CPVO · OCVV
Community Plant Variety Office
Office Communautaire des Variétés Végétales

PROTOCOL FOR TESTS ON DISTINCTNESS, UNIFORMITY AND STABILITY

Coleus scutellarioides (L.) Benth.
(syn. *Plectranthus scutellarinoides* (L.) R. Br. ; *Coleus blumei* Benth.; *Solenostemon scutellarioides* (L.) Codd)

COLEUS

UPOV Code: PLECT_SCU

Adopted on 18/12/2025

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CPVO-TP/327/1 based on the version 5 of the CPVO-TP/template

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CPVO-TP/327/1

1. SUBJECT OF THE PROTOCOL AND REPORTING

1.1 Scope of the technical protocol

This Technical Protocol applies to all varieties of *Coleus scutellarioides* (L.) Benth.

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/327/1 dated 20/09/2018 (https://www.upov.int/edocs/tgdocs/en/tg327.pdf) for the conduct of tests for Distinctness, Uniformity and Stability.

1.2 Entry into Force

The present protocol enters into force on **01.01.2026**. 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 growing cycle.

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 four weeks after the date of the request for technical examination by the CPVO and in any case preferably before the submission period of the plant material.

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.

If a report is negative the Examination Office shall set out the detailed reasons for its findings.

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

In cases where the Examination Office identifies issues during the course of the technical examination that may lead to a negative report, the Examination Office shall inform the CPVO and in urgent cases the applicant/holder as soon as such issues become obvious.

1.3.3 Sample keeping in case of problems

As far as feasible the Examination Office shall keep a representative sample of any relevant testing material of the candidate variety and reference variety(ies) if the technical examination has resulted in a negative report. As soon as possible, the CPVO shall inform the Examination Office when the material can be destroyed.

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 https://public.plantvarieties.eu/publication in the special issue S2/S3 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 submission of plant 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 in writing.

3. METHOD OF EXAMINATION

3.1 Number of growing cycles

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

The testing of a variety may be concluded when the entrusted examination office 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" 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

3.4.1 In the case of vegetatively propagated varieties, each test should be designed to result in a total of at least 10 plants.

3.4.2 In the case of seed-propagated varieties, each test should be designed to result in a total of at least 30 plants.

3.4.3 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 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 characteristics 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 may only obtain living plant material of reference varieties as and when those varieties need to be included in growing trials or other tests.

Living plant material of reference varieties identified to be included in the growing trial may be taken from the EO's collection in case there is one or shall be obtained specifically for the growing trial 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.
The inventory shall take into account the list of varieties which are the subject of an on-going application for protection or official registration (candidate varieties).

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

- relevant example varieties referred to in the technical protocols;
- 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.

3.6.4 Maintenance and renewal/update of a living variety collection

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.
Living material in variety collections representing varieties for which a DUS test was carried out at that EO shall be renewed after verification in a side-by-side comparison. In case where no living material is available anymore in the collection, such verification could be done with any other test that has proven to give similar results between the material in the collection and the new material.

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 9 plants or parts taken from each of 9 plants and any other observations made on all plants in the test, disregarding any off-type plants.

In the case of 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 observation 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:

4.2.2 This Technical Protocol has been developed for the examination of vegetatively propagated and cross-pollinated seed-propagated varieties. For varieties with other types of propagation the recommendations in the UPOV-General Introduction to DUS and document TGP/13 "Guidance for new types and species", Section 4.5 "Testing Uniformity" should be followed.

For the assessment of uniformity of vegetatively propagated varieties, a population standard of 1% and an acceptance probability of at least 95 % should be applied. In the case of a sample size of 10 plants, 1 off-type is allowed.

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

4.3 Stability

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.pd)

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) Plant: growth habit (characteristic 1)

b) Plant: height (characteristic 2)

c) Leaf blade: depth of incisions of margin (characteristic 35)

d) Leaf blade: colour covering the largest surface area, with the following groups:

Gr. 1: white
Gr. 2: green
Gr. 3: yellow green
Gr. 4: light yellow
Gr. 5: medium yellow
Gr. 6: orange
Gr. 7: pink
Gr. 8: red
Gr. 9: purple red
Gr. 10: purple
Gr. 11: brown

e) Leaf blade: colour covering the second largest surface area, with the following groups:

Gr. 1: white
Gr. 2: green
Gr. 3: yellow green
Gr. 4: light yellow
Gr. 5: medium yellow
Gr. 6: orange
Gr. 7: pink
Gr. 8: red
Gr. 9: purple red
Gr. 10: purple
Gr. 11: brown

5.4 If characteristics other than those mentioned in the list of grouping characteristics and/or from the table of characteristics and/or from the Technical Questionnaire – sections 5 and 7. 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

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

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 Asterisked characteristic	-Characteristics that are important for the international harmonization of variety descriptions.

For column 'Stage, method':

MG, MS, VG, VS		-see Chapter 4.1.5
(a)-(d)	Explanations covering several Characteristics	-see Chapter 8.1

7. TABLE OF CHARACTERISTICS

CPVO N°	UPOV N°	Stage, Method	Characteristics	Examples	Note
1. (+)	**1. (*)**	**VG**	**Plant: growth habit**		
PQ			upright		1
			semi-upright		2
			spreading		3
G			trailing		4
2. (+)	**2. (*)**	**MG/MS /VG**	**Plant: height**		
QN			very short		1
			very short to short		2
			short	Highway mosaic	3
			short to medium		4
			medium	COL-06-076C	5
			medium to tall		6
			tall	Grecom Orange Marmalade	7
			tall to very tall		8
G			very tall		9
3. (+)	**3. (*)**	**MG/MS /VG**	**Plant: width**		
QN			very narrow		1
			very narrow to narrow		2
			narrow	COL-06-076C	3
			narrow to medium		4
			medium	Splash Yellow	5
			medium to broad		6
			broad	Grecom Orange Marmalade	7
			broad to very broad		8
			very broad		9

CPVO N°	UPOV N°	Stage, Method	Characteristics	Examples	Note
4. (+)	**4.**	**VG**	**Stem: colour**		
PQ			RHS Colour Chart (indicate reference number)		
5. (+)	**5.**	**MG/MS /VG**	**Petiole: length**		
QN		**(a)**	very short		1
			very short to short		2
			short	Balaublach	3
			short to medium		4
			medium	Versa Lime	5
			medium to tall		6
			tall		7
			tall to very tall		8
			very tall		9
6. (+)	**6. (*)**	**MG/MS /VG**	**Leaf blade: length**		
QN		**(a)**	very short		1
			very short to short		2
			short	Carefree White	3
			short to medium		4
			medium	Wizard Scarlet	5
			medium to tall		6
			tall	Grecom Orange Marmalade	7
			tall to very tall		8
			very tall		9

CPVO N°	UPOV N°	Stage, Method	Characteristics	Examples	Note
7. (+)	**7. (*)**	**MG/MS /VG**	**Leaf blade: width**		
QN		**(a)**	very narrow		1
			very narrow to narrow		2
			narrow	Balaublach	3
			narrow to medium		4
			medium	Versa Lime	5
			medium to broad		6
			broad	Grecom Orange Marmalade	7
			broad to very broad		8
			very broad		9
8. (+)	**8.**	**MG/MS /VG**	**Leaf blade: ratio length/width**		
QN		**(a)**	very low		1
			Very low to low		2
			low		3
			low to medium		4
			medium		5
			medium to high		6
			high		7
			high to very high		8
			very high		9
9.	**9. (*)**	**VG**	**Leaf blade: colour one**		
PQ		**(a), (b)**	RHS Colour Chart (indicate reference number)		

CPVO N°	UPOV N°	Stage, Method	Characteristics	Examples	Note
10.	**10. (*)**	**VG**	**Leaf blade: colour one: distribution**		
PQ		**(a), (c)**	single coloured		1
			along veins		2
			between veins		3
			marginal zone		4
			central zone		5
			basal zone		6
			between midrib and margin		7
			throughout		8
11.	**11. (*)**	**VG**	**Leaf blade: colour one: pattern**		
PQ		**(a), (d)**	flushed		1
			blotched		2
			irregular		3
			solid or nearly solid		4
12.	**12. (*)**	**VG**	**Leaf blade: colour one: total area**		
QN		**(a)**	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
13.	**13. (*)**	**VG**	**Leaf blade: colour two**		
PQ		**(a), (b)**	RHS Colour Chart (indicate reference number)		

CPVO N°	UPOV N°	Stage, Method	Characteristics	Examples	Note
14.	**14. (*)**	**VG**	**Leaf blade: colour two: distribution**		
PQ		**(a), (c)**	none		1
			along veins		2
			between veins		3
			marginal zone		4
			central zone		5
			basal zone		6
			between midrib and margin		7
			throughout		8
15.	**15. (*)**	**VG**	**Leaf blade: colour two: pattern**		
PQ		**(a), (d)**	flushed		1
			blotched		2
			irregular		3
			solid or nearly solid		4
16.	**16. (*)**	**VG**	**Leaf blade: colour two: total area**		
QN		**(a)**	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
17.	**17. (*)**	**VG**	**Leaf blade: colour three**		
PQ		**(a), (b)**	RHS Colour Chart (indicate reference number)		

CPVO N°	UPOV N°	Stage, Method	Characteristics	Examples	Note
18.	**18. (*)**	**VG**	**Leaf blade: colour three: distribution**		
PQ		**(a), (c)**	none		1
			along veins		2
			between veins		3
			marginal zone		4
			central zone		5
			basal zone		6
			between midrib and margin		7
			throughout		8
19.	**19. (*)**	**VG**	**Leaf blade: colour three: pattern**		
PQ		**(a), (d)**	flushed		1
			blotched		2
			irregular		3
			solid or nearly solid		4
20.	**20. (*)**	**VG**	**Leaf blade: colour three: total area**		
QN		**(a)**	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
21.	**21. (*)**	**VG**	**Leaf blade: colour four**		
PQ		**(a), (b)**	RHS Colour Chart (indicate reference number)		

CPVO N°	UPOV N°	Stage, Method	Characteristics	Examples	Note
22.	**22. (*)**	**VG**	**Leaf blade: colour four: distribution**		
PQ		**(a), (c)**	none		1
			along veins		2
			between veins		3
			marginal zone		4
			central zone		5
			basal zone		6
			between midrib and margin		7
			throughout		8
23.	**23. (*)**	**VG**	**Leaf blade: colour four: pattern**		
PQ		**(a), (d)**	flushed		1
			blotched		2
			irregular		3
			solid or nearly solid		4
24.	**24. (*)**	**VG**	**Leaf blade: colour four: total area**		
QN		**(a)**	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
25.	**25.**	**VG**	**Leaf blade: colour one of lower side**		
PQ		**(a), (b)**	RHS Colour Chart (indicate reference number)		

CPVO N°	UPOV N°	Stage, Method	Characteristics	Examples	Note
26.	**26.**	**VG**	**Leaf blade: colour one: distribution on lower side**		
PQ		**(a), (c)**	single coloured		1
			along veins		2
			between veins		3
			marginal zone		4
			central zone		5
			basal zone		6
			between midrib and margin		7
			throughout		8
27.	**27.**	**VG**	**Leaf blade: colour one: pattern on lower side**		
PQ		**(a), (d)**	flushed		1
			blotched		2
			random		3
			solid or nearly solid		4
28.	**28.**	**VG**	**Leaf blade: colour one: total area on lower side**		
QN		**(a)**	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
29.	**29.**	**VG**	**Leaf blade: colour two of lower side**		
PQ		**(a), (b)**	RHS Colour Chart (indicate reference number)		

CPVO N°	UPOV N°	Stage, Method	Characteristics	Examples	Note
30.	**30.**	**VG**	**Leaf blade: colour two: distribution on lower side**		
PQ		**(a), (c)**	none		1
			along veins		2
			between veins		3
			marginal zone		4
			central zone		5
			basal zone		6
			between midrib and margin		7
			throughout		8
31.	**31.**	**VG**	**Leaf blade: colour two: pattern on lower side**		
PQ		**(a), (d)**	flushed		1
			blotched		2
			random		3
			solid or nearly solid		4
32.	**32.**	**VG**	**Leaf blade: colour two: total area on lower side**		
QN		**(a)**	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

CPVO N°	UPOV N°	Stage, Method	Characteristics	Examples	Note
33. (+)	**33. (*)**	**VG**	**Leaf blade: shape of base**		
PQ		**(a)**	acute		1
			obtuse		2
			truncate		3
			shallow cordate		4
			deep cordate		5
34. (+)	**34. (*)**	**VG**	**Leaf blade: shape of apex**		
PQ		**(a)**	acuminate		1
			acute		2
			obtuse		3
			rounded		4
35. (+)	**35. (*)**	**VG**	**Leaf blade: depth of incisions of margin**		
QN		**(a)**	very shallow		1
			very shallow to shallow		2
			shallow		3
			shallow to medium		4
			medium		5
			medium to deep		6
			deep		7
			deep to very deep		8
G			very deep		9
36.	**36.**	**VG**	**Leaf blade: undulation of margin**		
QN		**(a)**	absent or very weak	Wizard Scarlet	1
			weak	Zigzag	2
			medium	UF0843	3
			strong		4
			very strong		5

8. EXPLANATIONS ON THE TABLE OF CHARACTERISTICS

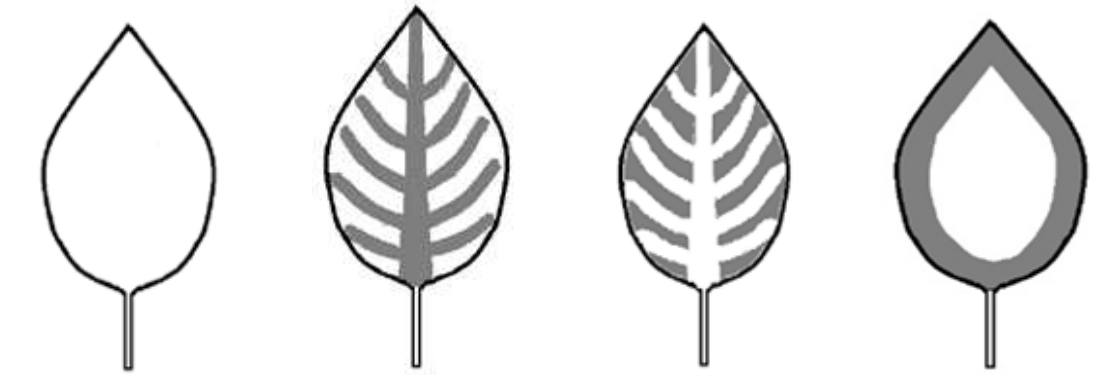
8.1 Explanations covering several characteristics

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

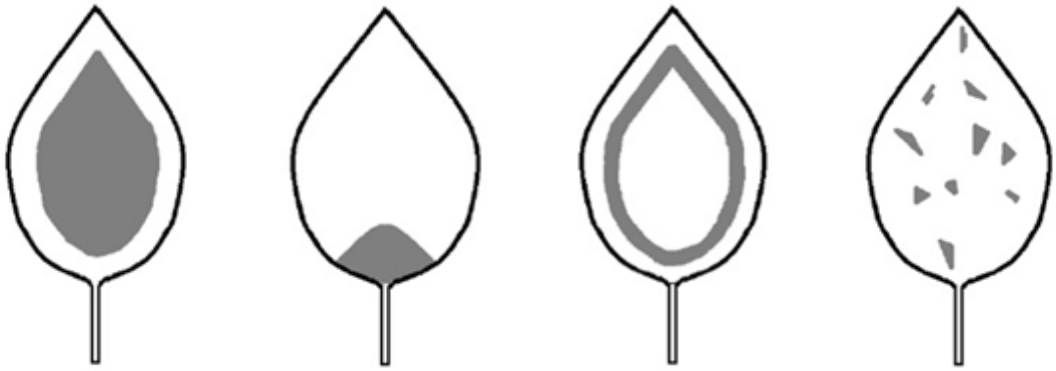
a) Observations should be made on the upper side of fully expanded leaves from the middle third of the stem.

b) Where the characteristic refers to colours as "one", "two" etc., they are to be recorded in the order that they appear on the RHS chart, i.e. colour one is the one with the lowest number, colour two with the second lowest and so on. For example, if the leaves are Green 137A dotted with White 155A, Green 137A will be colour one and White 155A colour two. If two colours are on the same leaf of the chart, for example Green 137A and Green 137D, 137A is regarded as the lower numbered colour. It should be noted that under this system, ranking is independent of surface area, so the colour covering the greatest surface area may be classified as colour three or four. The Guideline makes provision for four colours; if there are more, the colour[s] with the smallest surface area[s] should be discounted.

c) Colour distribution:

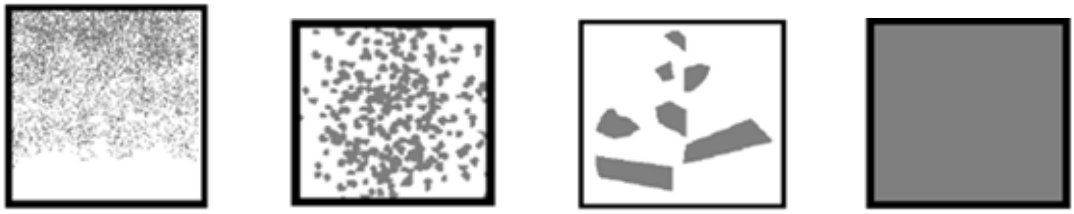


1 single coloured or none | 2 along veins | 3 between veins | 4 marginal zone



5 central zone | 6 basal zone | 7 between midrib | 8 throughout

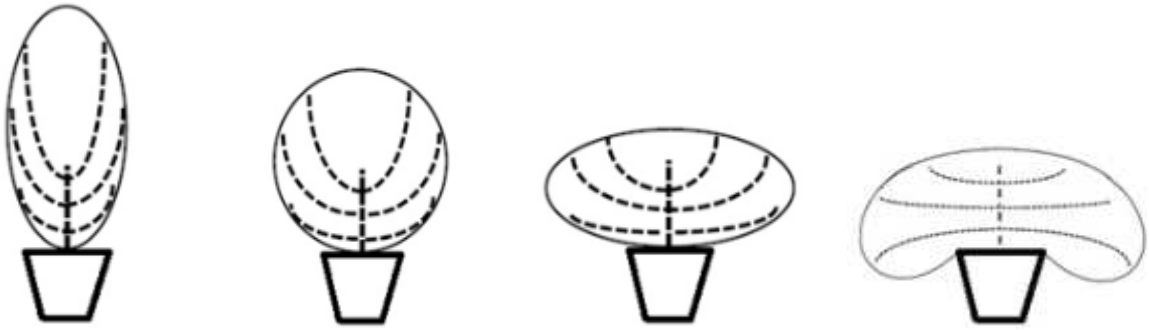
d) Colour pattern



1 flushed | 2 blotched | 3 irregular | 4 solid or nearly solid

8.2 Explanations for individual characteristics

Ad 1: Plant: growth habit



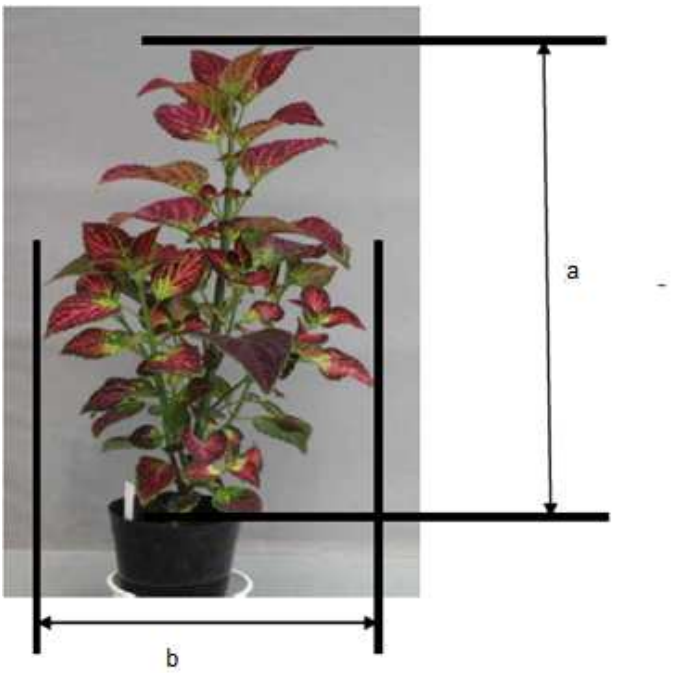
1
upright

2
semi-upright

3
spreading

4
trailing

Ad. 2: Plant: height
Ad. 3: Plant: width

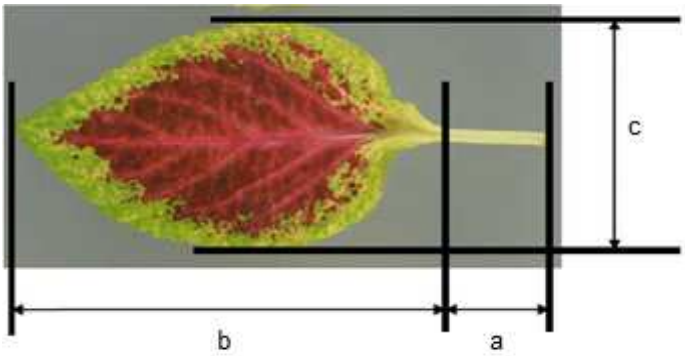


a = plant: height
b = plant: width

Ad. 4: Stem: colour

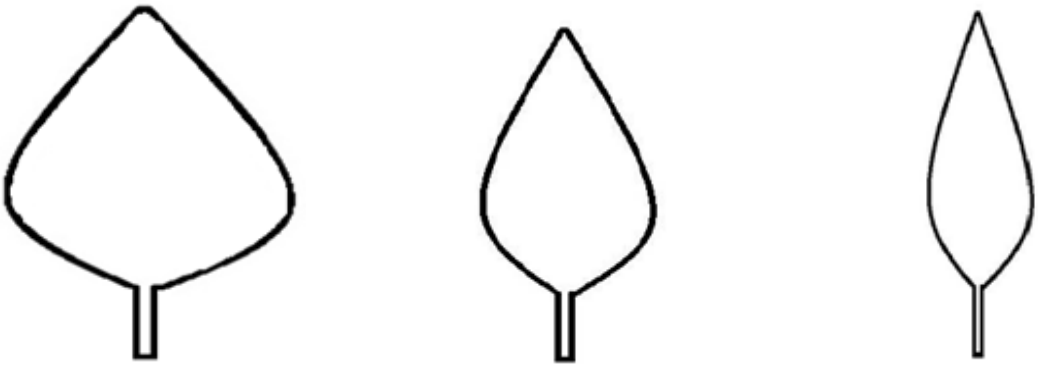
Observations should be made on the middle third of an actively growing stem.

Ad. 5: Petiole: length
Ad. 6: Leaf blade: length
Ad. 7: Leaf blade: width



a = Petiole: length
b = Leaf blade: length
c = Leaf blade: width

Ad. 8: Leaf blade: ratio length/width

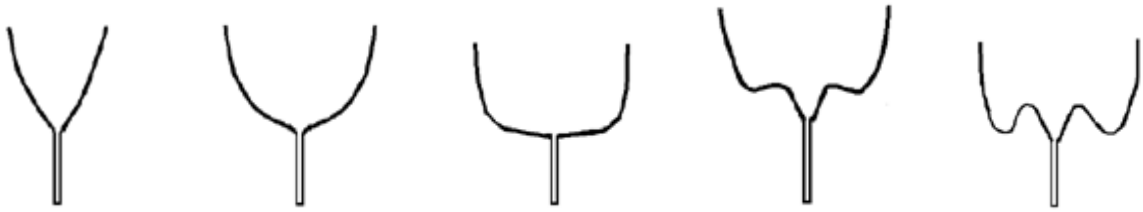


3
low

5
medium

7
high

Ad. 33: Leaf blade: shape of base



1
acute

2
obtuse

3
truncate

4
shallow cordate

5
deep cordate

Ad. 34: Leaf blade: shape of apex

1
acuminate

2
acute

3
obtuse

4
rounded

Ad. 35: Leaf blade: depth of incisions of margin

1
very shallow

3
shallow

5
medium

7
deep

9
very deep

9. LITERATURE

Hartlage, R., 2008: Coleus-Rainbow Foliage for Containers and Gardens. Timber Press, Portland, Oregon, US.

Tsukamoto, Y., 1994: The Grand Dictionary of Horticulture, Volume 1. The Shogakukan Ltd., Tokyo, JP, pp. 908-910.

10. TECHNICAL QUESTIONNAIRE

The Technical Questionnaire is available on the CPVO website under the following reference:
CPVO/TQ-327/1 – Coleus scutellarioides (L.) Benth. - coleus