



PROTOCOL FOR DISTINCTNESS, UNIFORMITY AND STABILITY TESTS

***Oenothera* L. (syn. *Gaura* L.)**

GAURA

UPOV Species Code: GAURA

Adopted on 21/03/2012

Entry into force on 21/03/2012

I **SUBJECT OF THE PROTOCOL**

The protocol describes the technical procedures to be followed in order to meet the Council Regulation 2100/94 on Community Plant Variety Rights. The technical procedures have been agreed by the Administrative Council and are based on general UPOV Document TG/1/3 and UPOV Guideline TG/261/1 dated 24/03/2010 for the conduct of tests for Distinctness, Uniformity and Stability. This protocol applies to all vegetatively propagated varieties of **Gaura L.**

II **SUBMISSION OF PLANT MATERIAL**

1. The Community Plant Variety Office (CPVO) is responsible for informing the applicant of

- the closing date for the receipt of plant material;
- the minimum amount and quality of plant material required;
- the examination office to which material is to be sent.

The applicant is responsible for ensuring compliance with any customs and plant health requirements.

2. Final dates for receipt of documentation and material by the Examination Office

The final dates for receipt of requests, technical questionnaires and the final date or submission period for plant material will be decided by the CPVO and each Examination Office chosen.

The Examination Office is responsible for immediately acknowledging the receipt of requests for testing, and technical questionnaires. If no or unsatisfactory plant material is submitted the CPVO should be informed as soon as possible.

3 Plant material requirements

Information with respect to closing dates and submission requirements of plant material for technical examination of varieties can be found on the CPVO website (www.cpvo.europa.eu) and in the special Issue S2 of the Official Gazette of the Office.

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

The plant material must not have undergone any treatment unless the CPVO and the examination office allow or request such treatment. If it has been treated, full details of the treatment must be given.

Labelling of sample: - Species
- File number of the application allocated by the CPVO
- Breeder's reference
- Examination reference (if known)
- Name of applicant
- The phrase "On request of the CPVO"

III CONDUCT OF TESTS

1. Variety collection

A variety collection will be maintained for the purpose of establishing distinctness of the candidate varieties in test. A variety collection may contain both living material and descriptive information. A variety will be included in a reference collection only if plant material is available to make a technical examination.

Pursuant to Article 7 of Council Regulation No. 2100/94, the basis for a collection should be the following:

- varieties listed or protected at the EU level;
- varieties protected in other UPOV Member States;
- any other variety in common knowledge.

It is the responsibility of Examination Office to keep the variety collection up to date.

2. Material to be examined

Candidate varieties will be directly compared with other candidates for Community plant variety rights tested at the same Examination Office, and with appropriate varieties in the variety collection. When necessary an Examination Office may also include other candidates and varieties.

3. Characteristics to be used

The characteristics to be used in DUS tests and preparation of descriptions shall be those referred to in Annex I. 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. In the latter case, the CPVO should be informed. In addition the existence of some other regulation e.g. plant health, may make the observation of the characteristic impossible.

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.

4. Grouping of varieties

The varieties and candidates to be compared will be divided into groups to facilitate the assessment of distinctness. Characteristics which are suitable for grouping purposes are those which are known from experience not to vary, or to vary only slightly, within a variety and which in their various states of expression are fairly evenly distributed throughout the collection. In the case of continuous grouping characteristics overlapping states of expression between adjacent groups is required to reduce the risks of incorrect allocation of candidates to groups. The characters used for grouping are the following:

- a) Leaf: variegation (characteristic 17)
- b) Leaf: anthocyanin coloration (characteristic 21)
- c) Petal: main colour of inner surface (characteristic 32), with the following groups:
 - Gr. 1: white
 - Gr. 2: light pink
 - Gr. 3: medium pink
 - Gr. 4: dark pink
 - Gr. 5: red

d) Petal: secondary colour of inner surface (excluding veins) (characteristic 33), with the following groups:

- Gr. 1: white
- Gr. 2: light pink
- Gr. 3: medium pink
- Gr. 4: dark pink
- Gr. 5: red

e) Petal: conspicuousness of veins (characteristic 35)

5. Trial designs and growing conditions

The minimum duration of tests should normally be a single growing cycle if the results on distinctness and uniformity are conclusive. Tests will be carried out under conditions ensuring normal growth.

The test design is as follows:

Each test should be designed to result in a total of at least 10 plants.

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.

Unless otherwise indicated, all observations should be made on 10 plants or parts taken from each of 10 plants.

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

6. Special tests

In accordance with Article 83(3) of Council Regulation No. 2100/94 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.

7. Standards for decisions

a) **Distinctness**

A candidate variety will be considered to be distinct if it meets the requirements of Article 7 of Council Regulation No. 2100/94.

b) **Uniformity**

For the assessment of uniformity a population standard of 1% with an acceptance probability of at least 95% should be applied. In the case of a sample size between 6 and 35 plants, 1 off-type is allowed.

c) **Stability**

A candidate will be considered to be sufficiently stable when there is no evidence to indicate that it lacks uniformity.

Where appropriate, or in case of doubt, stability may be tested, either by growing a further generation, or testing a new plant stock to ensure that it exhibits the same characteristics as those shown by the previous material supplied.

IV REPORTING OF RESULTS

After each growing cycle the results will be summarised and reported to the CPVO in the form of a UPOV model interim report in which any problems will be indicated under the headings distinctness, uniformity and stability. Candidates may meet the DUS standards after one growing cycle but in some cases two or more growing cycles may be required. When tests are completed the results will be sent by the Examination Office to the CPVO in the form of a UPOV model final report.

If it is considered that the candidate complies with the DUS standards, the final report will be accompanied by a variety description in the format recommended by UPOV. If not the reasons for failure and a summary of the test results will be included with the final report.

The CPVO must receive interim reports and final reports by the date agreed between the CPVO and the examination office.

Interim reports and final examination reports shall be signed by the responsible member of the staff of the Examination Office and shall expressly acknowledge the exclusive rights of disposal of CPVO.

V LIAISON WITH THE APPLICANT

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 agreement, the applicant may be directly informed at the same time as the CPVO particularly if a visit to the trial is advisable.

The interim report and final report shall be sent by the Examination Office to the CPVO.

VI ENTRY INTO FORCE

The present protocol enters into force on **21.03.2012**. Any ongoing DUS examination of candidate varieties started before the aforesaid date will not be affected by the approval of the new 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.

ANNEXES TO FOLLOW

ANNEX I	<u>PAGE</u>
Table of characteristics	7
Legend:	
(+) See explanations on the Table of characteristics	
QL: Qualitative characteristic	
QN: Quantitative characteristic	
PQ: Pseudo-qualitative characteristic	
(a)-(h) see explanations on the table of characteristics	
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ANNEX II

Technical questionnaire

ANNEX I

TABLE OF CHARACTERISTICS TO BE USED IN DUS-TEST AND PREPARATION OF DESCRIPTION

CPVO N°	UPOV N°	Stage, Method	Characteristics	Examples	Note		
1.	1.		Plant: height				
			QN	(a)	short	Gausudre	3
					medium	Redgapi	5
					tall	Gaudwwhi	7
2.	2.		Plant: width				
			QN	(a)	narrow	Gausudre	3
					medium	Passionate Blush	5
					broad	Gaudwwhi	7
3.	3.		Plant: height/width ratio				
			(+)	(a)	moderately compressed	Gausudre	3
			QN		medium	Gaudwwhi	5
					moderately elongated		7
4.	4.		Plant: density				
			(+)	(a)	sparse		3
			QN		medium	Gaudwwhi	5
					dense	Gausudre	7
5.	5.		Plant: number of flowers				
			(+)	(a)	low	Gausudre	3
			QN		medium	Gautalwhi	5
					high	Passionate Pink	7

CPVO N°	UPOV N°	Stage, Method	Characteristics	Examples	Note
6.	6.	(b)	Plant: attitude of stems		
			upright		1
			semi upright	Redgapi	3
			intermediate	Gaudwwhi	5
			moderately spreading	The Bride	7
	strongly spreading		9		
7.	7.	(b)	Stem: number of branches		
			few	Gaudros	3
			medium	Redgapi	5
	many	Passionate Rainbow	7		
8.	8.	(b)	Stem: number of leaves		
			few	Gaudros	3
			medium	Gaudwwhi	5
	many	Passionate Rainbow	7		
9.	9.	(b)	Stem: distribution of leaves		
			basal quarter	Gaudros	1
			basal half	Gaudwwhi	2
	basal three quarters	Passionate Rainbow	3		
10.	10.	(c)	Young shoot: anthocyanin coloration		
			absent or very weak	Gaudwwhi	1
			weak	Gaudros	3
			medium	Passionate Pink	5
	strong	Gausudre	7		
11.	11.	(d)	Leaf: length		
			short	Gaudros	3
			medium	Gaudwwhi	5
	long	Passionate Rainbow	7		

CPVO N°	UPOV N°	Stage, Method	Characteristics	Examples	Note
12.	12.	QN (d)	Leaf: width		
			narrow	Redgapi	3
			medium	Gausudre	5
			broad	Gaudwwhi	7
13.	13.	(+) (d)	Leaf: length/width ratio		
			slightly elongated	Gaudwwhi	3
			moderately elongated	Gaudros	5
			strongly elongated	Redgapi	7
14.	14.	QN (d)	Leaf: position of maximum width		
			towards base		1
			at mid point	Gaudros	2
			towards apex	Baltincite	3
15.	15.	QN (d)	Leaf: undulation of margin		
			absent or weak	Passionate Pink	1
			moderate	Gaudwwhi	2
			strong	The Bride	3
16.	16.	QN (d)	Leaf: intensity of green colour		
			light		3
			(e) medium	Redgapi	5
			dark	Gaudwwhi	7
17.	17.	QL (d)	Leaf: variegation		
			absent	Gaudwwhi	1
		(e)	present	Passionate Rainbow	9

CPVO N°	UPOV N°	Stage, Method	Characteristics	Examples	Note		
18.	18.		Leaf: distribution of variegation				
		(+)	(d)	marginal	Passionate Rainbow	1	
		PQ	(e)	central	Jo Adela	2	
				irregular blotches		3	
				fine flecks		4	
19.	19.		Leaf: area covered by variegation				
		QN	(d)	small	Passionate Rainbow	3	
				medium		5	
				large		7	
20.	20.		Leaf: colour of variegation				
		PQ	(d)	white		1	
				(e)	yellowish white	Passionate Rainbow	2
					yellow	Corries Gold	3
					yellow green	Jo Adela	4
21.	21.		Leaf: anthocyanin coloration				
		QN	(d)	absent or very weak	Gaudwwhi	1	
				weak		3	
				medium	Passionate Pink	5	
				strong	Passionate Rainbow	7	
22.	22.		Leaf: distribution of anthocyanin coloration				
		(+)	(d)	mainly towards base	Passionate Pink	1	
		PQ	(e)	mainly towards apex		2	
				mainly towards margin		3	
				mainly along main vein	Redgapi	4	
				discrete spots		5	
				irregular blotches	Harrosy	6	

CPVO N°	UPOV N°	Stage, Method	Characteristics	Examples	Note	
23.	23.		Leaf: area covered by anthocyanin coloration			
		QN	(d)	small	Harrosy	3
			(e)	medium		5
				large	Passionate Pink	7
24.	24.		Flowering stem: anthocyanin coloration			
		QN	(f)	absent or very weak	Gaudwwhi	1
				weak	The Bride	3
				medium		5
				strong	Passionate Pink	7
25.	25.		Flowering stem: distribution of anthocyanin coloration			
		PQ	(f)	in distal quarter	The Bride	1
				in distal half	Baltincite	2
				throughout	Passionate Pink	3
26.	26.		Bud: colour			
		PQ	(g)	RHS Colour Chart (indicate reference number)		
27.	27.		Flower: width			
		(+)		narrow	Redgapi	3
		QN		medium	Gaudwwhi	5
				broad	The Bride	7
28.	28.		Petal: shape			
		(+)		ovate	The Bride	1
		PQ		elliptic	Passionate Pink	2
				obovate		3
				obtrullate		4
				rhombic	White Dove	5

CPVO N°	UPOV N°	Stage, Method	Characteristics	Examples	Note	
29.	29.		Petal: length			
			(+)	short	Redgapi	3
			QN	medium	Gaudros	5
long	Gaudwwhi	7				
30.	30.		Petal: width			
			(+)	narrow	Passionate Pink	3
			QN	medium	Gaudros	5
broad	Gaudwwhi	7				
31.	31.		Petal: length/width ratio			
			QN	slightly elongated	Gaudwwhi	3
				moderately elongated	Redgapi	5
strongly elongated	Passionate Pink	7				
32.	32.	(h)	Petal: main colour of inner surface			
			(+)	RHS Colour Chart (indicate reference number)		
		PQ				
33.	33.	(h)	Petal: secondary colour of inner surface (excluding veins)			
			(+)	RHS Colour Chart (indicate reference number)		
		PQ				
34.	34.	(h)	Petal: distribution of secondary colour of inner surface (excluding veins)			
			(+)	none		1
			PQ	at tip		2
				at margin	Harrosy	3
				at base		4
				irregular blotches		5
				fine flecks		6

CPVO N°	UPOV N°	Stage, Method	Characteristics	Examples	Note
35.	35.	(+) (h) QN	Petal: conspicuousness of veins		
			absent or very weak	Gaudwwhi	1
			weak	Gausudre	3
			medium	Passionate Blush	5
			strong	Passionate Pink	7
36.	36.	PQ (h)	Style: colour		
			white	The Bride	1
			yellowish white	Gaudwwhi	2
			pink	Passionate Pink	3
			red	Redgapi	4
37.	37.	PQ (h)	Stamen: colour of filament		
			white	Gaudwwhi	1
			white tinged pink	Passionate Pink	2
			pink	Redgapi	3
			red		4
38.	38.	(+) QN	Petal: colour change with age		
			absent or very weak	Passionate Blush	1
			weak	Gaudwwhi	2
			medium		3
			strong	Baltincite	4

EXPLANATIONS ON THE TABLE OF CHARACTERISTICS

Explanations covering several characteristics

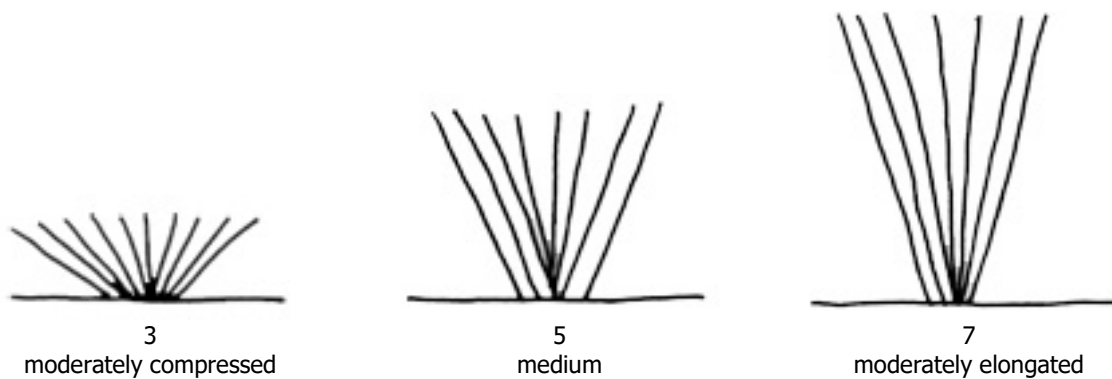
Unless otherwise indicated, all characteristics should be observed at the time of full flowering.

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

- (a) To be observed on the whole plant, including the flowering stems.
- (b) To be observed on the entire flowering stem.
- (c) To be observed on young shoots before the first flowers open.
- (d) To be observed on fully expanded leaves from the lower third of stem.
- (e) To be observed on the upper surface of the leaf.
- (f) To be observed on the part of the flowering stem above the highest leaves.
- (g) To be observed just prior to flower opening.
- (h) Colour observations should be made early in the day on fresh, fully expanded flowers, before they start to fade.

Explanations for individual characteristics

Ad 3: Plant: height/width ratio



Ad 4: Plant: density

The plant density is observed as the overall impression, based on foliage and flowers.

Ad 5: Plant: number of flowers



The numbers of flowers should be observed as the number of flowers open on the plant at the time of full flowering.

Ad 7: Stem: number of branches



3
few



5
medium



7
many

Ad 13: Leaf: length/width ratio



3
slightly elongated

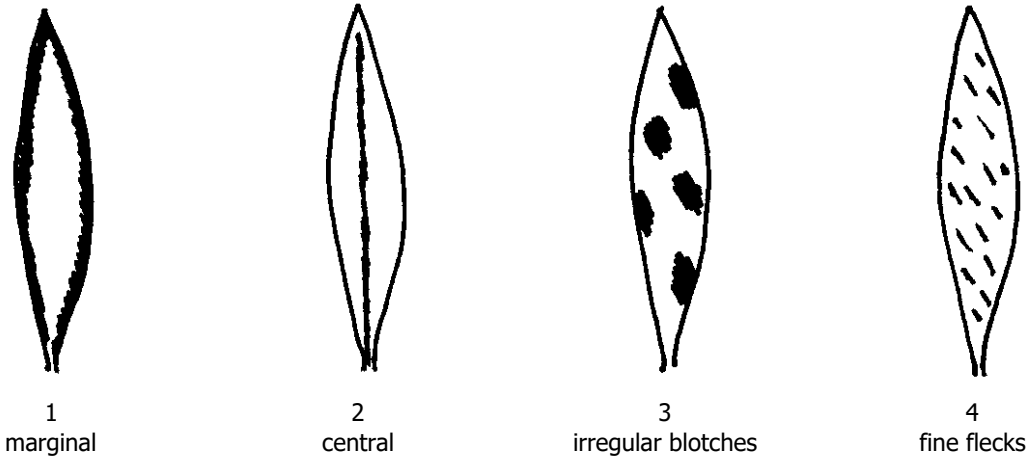


5
moderately elongated

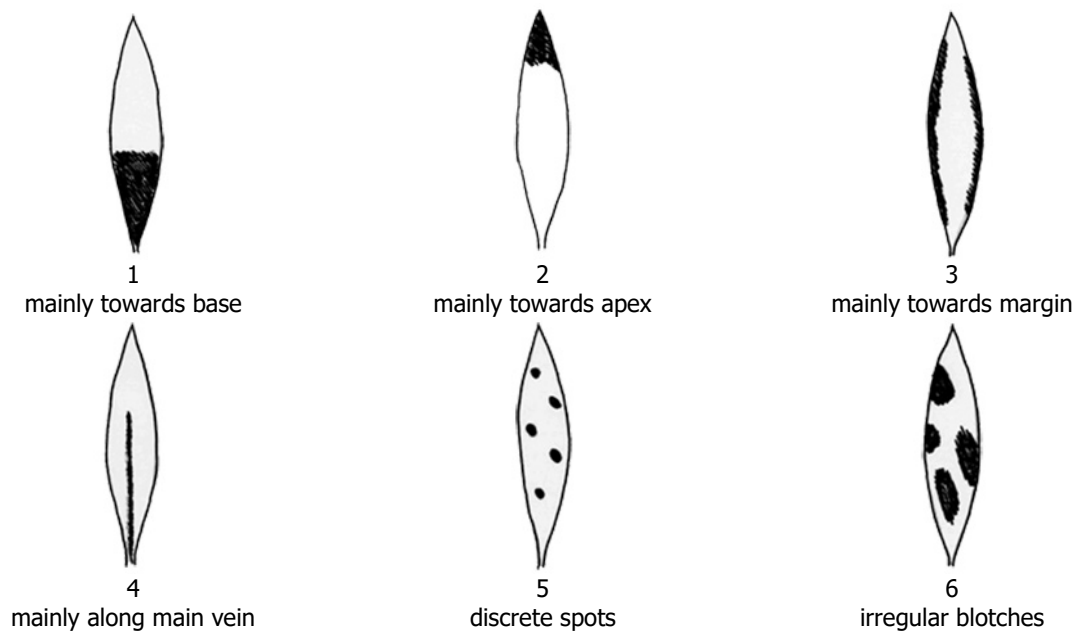


7
strongly elongated

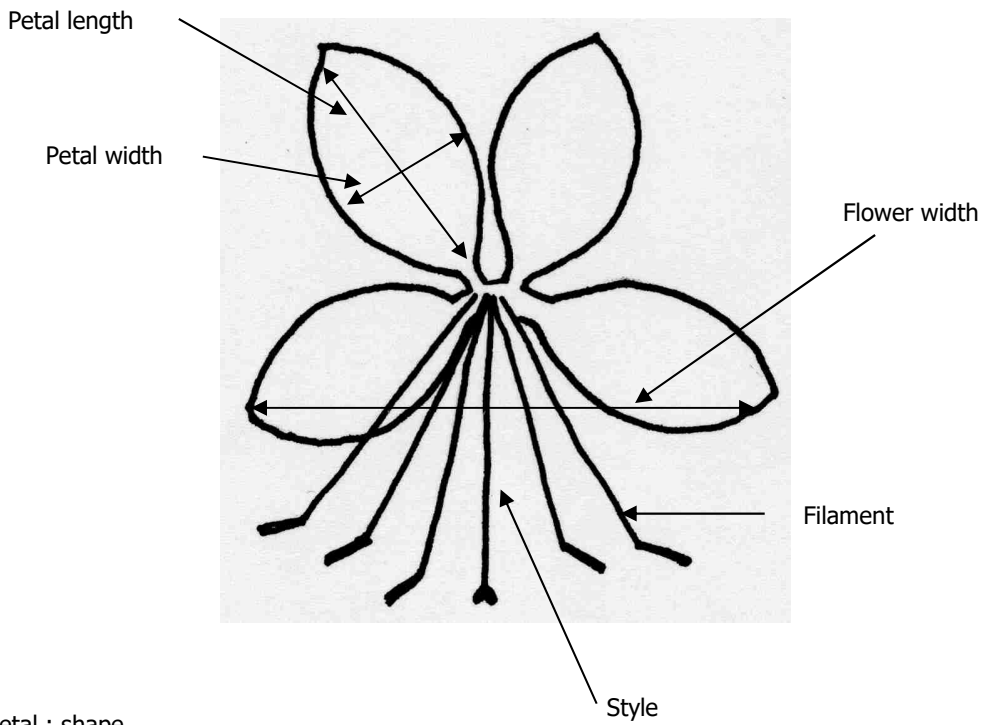
Ad 18: Leaf: distribution of variegation




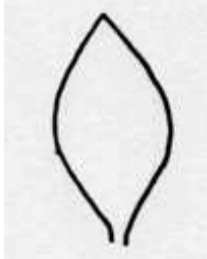
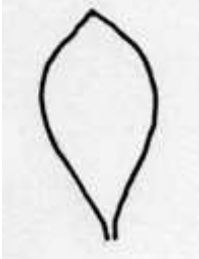
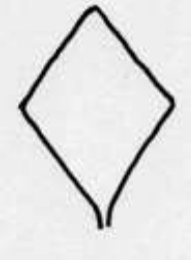

Ad 22: Leaf: distribution of anthocyanin coloration



Ad 27: Flower: width
Ad 29: Petal: length
Ad 30: Petal: width



Ad 28 : Petal : shape

		< position of broadest part >		
		below middle	at middle	above middle
< lateral outline >	rounded	 1 ovate	 2 elliptic	 3 obovate
	angular		 5 rhombic	 4 obtrullate

Ad 32: Petal: main colour of inner surface

The main colour is the colour with the largest surface area.

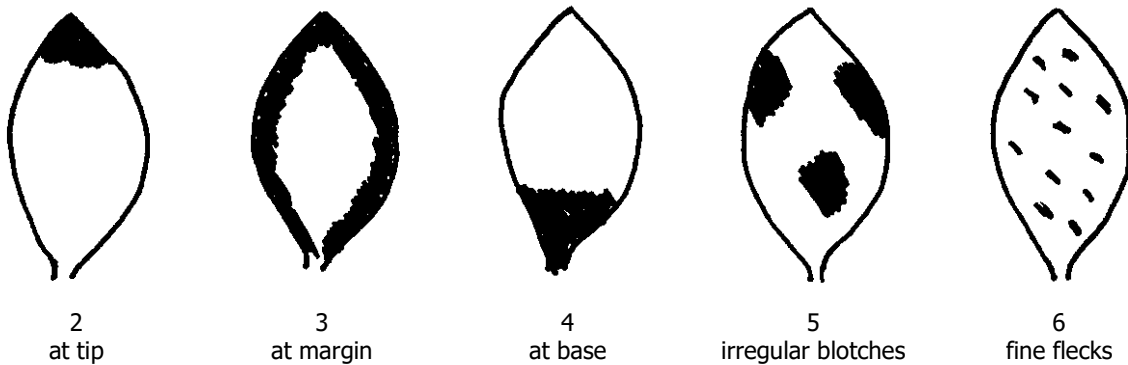
Ad 33: Petal: secondary colour of inner surface (excluding veins)

The secondary colour is the colour with the second largest surface area.



Examples of petals with a secondary colour

Ad 34: Petal: distribution of secondary colour of inner surface (excluding veins)



Ad 35: Petal: conspicuousness of veins



The conspicuousness of the veins is determined by the colour contrast.

Ad 38: Petal: colour change with age

To be observed on flowers before they collapse and fall off.

LITERATURE

Brickell, C. (ed.), 1996: The Royal Horticultural Society A-Z Encyclopedia of Garden Plants. Dorling Kindersley Ltd., London, GB.

Huxley, A. (ed.), Griffiths, M. (ed.), Levy, M. (ed.), 1999: The Royal Horticultural Society. Dictionary of Gardening. McMillan Reference Ltd., London, GB.

ANNEX II

The Technical Questionnaire is available on the CPVO website under the following reference:
CPVO-TQ/261/1