



PROTOCOL FOR TESTS ON DISTINCTNESS, UNIFORMITY AND STABILITY

***Portulaca grandiflora* Hook.; *Portulaca oleracea* L.; *Portulaca umbraticola* Kunth**

PORTULACA

UPOV Code: PORTU_GRA; PORTU_OLE; PORTU_UMB

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CPVO-TP/242/2

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1. SUBJECT OF THE PROTOCOL AND REPORTING

1.1 Scope of the technical protocol

This Technical Protocol applies to all varieties of *Portulaca grandiflora* Hook., *Portulaca oleracea* L. and *Portulaca umbraticola* Kunth.

The protocol describes the technical procedures to be followed in order to meet the requirements of Council Regulation 2100/94 on Community Plant Variety Rights. The technical procedures have been agreed by the Administrative Council and are based on documents agreed by the International Union for the Protection of New Varieties of Plants (UPOV), such as the General Introduction to DUS (UPOV Document TG/1/3 http://www.upov.int/export/sites/upov/resource/en/tg_1_3.pdf), its associated TGP documents (<http://www.upov.int/tgp/en/>) and the relevant UPOV Test Guideline TG/242/2 dated 05/02/2020 (<https://www.upov.int/edocs/tgdocs/en/tg242.pdf>) for the conduct of tests for Distinctness, Uniformity and Stability.

1.2 Entry into Force

The present protocol enters into force on **01.03.2020**. Any ongoing DUS examination of candidate varieties started before the aforesaid date will not be affected by the approval of the Technical Protocol. Technical examinations of candidate varieties are carried out according to the TP in force when the DUS test starts. The starting date of a DUS examination is considered to be the due date for submitting of plant material for the first test period.

In cases where the Office requests to take-over a DUS report for which the technical examination has either been finalized or which is in the process to be carried out at the moment of this request, such report can only be accepted if the technical examination has been carried out according to the CPVO TP which was in force at the moment when the technical examination started.

1.3 Reporting between Examination Office and CPVO and Liaison with Applicant

1.3.1 Reporting between Examination Office and CPVO

The Examination Office shall deliver to the CPVO a preliminary report ("the preliminary report") no later than two weeks after the date of the request for technical examination by the CPVO.

The Examination Office shall also deliver to the CPVO a report relating to each growing period ("the interim report") and, when the Examination Office considers the results of the technical examination to be adequate to evaluate the variety or the CPVO so requests, a report relating to the examination ("the final report").

The final report shall state the opinion of the Examination Office on the distinctness, uniformity and stability of the variety. Where it considers those criteria to be satisfied, or where the CPVO so requests, a description of the variety shall be added to the report.

The interim and the final reports shall be delivered to the CPVO as soon as possible and no later than on the deadlines as laid down in the designation agreement.

1.3.2 Informing on problems in the DUS test

If problems arise during the course of the test the CPVO should be informed immediately so that the information can be passed on to the applicant. Subject to prior permanent agreement, the applicant may be directly informed at the same time as the CPVO particularly if a visit to the trial is advisable.

1.3.3 Sample keeping in case of problems

If the technical examination has resulted in a negative report, the CPVO shall inform the Examination Office as soon as possible in case that a representative sample of any relevant testing material shall be kept.

2. MATERIAL REQUIRED

2.1 Plant material requirements

Information with respect to the agreed closing dates and submission requirements of plant material for the technical examination of varieties can be found on <http://cpvo.europa.eu/applications-and-examinations/technical-examinations/submission-of-plant-material-s2-publication> in the special issue S2 of the Official Gazette of the Office. General requirements on submission of samples are also to be found following the same link.

2.2 Informing the applicant of plant material requirements

The CPVO informs the applicant that

- he is responsible for ensuring compliance with any customs and plant health requirements.
- the plant material supplied should be visibly healthy, not lacking in vigour, nor affected by any important pest or disease.
- 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.

2.3 Informing about problems on the submission of material

The Examination Office shall report to the CPVO immediately in cases where the test material of the candidate variety has not arrived in time or in cases where the material submitted does not fulfil the conditions laid down in the request for material issued by the CPVO.

In cases where the examination office encounters difficulties to obtain plant material of reference varieties the CPVO should be informed.

3. METHOD OF EXAMINATION

3.1 Number of growing cycles

The minimum duration of tests should normally be a single growing cycle.

3.2 Testing Place

Tests are normally conducted at one place. In the case of tests conducted at more than one place, guidance is provided in TGP/9 "Examining Distinctness" http://www.upov.int/edocs/tgpdocs/en/tgp_9.pdf.

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.

Because daylight varies, colour determinations made against a colour chart should be made either in a suitable cabinet providing artificial daylight or in the middle of the day in a room without direct sunlight. The spectral distribution of the illuminant for artificial daylight should conform with the CIE Standard of Preferred Daylight D 6500 and should fall within the tolerances set out in the British Standard 950, Part I. These determinations should be made with the plant part placed against a white background. The colour chart and version used should be specified in the variety description.

3.4 Test design

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.

Vegetatively propagated varieties: each test should be designed to result in a total of at least 15 plants.

Seed-propagated varieties: each test should be designed to result in a total of at least 40 plants.

3.5 Special tests for additional characteristics

In accordance with Article 23 of Implementing Rules N° 874/2009 an applicant may claim either in the Technical Questionnaire or during the test that a candidate has a characteristic which would be helpful in establishing distinctness. If such a claim is made and is supported by reliable technical data, a special test may be undertaken providing that a technically acceptable test procedure can be devised.

Special tests will be undertaken, with the agreement of the President of CPVO, where distinctness is unlikely to be shown using the characters listed in the protocol.

3.6 Constitution and maintenance of a variety collection

The process for the constitution and the maintenance of a variety collection can be summarized as follows:

Step 1: Making an inventory of the varieties of common knowledge

Step 2: Establishing a collection ("variety collection") of varieties of common knowledge which are relevant for the examination of distinctness of candidate varieties

Step 3: Selecting the varieties from the variety collection which need to be included in the growing trial or other tests for the examination of distinctness of a particular candidate variety.

3.6.1 Forms of variety collection

The variety collection shall comprise variety descriptions and may comprise living plant material. The variety description shall be produced by the EO unless special cooperation exists between EOs and the CPVO. The variety collection shall comprise images (e.g. photographs, illustrations or digitalized images) of representative parts of the plants of each variety, produced by the respective EO. The descriptive and pictorial information produced by the EO shall be held and maintained in a form of a database.

3.6.2 Living Plant Material

The EO shall obtain living plant material of reference varieties as and when those varieties need to be included in growing trials or other tests.

3.6.3 Making an inventory of varieties of common knowledge for inclusion in the variety collection

The inventory shall include varieties protected under National and Community PBR, varieties in trade or in commercial registers.

In addition to the above, the inventory shall be extended to the appropriate to

- any commercial document in which varieties are marketed as propagating or harvested material, especially when there is no official registration system;
- any list including varieties which are publicly available within plant collections (varieties included in genetic resource collections, collection of old varieties, etc.);
- information provided by relevant plant experts;
- relevant example varieties referred to in the technical protocols

3.6.4 Maintenance and renewal/update of a living variety collection

(a) Seed propagated species

The EO shall maintain seeds in conditions which will ensure germination and viability, periodical checks, and renewal as required. For the renewal of existing living material the identity of replacement living plant material shall be verified by conducting side-by-side plot comparisons between the material in the collection and the new material.

(b) Vegetatively propagated species

The EO shall maintain the variety collection under appropriate growing conditions (e.g. glasshouse, orchard, in vitro), where it shall be ensured that the plants are adequately irrigated, fertilised, pruned and protected from harmful pests and diseases. For the renewal of existing living material the identity of replacement living plant material shall be verified by conducting side-by-side plot comparisons between the material in the collection and the new material or by checking the identity of the new material against the variety description.

4. ASSESSMENT OF DISTINCTNESS, UNIFORMITY AND STABILITY

The prescribed procedure is to assess distinctness, uniformity and stability in a growing trial.

4.1 Distinctness

4.1.1 General recommendations

It is of particular importance for users of this Technical Protocol to consult the UPOV-General Introduction to DUS (link in chapter 1 of this document) and TGP 9 'Examining Distinctness' (http://www.upov.int/edocs/tgpdocs/en/tgp_9.pdf) prior to making decisions regarding distinctness. However, the following points are provided for elaboration or emphasis in this Technical Protocol.

Further guidance is provided in documents TGP/9 "Examining Distinctness" and TGP/8 "Trial Design and Techniques Used in the Examination of Distinctness, Uniformity and Stability".

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 Technical Protocols are familiar with the recommendations contained in the UPOV-General Introduction to DUS prior to making decisions regarding distinctness.

4.1.4 Number of plants/parts of plants to be examined

In the case of vegetatively propagated varieties, unless otherwise indicated, for the purposes of distinctness, all observations on single plants should be made on 10 plants or parts taken from each of 10 plants and any other observations made on all plants in the test, disregarding any off-type plants.

In the case of seed propagated varieties, unless otherwise indicated, for the purposes of distinctness, all observations on single plants should be made on 20 plants or parts taken from each of 20 plants and any other observations made on all plants in the test, disregarding any off-type plants.

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 third column of 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. colour 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 this Technical Protocol to consult the UPOV-General Introduction to DUS (link in chapter 1 of this document) and TGP 10 'Examining Uniformity' (http://www.upov.int/edocs/tgpdocs/en/tgp_10.pdf) prior to making decisions regarding uniformity. However, the following points are provided for elaboration or emphasis in this Technical Protocol:

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 15 plants, 1 off-type is allowed.

The assessment of uniformity for seed-propagated should be according to the recommendations for cross-pollinated varieties in the General Introduction.

4.3 Stability

- 4.3.1 It is of particular importance for users of this Technical Protocol to consult the UPOV-General Introduction to DUS (link in chapter 1 of this document) and TGP 11 'Examining Stability' (http://www.upov.int/edocs/tgpdocs/en/tgp_11.pdf)

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.

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 ORGANISATION 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 organise the growing trial so that similar varieties are grouped together.

- 5.3 The following have been agreed as useful grouping characteristics.

- a) Shoot: attitude (characteristic 2)
- b) Flower: type (characteristic 11)
- c) Flower: diameter (characteristic 13)
- d) Petal: main colour (characteristic 17) with the following groups:
 - Gr. 1: white
 - Gr. 2: yellow
 - Gr. 3: yellow orange
 - Gr. 4: orange
 - Gr. 5: pink
 - Gr. 6: red
 - Gr. 7: purple
 - Gr. 8: violet
- e) Petal: secondary colour (characteristic 18) with the following groups:
 - Gr. 1: white
 - Gr. 2: yellow
 - Gr. 3: orange
 - Gr. 4: orange brown
 - Gr. 5: pink
 - Gr. 6: red
 - Gr. 7: purple
 - Gr. 8: violet
- f) Petal: distribution of secondary colour (characteristic 19)

- 5.4 If other characteristics than those from the Technical Protocol are used for the selection of varieties to be included into the growing trial, the EO shall inform the CPVO and seek the prior consent of the CPVO before using these characteristics.

- 5.5 Guidance for the use of grouping characteristics, in the process of examining distinctness, is provided through the UPOV-General Introduction to DUS and document TGP/9 "Examining Distinctness".

6. INTRODUCTION TO THE TABLE OF CHARACTERISTICS

6.1 Characteristics to be used

The characteristics to be used in DUS tests and preparation of descriptions shall be those referred to in the table of characteristics. All the characteristics shall be used, providing that observation of a characteristic is not rendered impossible by the expression of any other characteristic, or the expression of a characteristic is prevented by the environmental conditions under which the test is conducted or by specific legislation on plant health. In the latter case, the CPVO should be informed.

The Administrative Council empowers the President, in accordance with Article 23 of Commission Regulation N°874/2009, to insert additional characteristics and their expressions in respect of a variety.

6.2. States of expression and corresponding notes

In the case of qualitative and pseudo-qualitative characteristics, all relevant states of expression are presented in the characteristic. However, in the case of quantitative characteristics with 5 or more states, an abbreviated scale may be used to minimize the size of the Table of Characteristics. For example, in the case of a quantitative characteristic with 9 states, the presentation of states of expression in the Test Guidelines may be abbreviated as follows:

State	Note
small	3
medium	5
large	7

However, it should be noted that all of the following 9 states of expression exist to describe varieties and should be used as appropriate:

State	Note
very small	1
very small to small	2
small	3
small to medium	4
medium	5
medium to large	6
large	7
large to very large	8
very large	9

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

6.3 Example Varieties

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

6.4 Legend

For column 'CPVO N°':

G	Grouping characteristic	-see Chapter 5
QL	Qualitative characteristic	
QN	Quantitative characteristic	
PQ	Pseudo-qualitative characteristic	
(+)	Explanations for individual characteristics	-see Chapter 8.2

For column 'UPOV N°':

The numbering of the characteristics is provided as a reference to the UPOV guideline.

(*)	UPOV Asterisk characteristic	-Characteristics that are important for the international harmonization of variety descriptions.
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For column 'Stage, method':

MG, MS, VG, VS		-see Chapter 4.1.5
(a)-(c)	Explanations covering several Characteristics	-see Chapter 8.1
00-99	Explanations on growth stages	-see Chapter 8.3

7. TABLE OF CHARACTERISTICS

CPVO N°	UPOV N°	Stage, Method	Characteristics	Examples	Note
1. QN	1. (*)	VG	Plant: number of shoots		
			few	LAZPRT 1502	3
			medium	Cindy	5
			many	LAZZDU 0807	7
2. (+) QN	2. (*)	VG	Shoot: attitude		
			upright	Sunseeker Orange	1
			semi-upright	Pazzaz Deep Pink	3
			horizontal		5
			semi-trailing	LAZPRT 1703	7
			G	trailing	LAZPRT 1502
3. QN	3.	MS/VG	Shoot: length		
			short	Sunseeker Orange	3
			medium		5
			long	LAZPRT 1502	7
4. PQ	4. (*)	VG	Shoot: colour		
			light green	Cindy	1
			medium green		2
			dark green		3
			light reddish brown		4
			medium reddish brown	Sunseeker Orange	5
			dark reddish brown	LAZZDU 1112	6
5. QN	5.	MS/VG (a)	Leaf: length		
			short		3
			medium	LAZZDU 1112	5
			long	LAZPRT 1507	7

CPVO N°	UPOV N°	Stage, Method	Characteristics	Examples	Note
6.	6. (*)	MS/VG	Leaf: width		
QN		(a)	very narrow	Sunseeker Orange	1
			narrow		3
			medium	LAZPRT 1507	5
			broad	LAZPRT 1502	7
			very broad		9
7.	7. (*)	VG	Leaf: variegation		
QL		(a)	absent	LAZPRT 1507	1
			present	Flare Cherry	9
8.	8.	VG	Leaf: intensity of green colour		
QN		(a)	light		1
			medium	LAZZDU 1112	2
			dark	Pazzaz Deep Pink	3
9. (+)	9. (*)	VG	Leaf: width of reddish brown colouration on margin		
QN		(a)	absent of very narrow	DPAZORFLAR	1
			narrow		2
			medium	LAZPRT 1507	3
			broad	Pazzaz Deep Pink	4
			very broad		5
10.	10.	VG	Leaf: intensity of reddish brown colouration on margin		
QN		(a)	absent of very weak	DPAZORFLAR	1
			weak	LAZPRT 1502	2
			medium	LAZPRT 1507	3
			strong	Pazzaz Deep Pink	4
			very strong		5

CPVO N°	UPOV N°	Stage, Method	Characteristics	Examples	Note		
11. (+)	11. (*)	VG	Flower: type				
			QL	(b)	single	LAZZDU 1112	1
					double	Sunseeker Orange	2
			G		with petaloid staminodes	Cindy	3
12. (+)	12.	VG	<u>Only varieties with Flower: type: single: Flower: shape in lateral view</u>				
					flat or slightly concave		1
					moderately concave		2
					strongly concave		3
13.	13. (*)	MS/VG	Flower: diameter				
			QN	(b)	small	LAZPRT 1502	3
					medium	Pazzaz Deep Pink	5
			G		large	KLEPO 12820	7
14. (+)	14. (*)	VG	<u>Only varieties with Flower: type: single: Flower: overlapping of petals</u>				
			QN	(b)	absent or weak	LAZZDU 1112	1
					medium	LAZZDU 0806	2
					strong	DPAZORFLAR	3
15. (+)	15.	VG	<u>Only varieties with Flower: type: single: Flower: conspicuousness of colour at base</u>				
			QN	(b)	absent or very weak	LAZZDU 1112	1
					weak		2
					medium	DPAZORFLAR	3
					strong		4
					very strong	LAZPRT 1707	5

CPVO N°	UPOV N°	Stage, Method	Characteristics	Examples	Note
16.	16.	VG	<u>Only varieties with Flower: type: single: Flower: colour at base</u>		
PQ		(b)	yellowish		1
			yellowish with dark margin		2
			reddish		3
			brownish		4
17. (+)	17. (*)	VG	Petal: main colour		
PQ		(c)	RHS Colour Chart (indicate reference number)		
18. (+)	18. (*)	VG	Petal: secondary colour		
PQ		(c)	RHS Colour Chart (indicate reference number)		
19. (+)	19. (*)	VG	Petal: distribution of secondary colour		
PQ		(c)	mainly at apex		1
			at upper third		2
			irregular along marginal zone		3
			on lateral marginal zone		4
			central		5
			throughout		6
20. (+)	20.	VG	Petal: tertiary colour		
PQ		(c)	RHS Colour Chart (indicate reference number)		
21.	21.	MS/VG	Petal: length		
QN		(c)	short	LAZPRT 1607	3
			medium	Pazzaz Deep Pink	5
			long	KLEPO 12820	7

CPVO N°	UPOV N°	Stage, Method	Characteristics	Examples	Note
22.	22.	MS/VG	Petal: width		
QN		(c)	narrow	LAZPRT 1502	3
			medium	Pazzaz Deep Pink	5
			broad	KLEPO 12820	7
23. (+)	23. (*)	VG	Petal: emargination		
QN		(c)	absent or very shallow	DPAZORFLAR	1
			medium	LAZZDU 0807	2
			deep	LAZZDU 0806	3
24. (+)	24. (*)	VG	Petaloid staminodes: colour of outer staminodes		
PQ			RHS Colour Chart (indicate reference number)		
25. (+)	25.	VG	Petaloid staminodes: colour of inner staminodes		
PQ			RHS Colour Chart (indicate reference number)		

8. EXPLANATIONS ON THE TABLE OF CHARACTERISTICS

8.1 Explanations covering several characteristics

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

- Observations should be made on the upper side of fully developed leaves from the middle part of a plant.
- Observations should be made on the inner side of a fully open flower.
- Observations should be made on the inner side. Unless otherwise indicated, observations on the petal of double flowers should be made on the outermost whorl of petals

8.2 Explanations for individual characteristics

Ad. 2: Shoot: attitude



1
upright



3
semi-upright



5
horizontal



7
semi-trailing



9
trailing

Ad. 9: Leaf: width of reddish brown coloration on margin



1
absent or very narrow



3
medium



4
broad

Ad. 11: Flower: type

A single flower has 4 to 6 petals and no petaloid staminodes. A double flower has more than 6 petals and no petaloid staminodes. For flowers with petaloid staminodes the number of petals is irrelevant.



1
single



2
double



3
with petaloid staminodes

Ad. 12: Only varieties with Flower: type: single: Flower: shape in lateral view



1
flat or slightly



2
moderately concave

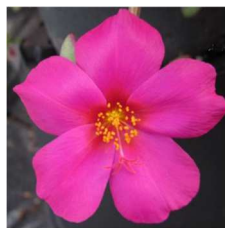


3
strongly concave

Ad. 14: Only varieties with Flower: type: single: Flower: overlapping of petals



1
absent or weak



2
medium



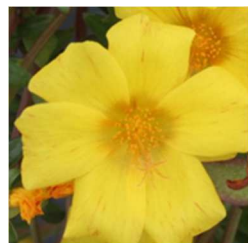
3
strong

Ad. 15: Only varieties with Flower: type: single: Flower: conspicuousness of colour at base

The conspicuousness is determined by the colour contrast and the width of the contrasting ring. The innermost centre of the flower is not observed.



1
absent or very weak



2
weak



3
medium



4
strong



5
very strong

colour at base

colour at base

Ad. 17: Petal: main colour

The main colour is the colour with the largest surface area excluding the colour at base. In cases where the areas of the main and the secondary colour are too similar to reliably decide which colour has the larger area, the darker colour is considered to be the main colour. The tertiary colour is the colour with the third largest area. In cases where the areas of the secondary and the tertiary colour are too similar to decide which has the smaller area, the lighter colour is considered to be the tertiary colour.

Ad. 18: Petal: secondary colour

See Ad. 17.

Ad. 19: Petal: distribution of secondary colour

In varieties with bi- or multi-coloured flowers the proportion of the main and the secondary colour can change due to environmental conditions. Those flowers which have the predominant distribution should be described.

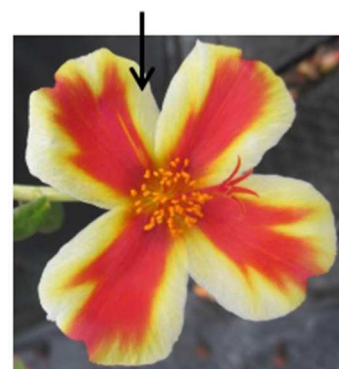
Arrow points to the secondary colour:



1
mainly at apex



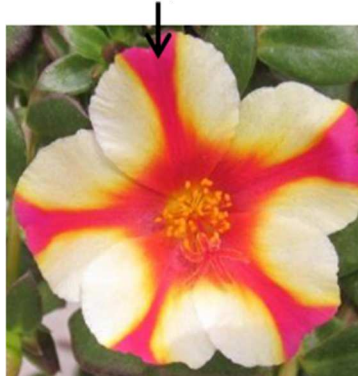
2
at upper third



3
irregular along marginal zone



4
on lateral marginal zone



5
central

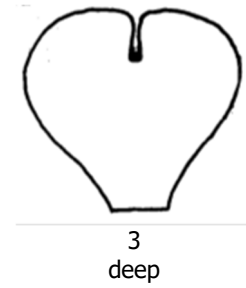
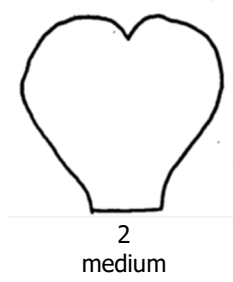
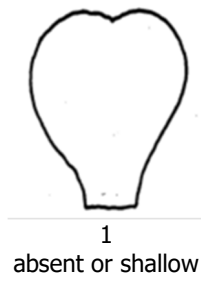


6
throughout

Ad. 20: Petal: tertiary colour

See Ad. 17.

Ad. 23: Petal: emargination



Ad. 24: Petaloid staminodes: colour of outer staminodes



a = inner staminodes
b = outer staminodes

Ad. 25: Petaloid staminodes: colour of inner staminodes

See Ad. 24.

9. LITERATURE

No specific literature.

10. TECHNICAL QUESTIONNAIRE

The Technical Questionnaire is available on the CPVO website under the following reference:
CPVO-TQ/242/2