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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

Geneva

DRAFT

GRANADILLA, PASSION FRUIT *

UPOV Code(s): PASSI_EDU

Passifloraedulis Sims

GUIDELINES

FOR THE CONDUCT OF TESTS

FOR DISTINCTNESS, UNIFORMITY AND STABILITY

prepared by an expert from Australia

to be considered by the

Technical Working Party for Fruit Crops at its fifty-sixth session,
to be held in Bursa, Türkiye, from 2025-06-23 to 2025-06-26

Disclaimer: this document does not represent UPOV policies or guidance

Alternative Names:*

Botanical name	*English*	*French*	*German*	*Spanish*
Passifloraedulis Sims	Granadilla, Passion fruit	Barbadine, Fruit de la passion	Passionsfrucht, Purpurgranadilla	Granadilla, Maracuyá

The purpose of these guidelines ("Test Guidelines") is to elaborate the principles contained in the General Introduction (document TG/1/3), and its associated TGP documents, into detailed practical guidance for the harmonized examination of distinctness, uniformity and stability (DUS) and, in particular, to identify appropriate characteristics for the examination of DUS and production of harmonized variety descriptions.

ASSOCIATED DOCUMENTS

These Test Guidelines should be read in conjunction with the General Introduction and its associated TGP documents.

* These names were correct at the time of the introduction of these Test Guidelines but may be revised or updated. [Readers are advised to consult the UPOV Code, which can be found on the UPOV Website (www.upov.int), for the latest information.]

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1. Subject of these Test Guidelines

These Test Guidelines apply to all varieties of *Passifloraedulis* Sims.

2. Material Required

2.1 The competent authorities decide on the quantity and quality of the plant material required for testing the variety and when and where it is to be delivered. Applicants submitting material from a State other than that in which the testing takes place must ensure that all customs formalities and phytosanitary requirements are complied with.

2.2 The material is to be supplied in the form of rooted cuttings or vegetatively propagated young plants.

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

5 rooted cuttings or 5 vegetatively propagated young plants.

2.4 The plant material supplied should be visibly healthy, not lacking in vigor, nor affected by any important pest or disease.

2.5 The plant material should not have undergone any treatment which would affect the expression of the characteristics of the variety, unless the competent authorities allow or request such treatment. If it has been treated, full details of the treatment must be given.

3. Method of Examination

3.1 Number of Growing Cycles

3.1.1 The minimum duration of tests should normally be two independent growing cycles.

3.1.2 The two independent growing cycles may be observed from a single planting, examined in two separate growing cycles.

3.1.3 The growing cycle is considered to be the period ranging from the beginning of active vegetative growth or flowering, continuing through active vegetative growth or flowering and fruit development and concluding with the harvesting of fruit.

3.1.4 In particular, it is essential that the plants produce a satisfactory crop of fruit in each of the two growing cycles.

3.1.5 To ensure satisfactory crop of good quality fruits, four freshly opened flower from each of the five plants should be hand pollinated and marked. Fruit developed from these flowers should be used for assessing fruit characteristics.

3.1.6 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

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.

3.4 Test Design

3.4.1 Each test should be designed to result in a total of at least 5 plants.

3.4.2 The design of the tests should be such that plants or parts of plants may be removed for measurement or counting without prejudice to the observations which must be made up to the end of the growing cycle.

3.5 Additional Tests

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

4. Assessment of Distinctness, Uniformity and Stability

4.1 Distinctness

4.1.1 General Recommendations

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

4.1.2 Consistent Differences

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

4.1.3 Clear Differences

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

4.1.4 Number of Plants or Parts of Plants to be Examined

Unless otherwise indicated, for the purposes of distinctness, all observations on single plants should be made on 5 plants or parts of plants taken from each of 5 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 2.

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 5 plants, no off-types are 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 seed or plant stock to ensure that it exhibits the same characteristics as those shown by the initial material supplied.

5. Grouping of Varieties and Organization of the Growing Trial

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

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

5.3 The following have been agreed as useful grouping characteristics:

(a) Flower: anthocyanin spots on style (characteristic 35)
(b) Fruit: height (characteristic 37)
(c) Fruit: color of skin (characteristic 42)
(d) Fruit: weight (characteristic 44)
(e) Fruit: color of pulp (characteristic 45)
(f) Plant: self-incompatibility (characteristic 48)

5.4 Guidance for the use of grouping characteristics, in the process of examining distinctness, is provided through the General Introduction and document TGP/9 “Examining Distinctness”.

6. Introduction to the Table of Characteristics

6.1 Categories of Characteristics

6.1.1 Standard Test Guidelines Characteristics

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

6.1.2 Asterisked Characteristics

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

6.2 States of Expression and Corresponding Notes

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

6.2.2 All relevant states of expression are presented in the characteristic.

6.2.3 Further explanation of the presentation of states of expression and notes is provided in document TGP/7 “Development of Test Guidelines”.

6.3 Types of Expression

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

6.4 Example Varieties

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

6.5 Legend

		English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
1	**2**	**3**	**4**	**5**	**6**	**7**			
		Name of characteristics in English		**Nom du caractère en français**		**Name des Merkmals auf Deutsch**	**Nombre del carácter en español**		
		states of expression		types d'expression		Ausprägungsstufen	tipos de expresión		

1 Characteristic number

2 (*) Asterisked characteristic – see Chapter 6.1.2

3 Type of expression
QL Qualitative characteristic – see Chapter 6.3
QN Quantitative characteristic – see Chapter 6.3
PQ Pseudo-qualitative characteristic – see Chapter 6.3

4 Method of observation (and type of plot, if applicable)
MG, MS, VG, VS – see Chapter 4.1.5

5 (+) See Explanations on the Table of Characteristics in Chapter 8.2

6 (a)-(x) See Explanations on the Table of Characteristics in Chapter 8.1

7 Growth stage key (if applicable) See Explanations on the Table of Characteristics in Chapter 8.3

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

		English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
1.		**QN**	**VG**	**(+)**					
		Plant: vigor							
		very weak						Lacey	1
		weak						Misty Gem	2
		medium						Tango	3
		strong						Flamenco	4
		very strong						Toms Special	5
2.		**PQ**	**VG**	**(+)**					
		Shoot: color							
		light green						Nellie Kelly Black, Summer Queen	1
		medium green						Misty Gem	2
		dark green						Charité, Ester	3
		greenish purple							4
		purple						Panama Gold	5
3.		**QN**	**VG**		**(a)**				
		Plant: relative number of leaves with three lobes							
		absent or very few						OPA6/19	1
		few							2
		medium						OPA4/19	3
		many						Misty Gem	4
		very many						Flamenco, Toms Special	5
4.		**QN**	**VG**						
		Stipules: anthocyanin coloration							
		absent or weak						Flamenco	1
		medium							2
		strong						Panama Gold	3
5.		**QN**	**VG**		**(a)**				
		Leaf blade: blistering							
		absent or weak						Panama Gold	1
		medium						Panama Red	2
		strong						Nellie Kelly Black	3

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
6.	**QN** **MS/VG**	**(a),(d)**				
	Leaf blade: length					
	very short					1
	very short to short					2
	short				Lacey	3
	short to medium				Sweetheart	4
	medium				Flamenco, Misty Gem	5
	medium to long				Panama Red	6
	long				OPA3/19, OPA4/19	7
	long to very long				OPA12/19	8
	very long				OPA6/19	9
7.	**QN** **MS/VG**	**(a),(d)**				
	Leaf blade: width					
	very narrow					1
	very narrow to narrow					2
	narrow				E23	3
	narrow to medium				Lacey	4
	medium				Misty Gem, Toms Special	5
	medium to broad				Flamenco	6
	broad				OPA13/19, Tango	7
	broad to very broad				OPA3/19	8
	very broad					9
8.	**QN** **MS/VG**	**(a),(d)**				
	Only varieties with: Plant: relative number of leaves with three lobes: present: Leaf blade: width of the middle lobe					
	very narrow					1
	very narrow to narrow					2
	narrow				Lacey, Sweetheart	3
	narrow to medium				E23, Toms Special	4
	medium				Misty Gem	5
	medium to broad				OPA5/19, OPA7/19	6
	broad				OPA11/19, OPA4/19	7
	broad to very broad				McGuffies Red, OPA3/19	8
	very broad				OPA12/19	9

		English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
9.		**QN**	**VG**		**(a)**				
		Leaf blade: intensity of green color of upper side							
		very light							1
		light						Lacey	2
		medium						McGuffies Red, Pandora	3
		dark						Sweetheart, Tango	4
		very dark						OPA6/19	5
10.		**QN**	**VG**		**(a)**				
		Leaf blade: glossiness of upper side							
		weak						E23	1
		medium						Flamenco, Tango	2
		strong						OPA6/19, Sweetheart	3
11.		**PQ**	**VG**	**(+)**	**(a)**				
		Leaf blade: shape of base							
		acute							1
		obtuse							2
		truncate							3
		weakly cordate						OPA4/19	4
		strongly cordate						Flamenco, Misty Gem	5
12.		**QN**	**MS/VG**	**(+)**	**(a),(d)**				
		Leaf blade: depth of sinus							
		absent or very shallow						OPA6/19	1
		shallow							2
		medium						Panama Red	3
		deep						Panama Gold	4
		very deep							5

		English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
13.		**QN**	**MS/VG**		**(a)**				
		Petiole: length							
		very short							1
		very short to short							2
		short						Tango, Toms Special	3
		short to medium						Misty Gem, OPA13/19	4
		medium						Flamenco, OPA3/19	5
		medium to long						McGuffies Red, OPA4/19	6
		long						OPA11/19, OPA7/19	7
		long to very long						OPA12/19	8
		very long							9
14.		**QN**	**VG**		**(a)**				
		Petiole: anthocyanin coloration							
		absent or weak						Misty Gem, Toms Special	1
		medium						Lacey, McGuffies Red	2
		strong						Panama Gold	3
15.	**(*)**	**QL**	**VG**	**(+)**	**(a)**				
		Petiole: position of nectaries							
		adjacent to the base of the leaf blade						Flamenco, Lacey	1
		distant from the base of the leaf blade						E23, OPA3/19	2
16.		**QN**	**MS/VG**		**(b)**				
		Flower: length of pedicel							
		very short							1
		short						Lacey	2
		medium						Misty Gem	3
		long						Flamenco, Toms Special	4
		very long						OPA11/19, Sweetheart	5

		English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
17.		**QN**	**MS/VG**		**(b),(h)**				
		Flower: length of bract							
		very short							1
		short						Lacey, Misty Gem	2
		medium						OPA3/19, Toms Special	3
		long						McGuffies Red, OPA6/19	4
		very long						OPA12/19, Sweetheart	5
18.		**QN**	**MS/VG**		**(b),(h)**				
		Flower: width of bract							
		very narrow							1
		narrow						Flamenco, OPA13/19	2
		medium						McGuffies Red, Pandora	3
		broad						OPA7/19, Tango	4
		very broad						OPA6/19	5
19.		**QL**	**VG**		**(b)**				
		Flower: nectaries on bract							
		absent							1
		present						Misty Gem	9
20.		**QL**	**VG**		**(b)**				
		<u>Only varieties with Flower: nectaries on bract: present</u>: Flower: color of nectaries on bract							
		green						Lacey	1
		purple							2
21.		**QN**	**MS/VG**		**(b),(h)**				
		Flower: length of sepal							
		very short							1
		short						Lacey	2
		medium						Misty Gem, Sweetheart	3
		long						OPA11/19	4
		very long							5

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
22.	**QN** **MS/VG**	**(b),(h)**				
	Flower: width of sepal					
	very narrow					1
	narrow				OPA5/19	2
	medium				Lacey, Misty Gem	3
	broad				OPA11/19	4
	very broad					5
23.	**QN** **MS/VG**	**(b),(h)**				
	Flower: length of petal					
	very short					1
	short				OPA5/19	2
	medium				Flamenco, Sweetheart	3
	long				McGuffies Red, Panama Red	4
	very long					5
24.	**QN** **MS/VG**	**(b),(h)**				
	Flower: width of petal					
	very narrow					1
	narrow				Lacey, OPA3/19	2
	medium				Flamenco, Sweetheart	3
	broad				Toms Special	4
	very broad					5
25.	**QN** **MS/VG**	**(b),(g)**				
	Flower: length of androgynophore					
	very short					1
	short				Lacey, Misty Gem	2
	medium				OPA12/19, Toms Special	3
	long				Flamenco, OPA3/19	4
	very long					5

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
26.		**QN** **VG**	**(+)** **(b)**				
		Flower: intensity of color on inner filaments in throat					
		absent or light				Flamenco	1
		medium				OPA3/19, Toms Special	2
		dark				OPA12/19	3
27.		**QN** **MS/VG**	**(b),(f)**				
		Flower: diameter of corona including filaments					
		very small					1
		small				Lacey	2
		medium				Misty Gem, Sweetheart	3
		large				OPA12/19	4
		very large					5
28.		**QN** **MS/VG**	**(b),(f)**				
		Flower: width of purple rings on corona filaments					
		absent or very narrow					1
		narrow				OPA7/19	2
		medium				OPA5/19, Sweetheart	3
		broad				OPA12/19	4
		very broad					5
29.	**(*)**	**QN** **VG**	**(b)**				
		Flower: intensity of color of purple rings on corona filaments					
		light				OPA7/19	1
		medium				Lacey, Misty Gem	2
		dark				OPA12/19	3
30.		**QN** **MS/VG**	**(b),(i)**				
		Anther: length					
		short					1
		medium				Flamenco, Misty Gem	2
		long				OPA11/19, OPA12/19	3

		English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
31.		**QN**	**MS/VG**		**(b),(i)**				
		Anther: width							
		narrow							1
		medium						Sweetheart, Toms Special	2
		broad						OPA13/19, OPA4/19	3
32.		**QN**	**MS/VG**		**(b),(g)**				
		Ovary: length							
		short						E23	1
		medium						Flamenco, Sweetheart	2
		long						OPA11/19, Toms Special	3
33.		**QN**	**MS/VG**		**(b),(g)**				
		Ovary: width							
		narrow						E23	1
		medium						Flamenco, Sweetheart	2
		broad						OPA11/19, Toms Special	3
34.		**QN**	**VG**		**(b)**				
		Anther: number of anthocyanin spots on filament							
		absent or very few							1
		few						Flamenco, Toms Special	2
		medium						OPA11/19, Sweetheart	3
		many						Lacey, OPA3/19	4
		very many							5
35.	**(*)**	**QN**	**VG**	**(+)**	**(b)**				
		Flower: anthocyanin spots on style							
		absent or few						Lacey, OPA11/19	1
		medium						OPA5/19, OPA7/19	2
		many						OPA3/19	3

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
36.		**QN** **VG**	**(b)**				
		Flower: number of anthocyanin spots on androgynophore					
		absent or few				Lacey, OPA13/19, OPA3/19	1
		medium				OPA4/19, Sweetheart	2
		many				Flamenco, Toms Special	3
37.	**(*)**	**QN** **MS/VG**	**(c),(e)**				
		Fruit: height					
		very short					1
		very short to short					2
		short				E23, Lacey	3
		short to medium					4
		medium				Flamenco, OPA13/19	5
		medium to tall					6
		tall				McGuffies Red, OPA11/19	7
		tall to very tall					8
		very tall				Golden Giant	9
38.		**QN** **MS/VG**	**(c),(e)**				
		Fruit: diameter					
		very small					1
		very small to small					2
		small				E23, Lacey	3
		small to medium					4
		medium				Flamenco, Pandora	5
		medium to large					6
		large				OPA12/19	7
		large to very large					8
		very large				Golden Giant	9
39.		**QN** **MS/VG**	**(c)**				
		Fruit: ratio height/diameter					
		very low					1
		low					2
		medium				Lacey, OPA3/19	3
		high				McGuffies Red	4
		very high					5

		English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
40.		**PQ**	**VG**	**(+)**	**(c)**				
		Fruit: shape in longitudinal view							
		obloid						BRS GA1	1
		globose						Lacey, Misty Gem, OPA3/19	2
		broad ellipsoid						McGuffies Red, OPA6/19	3
		narrow ellipsoid							4
		ovoid						Pandora	5
		obtuse ovoid						Panama Red	6
		obovoid							7
41.		**QN**	**VG**		**(c)**				
		Fruit: number of lenticels							
		absent or very low							1
		low						McGuffies Red	2
		medium						OPA6/19	3
		many						Pandora	4
		very many						Misty Gem, Panama Red	5
42.	**(*)**	**PQ**	**VG**		**(c)**				
		Fruit: color of skin							
		green							1
		medium yellow							2
		yellow						Brazilian Gold, Inca Gold	3
		dark yellow						Panama Gold	4
		reddish orange							5
		red						McGuffies Red	6
		reddish purple						Sweetheart, Toms Special	7
		purple						Misty Gem, Tango	8
		black purple						Nellie Kelly Black	9

		English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
43.		**QN**	**MS/VG**	**(+)**	**(c)**				
		Fruit: thickness of skin							
		very thin							1
		very thin to thin							2
		thin						OPA6/19	3
		thin to medium							4
		medium						E23, Flamenco, Misty Gem	5
		medium to thick							6
		thick						OPA3/19, Pandora	7
		thick to very thick							8
		very thick						OPA12/19	9
44.	**(*)**	**QN**	**MG/MS**	**(+)**	**(c)**				
		Fruit: weight							
		very low						E23	1
		very low to low							2
		low						Lacey, Misty Gem	3
		low to medium							4
		medium						Flamenco, OPA3/19, OPA5/19	5
		medium to high							6
		high						McGuffies Red, OPA12/19	7
		high to very high							8
		very high						Golden Giant	9
45.	**(*)**	**PQ**	**VG**		**(c)**				
		Fruit: color of pulp							
		whitish							1
		greenish yellow							2
		yellow						McGuffies Red, Misty Gem	3
		yellow orange						E23, Flamenco	4
		orange						OPA3/19	5

		English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
46.	**(*)**	**QN**	**MG/MS**	**(+)**	**(c)**				
		Fruit: weight of pulp including seeds							
		very low						E23	1
		very low to low							2
		low						Misty Gem	3
		low to medium							4
		medium						Flamenco, McGuffies Red, Pandora	5
		medium to high							6
		high						OPA6/19, OPA7/19	7
		high to very high							8
		very high							9
47.		**QN**	**MG**	**(+)**					
		Fruit: sweetness of pulp							
		very low							1
		very low to low							2
		low						E23	3
		low to medium						Panama Red	4
		medium						Flamenco	5
		medium to high						Misty Gem	6
		high						Pandora, Sweetheart	7
		high to very high						McGuffies Red	8
		very high						OPA6/19	9
48.	**(*)**	**QL**	**VG**	**(+)**					
		Plant: self-incompatibility							
		absent						Flamenco, Toms Special	1
		present						Panama Red	9

8. Explanations on the Table of Characteristics

8.1 Explanations covering several characteristics

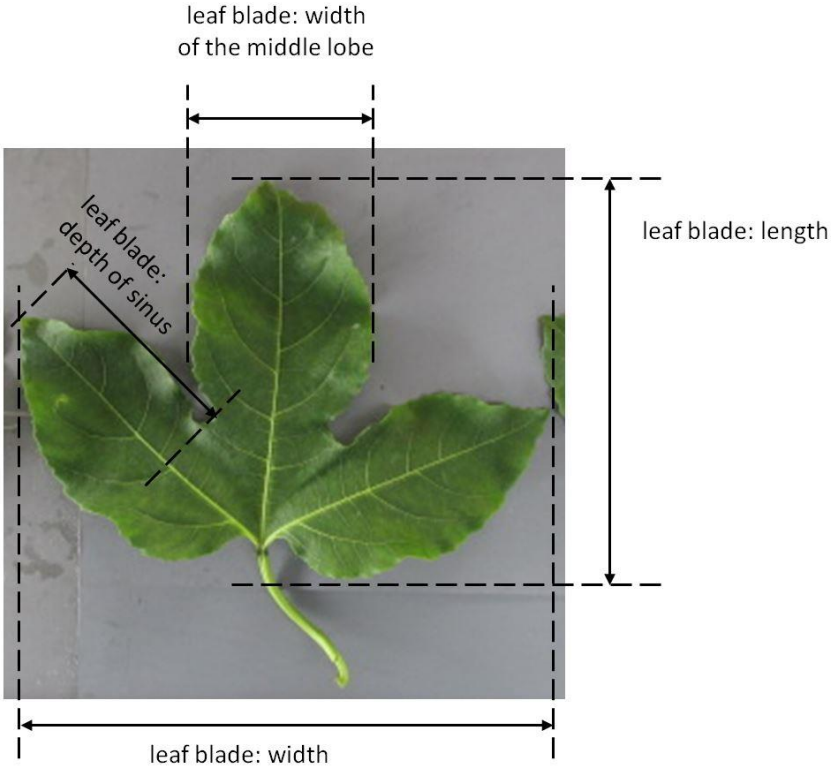
Characteristics containing the following key in the Table of Characteristics should be examined as indicated below:

(a) Leaf blade and petiole: Observations should be made on fully developed leaves from the middle third of vigorous shoots.

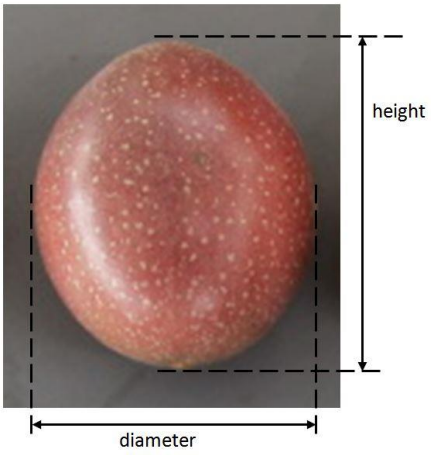
(b) Flower:Observations should be made on fully opened flowers.

(c) Fruit developed from hand pollinated flowers should be used for assessing fruit characteristics. Observations should be made on 10 typical fruits at the time when ≥75% of the fruit skin has changed color.

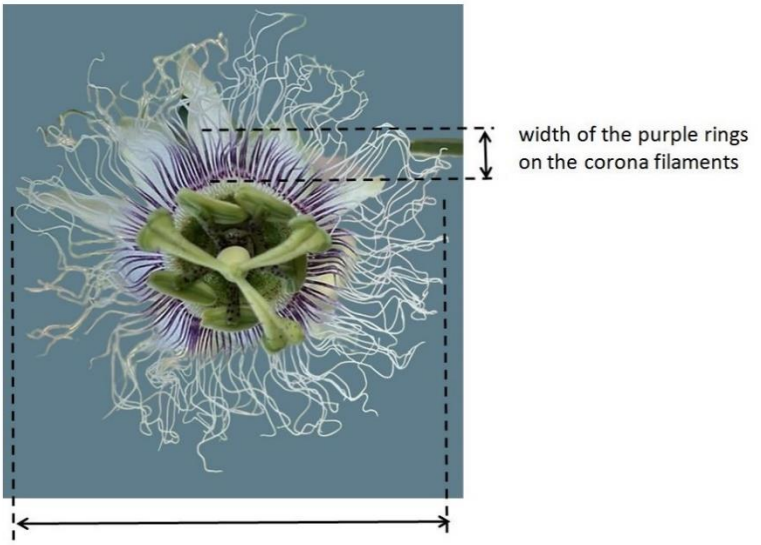
(d)



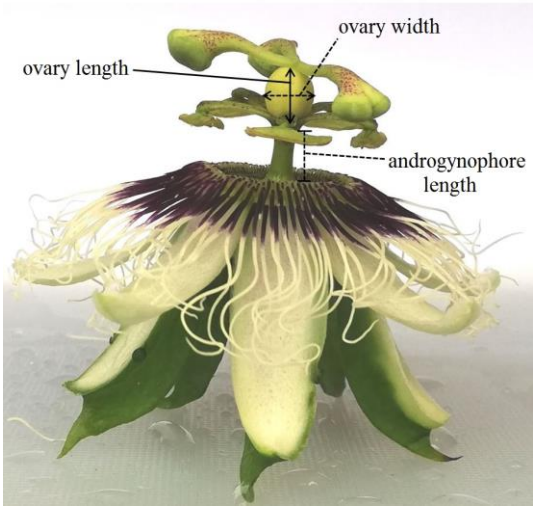
(e)



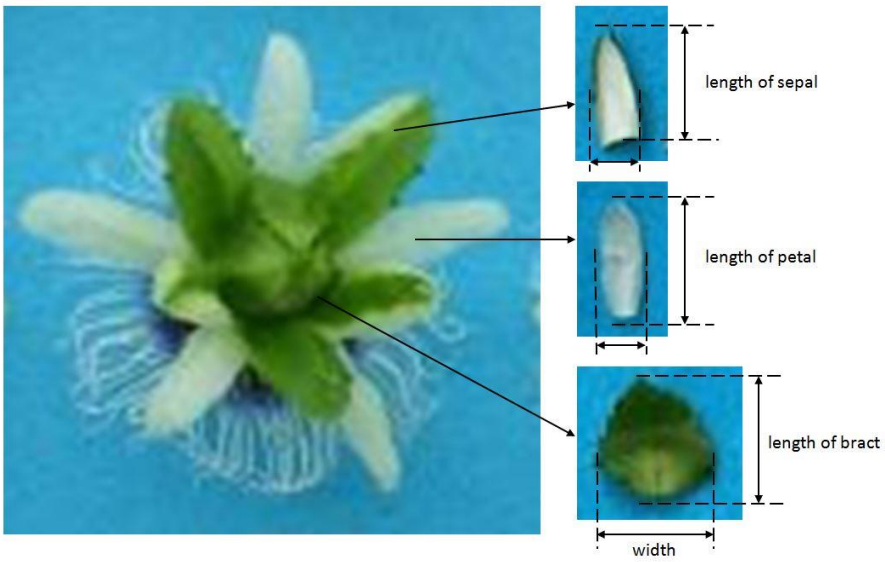
(f)


width of the purple rings
on the corona filaments
diameter of corona including filaments

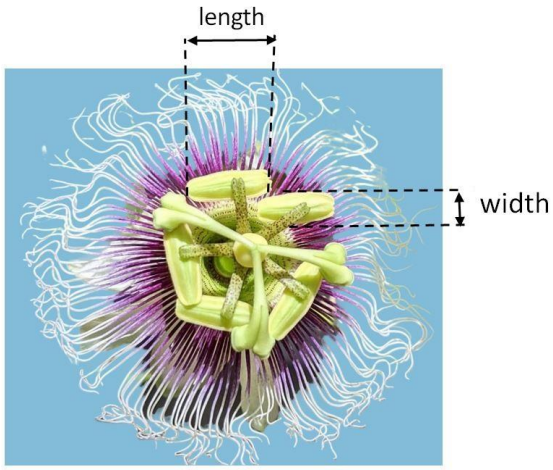
(g)


ovary width
ovary length
androgynophore
length

(h)


length of sepal
length of petal
length of bract
width

(i)



8.2 Explanations for individual characteristics

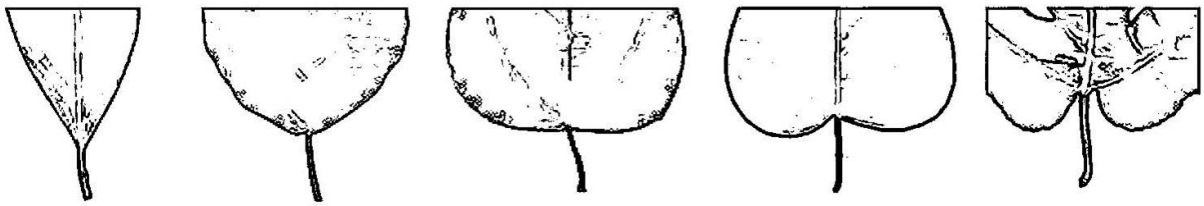
Ad. 1: Plant: vigor

The plant vigor should be considered as the overall abundance of vegetative growth.

Ad. 2: Shoot: color

Observations should be made on vigorous current season's shoots.

Ad. 11: Leaf blade: shape of base



1	2	3	4	5
acute	obtuse	truncate	weakly cordate	strongly cordate

Ad. 12: Leaf blade: depth of sinus

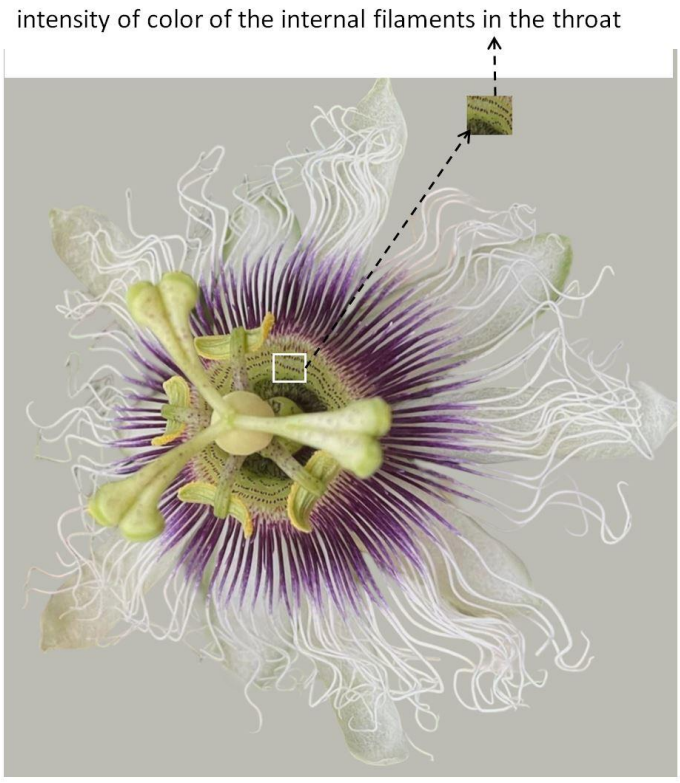
Observations should be made on the deepest sinus.

Ad. 15: Petiole: position of nectaries

1
adjacent to the base of the leaf blade

2
away from the base of the leaf blade

Ad. 26: Flower: intensity of color on inner filaments in throat



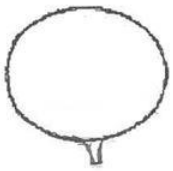
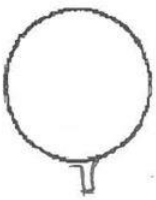
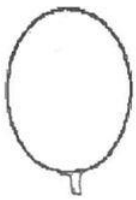
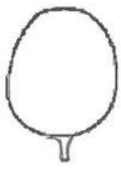
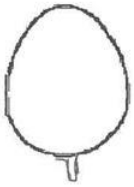
Ad. 35: Flower: anthocyanin spots on style

1
absent or few

2
medium

3
many

Ad. 40: Fruit: shape in longitudinal view

broadest part →	ratio height/diameter			
	low	medium	high	
above middle		 7 obovoid		
at middle	 1 obloid	 2 globose	 3 broad ellipsoid	 4 narrow ellipsoid
below middle		 6 obtuse ovoid		
↓		 5 ovoid		

Ad. 43: Fruit: thickness of skin

Ad. 44: Fruit: weight

Observations should be made on freshly harvested fruit.

Ad. 46: Fruit: weight of pulp including seeds

This characteristic can be observed by cutting the fruit and scooping out the pulp including seeds and then weighing them on an electronic scale.

Ad. 47: Fruit: sweetness of pulp

The sweetness of pulp should be observed in degrees Brix.

Ad. 48: Plant: self-incompatibility

A variety is self-incompatible when the fertile pollen of its own flower or of other flowers of the same variety is not able to fertilize the ovary.
To observe self-incompatibility, 5 un-opened flowers should be emasculated and bagged. Once the bagged flowers open, they should be hand pollinated using fresh pollen from the same plant or another plant of the same variety and re-bagged. Self-incompatibility is absent in the variety under observation if the ovary of the pollinated flower is swollen and still attached to the plant 72 hours after pollination.

9. Literature

Jesus, O.N., Oliveira, E.J., Faleiro, F.G., Soares, T.L.S., and Girardi, E.A. (2017). Illustrated Morpho-agronomic Descriptors for *Passiflora* spp. (Embrapa), Brasília, BR

10. Technical Questionnaire

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

	Application date: (not to be filled in by the applicant)

TECHNICAL QUESTIONNAIRE
to be completed in connection with an application for plant breeders' rights

1. Subject of the Technical Questionnaire

1.1.1	Botanical name	*Passifloraedulis* Sims	☐
1.1.2	Common name	Granadilla, Passion fruit	

2. Applicant

Name	
Address	
Telephone No.	
Fax No.	
E-mail address	
Breeder (if different from applicant)	

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

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 parent variety(ies))

(……..……..…) x (……..……..…)

female parent male parent

(c) unknown cross [ ]

4.1.2 Mutation
(please state parent variety)

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

4.1.4 Other
(Please provide details)

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

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

4.2 Method of propagating the variety

4.2.1 Vegetative propagation

(a) Cuttings [ ]
(b) In vitro propagation [ ]
(c) Budding and grafting (please specify rootstock) [ ]
(d) Other (state method) [ ]

4.2.2 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 (35)	**Flower: anthocyanin spots on style**		
	absent or few	Lacey, OPA11/19	1 [ ]
	medium	OPA5/19, OPA7/19	2 [ ]
	many	OPA3/19	3 [ ]
5.2 (37)	**Fruit: height**		
	very short		1 [ ]
	very short to short		2 [ ]
	short	E23, Lacey	3 [ ]
	short to medium		4 [ ]
	medium	Flamenco, OPA13/19	5 [ ]
	medium to tall		6 [ ]
	tall	McGuffies Red, OPA11/19	7 [ ]
	tall to very tall		8 [ ]
	very tall	Golden Giant	9 [ ]
5.3 (42)	**Fruit: color of skin**		
	green		1 [ ]
	medium yellow		2 [ ]
	yellow	Brazilian Gold, Inca Gold	3 [ ]
	dark yellow	Panama Gold	4 [ ]
	reddish orange		5 [ ]
	red	McGuffies Red	6 [ ]
	reddish purple	Sweetheart, Toms Special	7 [ ]
	purple	Misty Gem, Tango	8 [ ]
	black purple	Nellie Kelly Black	9 [ ]

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

	Characteristics	Example Varieties	Note
5.4 (44)	**Fruit: weight**		
	very low	E23	1 [ ]
	very low to low		2 [ ]
	low	Lacey, Misty Gem	3 [ ]
	low to medium		4 [ ]
	medium	Flamenco, OPA3/19, OPA5/19	5 [ ]
	medium to high		6 [ ]
	high	McGuffies Red, OPA12/19	7 [ ]
	high to very high		8 [ ]
	very high	Golden Giant	9 [ ]
5.5 (45)	**Fruit: color of pulp**		
	whitish		1 [ ]
	greenish yellow		2 [ ]
	yellow	McGuffies Red, Misty Gem	3 [ ]
	yellow orange	E23, Flamenco	4 [ ]
	orange	OPA3/19	5 [ ]
5.6 (48)	**Plant: self-incompatibility**		
	absent	Flamenco, Toms Special	1 [ ]
	present	Panama Red	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	*Fruit: height*	*short*	*tall*

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

A representative color photograph of the variety displaying its main distinguishing feature(s), should accompany the Technical Questionnaire. The photograph will provide a visual illustration of the candidate variety which supplements the information provided in the Technical Questionnaire.

The key points to consider when taking a photograph of the candidate variety are:

• Indication of the date and geographic location
• Correct labeling (breeder's reference)
• Good quality printed photograph (minimum 10 cm x 15 cm) and/or sufficient resolution electronic format version (minimum 960 x 1280 pixels)"

Further guidance on providing photographs with the Technical Questionnaire is available in document TGP/7 "Development of Test Guidelines", Guidance Note 35 (http://www.upov.int/tgp/en/).

[The link provided may be deleted by members of the Union when developing authorities' own test guidelines.]

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

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

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 Has the plant material to be examined been tested for the presence of virus or other pathogens?

Yes [ ]

(please provide details as specified by the Authority)

No [ ]

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]