |  | |  |  |  | 2 |
|  |  | strong | |  | |  |  |  | 3 |

|  |  | English | | français | | deutsch | español | Example Varieties Exemples Bei ejemplo | Note/ |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **17** |  | **QN** |  |  |  |  | | | |
|  |  | |  | | --- | | **Leaf blade: blistering** | | |  | |  |  |  |  |
|  |  | absent or weak | |  | |  |  |  | 1 |
|  |  | intermediate | |  | |  |  |  | 2 |
|  |  | strong | |  | |  |  |  | 3 |
| **18** |  | **QN** |  |  |  |  | | | |
|  |  | |  | | --- | | **Leaf blade: green color** | | |  | |  |  |  |  |
|  |  | light | |  | |  |  |  | 3 |
|  |  | medium | |  | |  |  |  | 5 |
|  |  | dark | |  | |  |  |  | 7 |
| **19** |  | **QN** |  |  |  |  | | | |
|  |  | |  | | --- | | **Leaf blade: undula­tion of margin** | | |  | |  |  |  |  |
|  |  | absent or weak | |  | |  |  |  | 1 |
|  |  | intermediate | |  | |  |  |  | 2 |
|  |  | strong | |  | |  |  |  | 3 |
| **20** | **(\*)** | **PQ** | **VG** |  |  |  | | | |
|  |  | |  | | --- | | **Leaf blade: incisions of margin** | | |  | |  |  |  |  |
|  |  | absent | |  | |  |  | C-35 (CTG) | 1 |
|  |  | present | |  | |  |  | CPB 4475 (CML) | 9 |
| **21** | **(\*)** | **PQ** | **VG** |  |  |  | | | |
|  |  | |  | | --- | | **Leaf blade: shape of apex** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | acuminate | |  | |  |  |  | 1 |
|  |  | acute | |  | |  |  | Carrizo (CTG) | 2 |
|  |  | obtuse | |  | |  |  |  | 3 |
|  |  | rounded | |  | |  |  | C-35 (CTG) | 4 |
| **22** |  | **QL** | **VG** |  |  |  | | | |
|  |  | |  | | --- | | **Leaf blade: emargination at tip** | | |  | |  |  |  |  |
|  |  | absent | |  | |  |  | CPB 4475 (CML) | 1 |
|  |  | present | |  | |  |  | C-35 (CTG) | 9 |

|  |  | English | | français | | deutsch | español | Example Varieties Exemples Bei ejemplo | Note/ |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **23** |  | **QN** |  |  |  |  | | | |
|  |  | |  | | --- | | **Petiole: length** | | |  | |  |  |  |  |
|  |  | short | |  | |  |  |  | 3 |
|  |  | medium | |  | |  |  |  | 5 |
|  |  | long | |  | |  |  |  | 7 |
| **24** | **(\*)** | **QL** | **VG** |  |  |  | | | |
|  |  | |  | | --- | | **Petiole: presence of wings** | | |  | |  |  |  |  |
|  |  | absent | |  | |  |  | CPB 4475 (CML) | 1 |
|  |  | present | |  | |  |  | Carrizo (CTG) | 9 |
| **25** |  | **QN** |  |  |  |  | | | |
|  |  | |  | | --- | | **Varieties with petiole wings present only: Petiole: width of wings** | | |  | |  |  |  |  |
|  |  | narrow | |  | |  |  |  | 3 |
|  |  | medium | |  | |  |  |  | 5 |
|  |  | broad | |  | |  |  |  | 7 |
| **26** |  | **QL** | **VG** |  |  |  | | | |
|  |  | |  | | --- | | **Flower bud: pres­ence of anthocyanin coloration** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | absent | |  | |  |  | C-35 (CTG) | 1 |
|  |  | present | |  | |  |  | Flying Dragon (PON) | 9 |
| **27** |  | **QN** |  |  |  |  | | | |
|  |  | |  | | --- | | **Flower bud: inten­sity of anthocyanin coloration** | | |  | |  |  |  |  |
|  |  | weak | |  | |  |  |  | 3 |
|  |  | medium | |  | |  |  |  | 5 |
|  |  | strong | |  | |  |  |  | 7 |
| **28** |  | **QN** | **MS** |  |  |  | | | |
|  |  | |  | | --- | | **Flower: diameter of calyx** | | |  | |  |  |  |  |
|  |  | small | |  | |  |  |  | 3 |
|  |  | medium | |  | |  |  | Troyer (CTG) | 5 |
|  |  | large | |  | |  |  | CPB 4475 (CML) | 7 |

|  |  | English | | français | | deutsch | español | Example Varieties Exemples Bei ejemplo | Note/ |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **29** |  | **QN** | **MS** |  |  |  | | | |
|  |  | |  | | --- | | **Flower: length of petal** | | |  | |  |  |  |  |
|  |  | short | |  | |  |  |  | 3 |
|  |  | medium | |  | |  |  | Forner Alcaide 5 (CTI) | 5 |
|  |  | long | |  | |  |  | Troyer (CTG) | 7 |
| **30** |  | **QN** |  |  |  |  | | | |
|  |  | |  | | --- | | **Flower: width of petal** | | |  | |  |  |  |  |
|  |  | narrow | |  | |  |  |  | 3 |
|  |  | medium | |  | |  |  |  | 5 |
|  |  | broad | |  | |  |  |  | 7 |
| **31** |  | **QN** |  |  |  |  | | | |
|  |  | |  | | --- | | **Flower: ratio length/ width of petal** | | |  | |  |  |  |  |
|  |  | small | |  | |  |  |  | 3 |
|  |  | medium | |  | |  |  |  | 5 |
|  |  | large | |  | |  |  |  | 7 |
| **32** |  | **QN** |  |  |  |  | | | |
|  |  | |  | | --- | | **Flower: length of stamens** | | |  | |  |  |  |  |
|  |  | short | |  | |  |  |  | 3 |
|  |  | medium | |  | |  |  |  | 5 |
|  |  | long | |  | |  |  |  | 7 |
| **33** |  | **QL** |  |  |  |  | | | |
|  |  | |  | | --- | | **Stamen: color of filament** | | |  | |  |  |  |  |
|  |  | white | |  | |  |  | Carrizo (CTG) | 1 |
|  |  | pink | |  | |  |  | Forner Alcaide 13 (CTI) | 2 |
| **34** |  | **PQ** |  |  |  |  | | | |
|  |  | |  | | --- | | **Anther: color** | | |  | |  |  |  |  |
|  |  | white | |  | |  |  |  | 1 |
|  |  | light yellow | |  | |  |  |  | 2 |
|  |  | medium yellow | |  | |  |  |  | 3 |

|  |  | English | | français | | deutsch | español | Example Varieties Exemples Bei ejemplo | Note/ |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **35** |  | **QL** | **VS** |  |  |  | | | |
|  |  | |  | | --- | | **Anther: pollen viability** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | absent or low | |  | |  |  |  | 1 |
|  |  | medium | |  | |  |  | Benecke (PON) | 2 |
|  |  | high | |  | |  |  | CPB 4475 (CML) | 3 |
| **36** |  | **QN** |  |  |  |  | | | |
|  |  | |  | | --- | | **Style: length** | | |  | |  |  |  |  |
|  |  | short | |  | |  |  |  | 3 |
|  |  | medium | |  | |  |  |  | 5 |
|  |  | long | |  | |  |  |  | 7 |
| **37** |  | **QL** | **VG** |  |  |  | | | |
|  |  | |  | | --- | | **Ovary: pubescence** | | |  | |  |  |  |  |
|  |  | absent | |  | |  |  | Forner Alcaide 5 (CTI) | 1 |
|  |  | present | |  | |  |  | Benecke (PON) | 9 |
| **38** | **(\*)** | **QN** | **MS** |  |  |  | | | |
|  |  | |  | | --- | | **Fruit: length** | | |  | |  |  |  |  |
|  |  | short | |  | |  |  | Forner Alcaide 5 (CTI) | 3 |
|  |  | medium | |  | |  |  |  | 5 |
|  |  | long | |  | |  |  | C-35 (CTG) | 7 |
| **39** |  | **QN** | **MS** |  |  |  | | | |
|  |  | |  | | --- | | **Fruit: diameter** | | |  | |  |  |  |  |
|  |  | small | |  | |  |  | Forner Alcaide 5 (CTI) | 3 |
|  |  | medium | |  | |  |  |  | 5 |
|  |  | large | |  | |  |  | C-35 (CTG) | 7 |
| **40** |  | **QN** |  |  |  |  | | | |
|  |  | |  | | --- | | **Fruit: ratio length/diameter** | | |  | |  |  |  |  |
|  |  | small | |  | |  |  |  | 3 |
|  |  | medium | |  | |  |  |  | 5 |
|  |  | large | |  | |  |  |  | 7 |

|  |  | English | | français | | deutsch | español | Example Varieties Exemples Bei ejemplo | Note/ |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **41** |  | **QN** |  |  |  |  | | | |
|  |  | |  | | --- | | **Fruit: position of broadest part** | | |  | |  |  |  |  |
|  |  | towards stalk end | |  | |  |  |  | 1 |
|  |  | at middle | |  | |  |  |  | 2 |
|  |  | towards distal end | |  | |  |  |  | 3 |
| **42** |  | **PQ** | **MS** |  |  |  | | | |
|  |  | |  | | --- | | **Fruit: shape in transverse section** | | |  | |  |  |  |  |
|  |  | circular | |  | |  |  | Benecke (PON) | 1 |
|  |  | somewhat angular | |  | |  |  | CPB 4475 (CML) | 2 |
|  |  | scalloped | |  | |  |  |  | 3 |
| **43** |  | **PQ** |  |  |  |  | | | |
|  |  | |  | | --- | | **Fruit: general shape of proximal part (excluding neck, collar and depres­sion at stalk end)** | | |  | |  |  |  |  |
|  |  | flattened | |  | |  |  |  | 1 |
|  |  | slightly rounded | |  | |  |  |  | 2 |
|  |  | strongly rounded | |  | |  |  |  | 3 |
|  |  | tapered | |  | |  |  |  | 4 |
| **44** |  | **QL** | **VG** |  |  |  | | | |
|  |  | |  | | --- | | **Fruit: presence of neck** | | |  | |  |  |  |  |
|  |  | absent | |  | |  |  | Carrizo (CTG) | 1 |
|  |  | present | |  | |  |  | CPB 4475 (CML) | 9 |
| **45** |  | **QN** |  |  |  |  | | | |
|  |  | |  | | --- | | **Necked varieties only: Fruit: length of neck** | | |  | |  |  |  |  |
|  |  | short | |  | |  |  |  | 3 |
|  |  | medium | |  | |  |  |  | 5 |
|  |  | long | |  | |  |  |  | 7 |

|  |  | English | | français | | deutsch | español | Example Varieties Exemples Bei ejemplo | Note/ |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **46** |  | **QN** |  |  |  |  | | | |
|  |  | |  | | --- | | **Necked varieties only: Fruit: thickness of neck** | | |  | |  |  |  |  |
|  |  | thin | |  | |  |  |  | 3 |
|  |  | medium | |  | |  |  |  | 5 |
|  |  | thick | |  | |  |  |  | 7 |
| **47** |  | **QL** |  |  |  |  | | | |
|  |  | |  | | --- | | **Only varieties without fruit neck: Fruit: presence of depression at stalk end** | | |  | |  |  |  |  |
|  |  | absent | |  | |  |  |  | 1 |
|  |  | present | |  | |  |  |  | 9 |
| **48** |  | **QN** |  |  |  |  | | | |
|  |  | |  | | --- | | **Only varieties without fruit neck: Fruit: depth of depression at stalk end** | | |  | |  |  |  |  |
|  |  | shallow | |  | |  |  |  | 3 |
|  |  | medium | |  | |  |  |  | 5 |
|  |  | deep | |  | |  |  |  | 7 |
| **49** |  | **QL** |  |  |  |  | | | |
|  |  | |  | | --- | | **Fruit: presence of constriction at stalk end** | | |  | |  |  |  |  |
|  |  | absent | |  | |  |  |  | 1 |
|  |  | present | |  | |  |  |  | 9 |
| **50** |  | **QN** |  |  |  |  | | | |
|  |  | |  | | --- | | **Fruit: expression of constriction at stalk end** | | |  | |  |  |  |  |
|  |  | weak | |  | |  |  |  | 3 |
|  |  | medium | |  | |  |  |  | 5 |
|  |  | strong | |  | |  |  |  | 7 |

|  |  | English | | français | | deutsch | español | Example Varieties Exemples Bei ejemplo | Note/ |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **51** |  | **QN** | **MS** |  |  |  | | | |
|  |  | |  | | --- | | **Fruit: number of  radial grooves at stalk end** | | | |  | | --- | |  | | | |  | | --- | |  | | |  | | --- | |  | |  |  |
|  |  | absent or few | |  | |  |  | Carrizo (CTG) | 1 |
|  |  | intermediate | |  | |  |  | CPB 4475 (CML) | 2 |
|  |  | many | |  | |  |  |  | 3 |
| **52** |  | **QN** | **MS** |  |  |  | | | |
|  |  | |  | | --- | | **Fruit: length of radial grooves at stalk end** | | |  | |  |  |  |  |
|  |  | short | |  | |  |  | CPB 4475 (CML) | 3 |
|  |  | medium | |  | |  |  |  | 5 |
|  |  | long | |  | |  |  | Benecke (PON) | 7 |
| **53** |  | **QN** |  |  |  |  | | | |
|  |  | |  | | --- | | **Necked varieties only: Fruit: depression at stalk attachment** | | |  | |  |  |  |  |
|  |  | absent or shallow | |  | |  |  |  | 1 |
|  |  | intermediate | |  | |  |  |  | 2 |
|  |  | deep | |  | |  |  |  | 3 |
| **54** |  | **QL** |  |  |  |  | | | |
|  |  | |  | | --- | | **Fruit: presence of collar** | | |  | |  |  |  |  |
|  |  | absent | |  | |  |  |  | 1 |
|  |  | present | |  | |  |  |  | 9 |
| **55** |  | **QN** |  |  |  |  | | | |
|  |  | |  | | --- | | **Fruit: abscission layer between floral disc and fruit** | | | |  | | --- | | **Fruit : abscission entre le disque floral et le fruit** | | | |  | | --- | | **Frucht: Trennschicht zwischen Blütenscheibe und Frucht** | | |  | | --- | | **Fruto: capa de abscisión entre el disco floral y el fruto** | |  |  |
|  |  | absent or weakly developed | |  | |  |  |  | 1 |
|  |  | intermediate | |  | |  |  |  | 2 |
|  |  | strongly developed | |  | |  |  |  | 3 |

|  |  | English | | français | | deutsch | español | Example Varieties Exemples Bei ejemplo | Note/ |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **56** |  | **QN** | **VG** |  |  |  | | | |
|  |  | |  | | --- | | **Fruit: general shape of distal part (excluding nipple, bulging of navel and depression at distal end)** | | | |  | | --- | | **Fruit : forme générale de la partie distale (à l’exclusion du mamelon, de la courbure du fruit secondaire et de la dépression à l’extrémité distale)** | | | |  | | --- | | **Frucht: allgemeine Form des distalen Teils (ohne Warze, Wölbung der sekundären Frucht und Einsenkung am distalen Ende)** | | |  | | --- | | **Fruto: forma general de la parte distal (excluidos el mamelón o pezón, el abultamiento del ombligo y la depresión en el extremo distal)** | |  |  |
|  |  | flattened | |  | |  |  | Forner Alcaide 5 (CTI) | 1 |
|  |  | slightly rounded | |  | |  |  | CPB 4475 (CML) | 2 |
|  |  | strongly rounded | |  | |  |  |  | 3 |
| **57** |  | **QL** |  |  |  |  | | | |
|  |  | |  | | --- | | **Fruit: presence of depression at distal end** | | | |  | | --- | | **Fruit : présence d’une dépression à l’extrémité distale** | | | |  | | --- | | **Frucht: Vorhandensein einer Einsenkung am distalen Ende** | | |  | | --- | | **Fruto: presencia de una depresión en el extremo distal** | |  |  |
|  |  | absent | |  | |  |  |  | 1 |
|  |  | present | |  | |  |  |  | 9 |
| **58** |  | **QN** |  |  |  |  | | | |
|  |  | |  | | --- | | **Fruit: depth of depression at distal end** | | | |  | | --- | | **Fruit : profondeur de la dépression à l’extrémité distale** | | | |  | | --- | | **Frucht: Tiefe der Einsenkung am distalen Ende** | | |  | | --- | | **Fruto: profundidad de la depresión en el extremo distal** | |  |  |
|  |  | shallow | |  | |  |  |  | 3 |
|  |  | medium | |  | |  |  |  | 5 |
|  |  | deep | |  | |  |  |  | 7 |
| **59** | **(\*)** | **QL** |  |  |  |  | | | |
|  |  | |  | | --- | | **Fruit: presence of nipple** | | | |  | | --- | | **Fruit : présence d’un mamelon** | | | |  | | --- | | **Frucht: Vorhandensein einer Warze** | | |  | | --- | | **Fruto: presencia de un mamelón o pezón** | |  |  |
|  |  | absent | |  | |  |  |  | 1 |
|  |  | present | |  | |  |  |  | 9 |
| **60** |  | **QN** |  |  |  |  | | | |
|  |  | |  | | --- | | **Fruit: prominence of nipple** | | | |  | | --- | | **Fruit : proéminence du mamelon** | | | |  | | --- | | **Frucht: Herausragen der Warze** | | |  | | --- | | **Fruto: prominencia del mamelón o pezón** | |  |  |
|  |  | weak | |  | |  |  |  | 3 |
|  |  | medium | |  | |  |  |  | 5 |
|  |  | strong | |  | |  |  |  | 7 |

|  |  | English | | français | | deutsch | español | Example Varieties Exemples Bei ejemplo | Note/ |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **61** |  | **QL** |  |  |  |  | | | |
|  |  | |  | | --- | | **Fruit: presence of areola** | | | |  | | --- | | **Fruit : présence d’une aréole** | | | |  | | --- | | **Frucht: Vorhandensein einer Areola** | | |  | | --- | | **Fruto: presencia de un areola** | |  |  |
|  |  | absent | |  | |  |  |  | 1 |
|  |  | incomplete | |  | |  |  |  | 2 |
|  |  | complete | |  | |  |  |  | 3 |
| **62** |  | **QL** |  |  |  |  | | | |
|  |  | |  | | --- | | **Fruit: type of areola** | | | |  | | --- | | **Fruit : type d’aréole** | | | |  | | --- | | **Frucht: Typ der Areola** | | |  | | --- | | **Fruto: tipo de areola** | |  |  |
|  |  | smooth | |  | |  |  |  | 1 |
|  |  | grooved | |  | |  |  |  | 2 |
|  |  | ridged | |  | |  |  |  | 3 |
| **63** |  | **QN** |  |  |  |  | | | |
|  |  | |  | | --- | | **Fruit: diameter of areola** | | | |  | | --- | | **Fruit : diamètre de l’aréole** | | | |  | | --- | | **Frucht: Durchmesser der Areola** | | |  | | --- | | **Fruto: diámetro de la areola** | |  |  |
|  |  | small | |  | |  |  |  | 3 |
|  |  | medium | |  | |  |  |  | 5 |
|  |  | large | |  | |  |  |  | 7 |
| **64** |  | **PQ** |  |  |  |  | | | |
|  |  | |  | | --- | | **Fruit: persistence of style** | | | |  | | --- | | **Fruit : persistance du style** | | | |  | | --- | | **Frucht: Persistenz des Griffels** | | |  | | --- | | **Fruto: persistencia del estilo** | |  |  |
|  |  | none | |  | |  |  |  | 1 |
|  |  | partial | |  | |  |  |  | 2 |
|  |  | total | |  | |  |  |  | 3 |
| **65** |  | **QL** | **VG** |  |  |  | | | |
|  |  | |  | | --- | | **Fruit: presence of radial grooves at distal end** | | | |  | | --- | | **Fruit : présence de cannelures radiales à l’extrémité distale** | | | |  | | --- | | **Frucht: Vorhandensein radialer Furchen am distalen Ende** | | |  | | --- | | **Fruto: presencia de acanaladuras radiales en el extremo distal** | |  |  |
|  |  | absent | |  | |  |  | Troyer (CTG) | 1 |
|  |  | present | |  | |  |  |  | 9 |

|  |  | English | | français | | deutsch | español | Example Varieties Exemples Bei ejemplo | Note/ |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **66** |  | **PQ** | **VG** |  |  |  | | | |
|  |  | |  | | --- | | **Fruit surface: predominant color(s)** | | | |  | | --- | | **Surface du fruit : couleur(s) prédominante(s)** | | | |  | | --- | | **Fruchtoberfläche: Hauptfarbe(n)** | | |  | | --- | | **Superficie del fruto: color(es) predominante(s)** | |  |  |
|  |  | green | |  | |  |  |  | 1 |
|  |  | yellow green | |  | |  |  |  | 2 |
|  |  | green and yellow | |  | |  |  |  | 3 |
|  |  | light yellow | |  | |  |  |  | 4 |
|  |  | medium yellow | |  | |  |  | Benecke (PON) | 5 |
|  |  | yellow orange | |  | |  |  |  | 6 |
|  |  | medium orange | |  | |  |  | Forner Alcaide 5 (CTI) | 7 |
|  |  | dark orange | |  | |  |  |  | 8 |
|  |  | green and orange | |  | |  |  |  | 9 |
|  |  | yellow and orange | |  | |  |  |  | 10 |
|  |  | orange red | |  | |  |  |  | 11 |
|  |  | yellow and red | |  | |  |  |  | 12 |
|  |  | orange and red | |  | |  |  |  | 13 |
| **67** | **(\*)** | **QL** | **VG** |  |  |  | | | |
|  |  | |  | | --- | | **Fruit surface: presence of pubescence** | | | |  | | --- | | **Surface du fruit : présence de pilosité** | | | |  | | --- | | **Fruchtoberfläche: Vorhandensein der Behaarung** | | |  | | --- | | **Superficie del fruto: presencia de pubescencia** | |  |  |
|  |  | absent | |  | |  |  | CPB 4475 (CML) | 1 |
|  |  | present | |  | |  |  | Benecke (PON) | 9 |
| **68** | **(\*)** | **QN** |  |  |  |  | | | |
|  |  | |  | | --- | | **Fruit surface: intensity of pubescence** | | | |  | | --- | | **Surface du fruit : intensité de la pilosité** | | | |  | | --- | | **Fruchtoberfläche: Intensität der Behaarung** | | |  | | --- | | **Superficie del fruto: intensidad de la pubescencia** | |  |  |
|  |  | weak | |  | |  |  |  | 3 |
|  |  | medium | |  | |  |  |  | 5 |
|  |  | strong | |  | |  |  |  | 7 |
| **69** |  | **QN** | **VG** |  |  |  | | | |
|  |  | |  | | --- | | **Fruit surface: roughness** | | | |  | | --- | | **Surface du fruit : rugosité** | | | |  | | --- | | **Fruchtoberfläche: Rauheit** | | |  | | --- | | **Superficie del fruto: rugosidad** | |  |  |
|  |  | smooth | |  | |  |  | C-35 (CTG) | 3 |
|  |  | medium | |  | |  |  | CPB 4475 (CML) | 5 |
|  |  | rough | |  | |  |  | Benecke (PON) | 7 |

|  |  | English | | français | | deutsch | español | Example Varieties Exemples Bei ejemplo | Note/ |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **70** |  | **QN** |  |  |  |  | | | |
|  |  | |  | | --- | | **Fruit surface: size of larger oil glands** | | | |  | | --- | | **Surface du fruit : taille des glandes à huile les plus grosses** | | | |  | | --- | | **Fruchtoberfläche: Größe der größeren Öldrüsen** | | |  | | --- | | **Superficie del fruto: tamaño de las glándulas de aceite más grandes** | |  |  |
|  |  | small | |  | |  |  |  | 3 |
|  |  | medium | |  | |  |  |  | 5 |
|  |  | large | |  | |  |  |  | 7 |
| **71** |  | **QN** |  |  |  |  | | | |
|  |  | |  | | --- | | **Fruit surface: conspicuousness of larger oil glands** | | | |  | | --- | | **Surface du fruit : netteté des glandes à huile les plus grosses** | | | |  | | --- | | **Fruchtoberfläche: Sichtbarkeit der größeren Öldrüsen** | | |  | | --- | | **Superficie del fruto: visibilidad de las glándulas de aceite más grandes** | |  |  |
|  |  | weak | |  | |  |  |  | 3 |
|  |  | medium | |  | |  |  |  | 5 |
|  |  | strong | |  | |  |  |  | 7 |
| **72** |  | **QL** | **VG** |  |  |  | | | |
|  |  | |  | | --- | | **Fruit rind: thickness** | | | |  | | --- | | **Écorce du fruit : épaisseur** | | | |  | | --- | | **Fruchtschale: Dicke** | | |  | | --- | | **Corteza del fruto: espesor** | |  |  |
|  |  | thin | |  | |  |  |  | 3 |
|  |  | medium | |  | |  |  |  | 5 |
|  |  | thick | |  | |  |  | CPB 4475 (CML) | 7 |
| **73** |  | **QN** |  |  |  |  | | | |
|  |  | |  | | --- | | **Fruit rind: adherence to flesh** | | |  | |  |  |  |  |
|  |  | weak | |  | |  |  |  | 3 |
|  |  | medium | |  | |  |  |  | 5 |
|  |  | strong | |  | |  |  |  | 7 |
| **74** |  | **PQ** | **VG** |  |  |  | | | |
|  |  | |  | | --- | | **Fruit: color of albedo** | | |  | |  |  |  |  |
|  |  | greenish | |  | |  |  |  | 1 |
|  |  | white | |  | |  |  | Troyer (CTG) | 2 |
|  |  | light yellow | |  | |  |  |  | 3 |
|  |  | light orange | |  | |  |  |  | 4 |
|  |  | pink | |  | |  |  |  | 5 |
|  |  | reddish | |  | |  |  |  | 6 |

|  |  | English | | français | | deutsch | español | Example Varieties Exemples Bei ejemplo | Note/ |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **75** |  | **PQ** |  |  |  |  | | | |
|  |  | |  | | --- | | **Fruit: main color of flesh** | | |  | |  |  |  |  |
|  |  | whitish | |  | |  |  |  | 1 |
|  |  | light green | |  | |  |  |  | 2 |
|  |  | light yellow | |  | |  |  |  | 3 |
|  |  | medium yellow | |  | |  |  |  | 4 |
|  |  | light orange | |  | |  |  |  | 5 |
|  |  | medium orange | |  | |  |  |  | 6 |
|  |  | dark orange | |  | |  |  |  | 7 |
|  |  | red | |  | |  |  |  | 8 |
|  |  | purple | |  | |  |  |  | 9 |
|  |  | yellow and red | |  | |  |  |  | 10 |
| **76** |  | **QN** | **VG** |  |  |  | | | |
|  |  | |  | | --- | | **Fruit: filling of core** | | |  | |  |  |  |  |
|  |  | absent or very sparse | |  | |  |  |  | 1 |
|  |  | sparse | |  | |  |  |  | 3 |
|  |  | medium | |  | |  |  | Forner Alcaide 5 (CTI) | 5 |
|  |  | dense | |  | |  |  |  | 7 |
|  |  | very dense | |  | |  |  | Troyer (CTG) | 9 |
| **77** |  | **QN** | **MS** |  |  |  | | | |
|  |  | |  | | --- | | **Fruit: number of well developed segments** | | |  | |  |  |  |  |
|  |  | few | |  | |  |  |  | 3 |
|  |  | medium | |  | |  |  | Benecke (PON) | 5 |
|  |  | many | |  | |  |  | Carrizo (CTG) | 7 |
| **78** |  | **PQ** |  |  |  |  | | | |
|  |  | |  | | --- | | **Fruit: presence of navel (viewed internally)** | | |  | |  |  |  |  |
|  |  | absent or very rare | |  | |  |  |  | 1 |
|  |  | occasionally present | |  | |  |  |  | 2 |
|  |  | always present | |  | |  |  |  | 3 |

|  |  | English | | français | | deutsch | español | Example Varieties Exemples Bei ejemplo | Note/ |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **79** |  | **QN** | **MG** |  |  |  | | | |
|  |  | |  | | --- | | **Fruit: juiciness** | | |  | |  |  |  |  |
|  |  | low | |  | |  |  | Benecke (PON) | 3 |
|  |  | medium | |  | |  |  | CPB 4475 (CML) | 5 |
|  |  | high | |  | |  |  | C-35 (CTG) | 7 |
| **80** |  | **QN** |  | **(+)** |  |  | | | |
|  |  | |  | | --- | | **Fruit: number of seeds (open pollination)** | | |  | |  |  |  |  |
|  |  | absent or very few | |  | |  |  |  | 1 |
|  |  | few | |  | |  |  |  | 3 |
|  |  | medium | |  | |  |  |  | 5 |
|  |  | many | |  | |  |  |  | 7 |
| **81** | **(\*)** | **QL** |  |  |  |  | | | |
|  |  | |  | | --- | | **Seed: polyembryony** | | |  | |  |  |  |  |
|  |  | absent | |  | |  |  |  | 1 |
|  |  | present | |  | |  |  |  | 9 |
| **82** |  | **QN** |  |  |  |  | | | |
|  |  | |  | | --- | | **Seed: length** | | |  | |  |  |  |  |
|  |  | short | |  | |  |  |  | 3 |
|  |  | medium | |  | |  |  |  | 5 |
|  |  | long | |  | |  |  |  | 7 |
| **83** |  | **QN** |  |  |  |  | | | |
|  |  | |  | | --- | | **Seed: width** | | |  | |  |  |  |  |
|  |  | narrow | |  | |  |  |  | 3 |
|  |  | medium | |  | |  |  |  | 5 |
|  |  | broad | |  | |  |  |  | 7 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **84** |  | **PQ** |  |  |  |  | | | |
|  |  | |  | | --- | | **Seed: external color** | | |  | |  |  |  |  |
|  |  | greenish | |  | |  |  |  | 1 |
|  |  | whitish | |  | |  |  |  | 2 |
|  |  | yellowish | |  | |  |  |  | 3 |
|  |  | pinkish | |  | |  |  |  | 4 |
|  |  | brownish | |  | |  |  |  | 5 |

|  |  | English | | français | | deutsch | español | Example Varieties Exemples Bei ejemplo | Note/ |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **85** |  | **PQ** |  |  |  |  | | | |
|  |  | |  | | --- | | **Only varieties with seed: polyembryony present: Seed: color of cotyledons** | | |  | |  |  |  |  |
|  |  | white | |  | |  |  |  | 1 |
|  |  | cream | |  | |  |  |  | 2 |
|  |  | light green | |  | |  |  |  | 3 |
|  |  | dark green | |  | |  |  |  | 4 |
| **86** | **(\*)** | **QL** |  |  |  |  | | | |
|  |  | |  | | --- | | **Flowering habit** | | |  | |  |  |  |  |
|  |  | flowering once | |  | |  |  |  | 1 |
|  |  | flowering more than once | |  | |  |  |  | 2 |
| **87** |  | **QN** |  |  |  |  | | | |
|  |  | |  | | --- | | **Time of maturity of fruit for consumption** | | |  | |  |  |  |  |
|  |  | early | |  | |  |  |  | 3 |
|  |  | medium | |  | |  |  |  | 5 |
|  |  | late | |  | |  |  |  | 7 |
| **88** |  | **QL** |  |  |  |  | | | |
|  |  | |  | | --- | | **Plant: self-incompatibility** | | |  | |  |  |  |  |
|  |  | absent | |  | |  |  |  | 1 |
|  |  | present | |  | |  |  |  | 9 |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  | | --- | --- | |  | | | |  | | --- | | *8.1* | | *Explanations for individual characteristics* | |  | | | |  | | --- | | Ad. 80: Fruit: number of seeds (open pollination)  Ad. 101 ([326]): Fruit: number of seeds (open pollination)    Open pollination means natural pollination between trees of any variety. | | | |
|  |

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

|  |  |  |
| --- | --- | --- |
| |  |  | | --- | --- | | 10. | Technical Questionnaire | |
|  |
| |  |  |  | | --- | --- | --- | | TECHNICAL QUESTIONNAIRE | Page {x} of {y} | Reference Number: | |
|  |
| |  |  | | --- | --- | |  | Application date: (not to be filled in by the applicant) | | TECHNICAL QUESTIONNAIRE to be completed in connection with an application for plant breeders' rights | | |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  |  |  |  | | 1. | Subject of the Technical Questionnaire | | | | |  |  |  |  |  | |  | |  | | --- | | 1.1 | | Botanical name | |  | | --- | | *Citrus trifoliata* L. | | |  | | --- | |  | | |  |  |  |  |  | |  | |  | | --- | | 1.2 | | Common name | |  | | --- | | Trifoliate Orange | |  | |  |  |  | |  | | --- | |  | |  | |  |  |  |  |  | |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  |  |  |  | | 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 | | [ ] | | |  | | --- | | (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) | [ ] | |  |  | | |  |  | | | | | | |

|  |  |  |  |
| --- | --- | --- | --- |
| |  |  |  | | --- | --- | --- | | TECHNICAL QUESTIONNAIRE | Page {x} of {y} | Reference Number: | |
|  |
| |  |  |  | | --- | --- | --- | |  |  |  | |  | 4.2 | Method of propagating the variety | |  | |  |  |  | | --- | --- | --- | | |  | | --- | | 4.2.1 | | Other (Please provide details) | [ ] | |  |  |  | |  |  |  | |  |  |  | | | |  | |  |  | | --- | --- | | |  | | --- | |  | | | | |

|  |  |  |  |
| --- | --- | --- | --- |
| |  |  |  | | --- | --- | --- | | TECHNICAL QUESTIONNAIRE | Page {x} of {y} | Reference Number: | |
|  |
| |  |  |  |  | | --- | --- | --- | --- | | 5. | Characteristics of the variety to be indicated (the number in brackets refers to the corresponding characteristic in Test Guidelines; please mark the note which best corresponds). | | | |  |  |  |  | |

|  | Characteristics | Example Varieties | Note |
| --- | --- | --- | --- |
|  |  |  |  |
| |  | | --- | | **5.1** |  |  | | --- | | **(6)** | | |  | | --- | | **Leaf: caducity** | |  |  |
|  | |  | | --- | | perennial | | |  | | --- | | CPB 4475 (CML) | | |  | | --- | | 1 [   ] | |
|  | |  | | --- | | partially caducous | | |  | | --- | | Troyer (CTG) | | |  | | --- | | 2 [   ] | |
|  | |  | | --- | | caducous | | |  | | --- | | Benecke (PON) | | |  | | --- | | 3 [   ] | |
|  |  |  |  |
|  |  |  |  |
| |  | | --- | | **5.2** |  |  | | --- | | **(7)** | | |  | | --- | | **Leaf: number of leaflets** | |  |  |
|  | |  | | --- | | one only | | |  | | --- | |  | | |  | | --- | | 1 [   ] | |
|  | |  | | --- | | variable | | |  | | --- | | Troyer (CTG) | | |  | | --- | | 2 [   ] | |
|  | |  | | --- | | mostly three | | |  | | --- | | Benecke (PON) | | |  | | --- | | 3 [   ] | |
|  |  |  |  |
|  |  |  |  |
| |  | | --- | | **5.3** |  |  | | --- | | **(67)** | | |  | | --- | | **Fruit surface: presence of pubescence** | |  |  |
|  | |  | | --- | | absent | | |  | | --- | | CPB 4475 (CML) | | |  | | --- | | 1 [   ] | |
|  | |  | | --- | | present | | |  | | --- | | Benecke (PON) | | |  | | --- | | 9 [   ] | |
|  |  |  |  |
|  |  |  |  |
| |  | | --- | | **5.4** |  |  | | --- | | **(81)** | | |  | | --- | | **Seed: polyembryony** | |  |  |
|  | |  | | --- | | absent | | |  | | --- | |  | | |  | | --- | | 1 [   ] | |
|  | |  | | --- | | present | | |  | | --- | |  | | |  | | --- | | 9 [   ] | |
|  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| |  |  |  | | --- | --- | --- | | TECHNICAL QUESTIONNAIRE | Page {x} of {y} | Reference Number: | |
|  |
| |  |  | | --- | --- | | 6. | Similar varieties and differences from these varieties | | |  | | --- | | *Please use the following table and box for comments to provide information on how your candidate variety differs from the variety (or varieties) which, to the best of your knowledge, is (or are) most similar. This information may help the examination authority to conduct its examination of distinctness in a more efficient way.* | | | | |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | | Denomination(s) of variety(ies) similar to your candidate variety | | |  | | --- | | Characteristic(s) in which your candidate variety differs from the similar variety(ies) | | |  | | --- | | Describe the expression of the characteristic(s) for the **similar** variety(ies) | | |  | | --- | | Describe the expression of the characteristic(s) for **your** candidate variety | | | | | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | *Example* | |  | | --- | |  | | |  | | --- | |  | | |  | | --- | |  | | |  |  |  |  | |  |  |  |  | |  |  |  |  | | | |  | Comments: | |

|  |  |  |  |
| --- | --- | --- | --- |
| |  |  |  | | --- | --- | --- | | TECHNICAL QUESTIONNAIRE | Page {x} of {y} | Reference Number: | |
|  |
| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | |  | | --- | | #7. | | Additional information which may help in the examination of the variety | | | | |  |  |  | | | | 7.1 | In addition to the information provided in sections 5 and 6, are there any additional characteristics which may help to distinguish the variety? | | | | |  | Yes | [ ] | No | [ ] | |  | (If yes, please provide details) | | | | | 7.2 | Are there any special conditions for growing the variety or conducting the examination? | | | | |  | Yes | [ ] | No | [ ] | |  | (If yes, please provide details) | | | | | 7.3 | Other information | | | | | |  | | --- | | Virus status          The plant material is virus-free                                                            [    ]          The plant material is virus tested                                                         [    ]          (indicate against which viruses: ..................................................            ................................................................................................... )          The virus status is unknown                                                                [    ] | | | | | | |  |  |  |  |  | |

|  |  |  |  |
| --- | --- | --- | --- |
| |  |  |  | | --- | --- | --- | | TECHNICAL QUESTIONNAIRE | Page {x} of {y} | Reference Number: | |
|  |
| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | 8. | Authorization for release | | | | | |  | (a) | Does the variety require prior authorization for release under legislation concerning the protection of the environment, human and animal health? | | | | |  |  | Yes | [ ] | No | [ ] | |  | (b) | Has such authorization been obtained? | | | | |  |  | Yes | [ ] | No | [ ] | |  | If the answer to (b) is yes, please attach a copy of the authorization. | | | | | |  |  |  |  |  |  | |
| |  |  | | --- | --- | | |  | | --- | | 9. Information on plant material to be examined or submitted for examination | | |  | | 9.1 The expression of a characteristic or several characteristics of a variety may be affected by factors, such as pests and disease, chemical treatment (e.g. growth retardants or pesticides), effects of tissue culture, different rootstocks, scions taken from different growth phases of a tree, etc. | |  | | |  | | --- | | 9.2 The plant material should not have undergone any treatment which would affect the expression of the characteristics of the variety, unless the competent authorities allow or request such treatment. If the plant material has undergone such treatment, full details of the treatment must be given. In this respect, please indicate below, to the best of your knowledge, if the plant material to be examined has been subjected to: | | | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | |  | (a) | Microorganisms (e.g. virus, bacteria, phytoplasma) | Yes [ ] | No [ ] |  | |  | (b) | Chemical treatment (e.g. growth retardant, pesticide) | Yes [ ] | No [ ] |  | |  | (c) | Tissue culture | Yes [ ] | No [ ] |  | |  | (d) | Other factors | Yes [ ] | No [ ] |  | |  | Please provide details for where you have indicated “yes”. | | | |  | |  |  | | | |  | | |  | |
| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | 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] |

1. \* 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 Web Site (www.upov.int), for the latest information.] [↑](#footnote-ref-1)