



**European Union**  
Community Plant Variety Office

**PROTOCOL FOR DISTINCTNESS, UNIFORMITY AND STABILITY TESTS**

*Verbena L.*

**VERBENA**

**UPOV Species Code: VERBE**

**Adopted on 14<sup>th</sup> November 2007**

## **I - SUBJECT OF THE PROTOCOL**

The protocol describes the technical procedures to be followed in order to meet the requirements of Council Regulation (EC) No. 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, UPOV Guideline TG/220/1 dated 31/03/2004 for the conduct of tests for Distinctness, Uniformity and Stability and conclusions of the ornamental experts' meeting of 19<sup>th</sup> and 20<sup>th</sup> September 2007. This protocol applies to all varieties of *Verbena L.* of the family *Verbenaceae*.

## **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 the technical examination of varieties can be found on the CPVO website ([www.cpvo.europa.eu](http://www.cpvo.europa.eu)) and in the special Issue S2 of the Official Gazette of the Office published yearly in the month of September.

Quality: ..... The plant material supplied should be visibly healthy, not lacking in vigour or affected by any important pest or disease, especially virus, as laid down in Council Directive 2000/29/EC and its amendments, or organisms impairing quality as indicated in Council Directive 98/56/EEC and Commission Directive 93/49/EEC and their amendments.

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 (EC) No. 2100/94, the basis for a collection should be the following:

- varieties listed or protected at the EU level or at least in one of the EEA Member States;
- 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 1. 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 later 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 (EC) No. 1239/95, 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) Plant: growth habit (characteristic 1)
- (b) Leaf blade: division (characteristic 7)
- (c) Leaf blade: type of division (characteristic 8)
- (d) Flower: type (characteristic 17)
- (e) Corolla: number of colours (characteristic 26)
- (f) Corolla: main colour (characteristic 29)

Group 1 : white

Group 2 : yellow

Group 3 : green

Group 4 : orange

Group 5 : light pink

Group 6 : pink

Group 7 : red

Group 8: red purple

Group 9 : blue purple

Group 10: light purple

## 5. Trial designs and growing conditions

The minimum duration of tests will normally be one growing cycle if the results on distinctness and uniformity are conclusive. Tests will be carried out under conditions ensuring normal growth. The size of the plots will be such that plants or parts of plants may be removed for measuring and counting without prejudice to the observations which must be made up to the end of the growing period.

### The test design is as follows:

As a minimum, each test should include a total of 18 plants for vegetatively propagated varieties or 100 plants for seed propagated varieties. Separate plots for observation and for measuring can only be used if they have been subject to similar environmental conditions.

All observations on individual plants determined by measurement or counting should be made on 10 plants or parts taken from each of 10 plants during full flowering time, and any other observations on all plants in the test.

The test should normally be conducted at one place.

The test should be carried out in the open, under conditions ensuring normal growth.

## 6. Special tests

In accordance with Article 83(3) of Council Regulation (EC) No. 2100/94 an applicant may claim either in the Technical Questionnaire or during the examination that a candidate variety 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 (EC) No. 2100/94.

### **b) Uniformity**

For the assessment of uniformity of vegetatively propagated varieties, a population standard of 1% with an acceptance probability of at least 95% should be applied.

For vegetatively propagated varieties for a sample size between 6 and 35 plants, only 1 off-type is allowed.

For the assessment of uniformity of seed propagated open pollinated and hybrid varieties, relative uniformity standards should be applied.

### **c) Stability**

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

## **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 from the Examination Office 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.

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## ANNEXES TO FOLLOW

ANNEX I	<u>PAGE</u>
Table of characteristics .....	9
Explanations on the table of characteristics .....	16
Legend:	
QL Qualitative characteristic	
QN Quantitative characteristic	
PQ Pseudo-qualitative characteristic	
(a) See explanations on the Table of characteristics	
(+) See explanations on the Table of characteristics	
(*): Important characteristic to be included in the UPOV variety description	
Literature .....	18

## ANNEX II

Technical questionnaire



## ANNEX I

### TABLE OF CHARACTERISTICS

CPVO N°	UPOV N°	Characteristics	Examples	Note	
<b>1.</b> <b>PQ</b>	<b>1.</b> <b>(*)</b> <b>PQ</b>	<b>Plant: growth habit</b>	upright	Sunvivapa	1
			semi-upright	Blancena, Sunmariba, Sunmaririho	2
			creeping	Sunvop	3
<b>2.</b> <b>QN</b>	<b>2.</b> <b>(*)</b> <b>QN</b>	<b>Plant: width</b>	small	Kieversil	3
			medium	Sunver, Sunvop	5
			large	Wynena	7
<b>3.</b> <b>QL</b>	<b>3.</b> <b>(*)</b> <b>QL</b>	<b>Stem: anthocyanin colouration (on middle third of an actively growing stem)</b>	absent	Blancena, Sunmaririho	1
			present	Wynena	9
<b>4.</b> <b>QN</b>	<b>4.</b> <b>(*)</b> <b>QN</b>	<b>Leaf blade: length</b>	short	Sunvop	3
			medium	White Parfait	5
			long	Scarlena	7
<b>5.</b> <b>QN</b>	<b>5.</b> <b>(*)</b> <b>QN</b>	<b>Leaf blade: width</b>	narrow	White Parfait	3
			medium	Wynena	5
			broad		7

CPVO N°	UPOV N°	Characteristics	Examples	Note	
<b>6.</b> <b>PQ</b>	<b>6.</b> <b>(*)</b> <b>PQ</b>	<b>Leaf blade: shape</b>			
			lanceolate	Wesverdark	1
			narrow elliptic		2
			elliptic	Kieversil	3
			ovate	Lan Pureye	4
		broad ovate		5	
<b>7.</b> <b>QL</b>	<b>7.</b> <b>(*)</b> <b>QL</b>	<b>Leaf blade: division</b>			
			absent	White Parfait	1
		present	Sunvop	9	
<b>8.</b> <b>PQ</b> <b>(+)</b>	<b>8.</b> <b>(*)</b> <b>PQ</b> <b>(+)</b>	<b>Leaf blade: type of division</b>			
			lobed	Balazplum	1
			divided		2
		dissected	Sunvop	3	
<b>9.</b> <b>PQ</b> <b>(+)</b>	<b>9.</b> <b>(*)</b> <b>PQ</b> <b>(+)</b>	<b>Leaf blade: type of incisions of margin</b>			
			crenate	Balazlavi, Sunvivaripi	1
			dentate	Sunmarisu	2
		serrate	Sunverb 07	3	

CPVO N°	UPOV N°	Characteristics	Examples	Note	
<b>10.</b> <b>PQ</b>	<b>10.</b> <b>(*)</b> <b>PQ</b>	<b>Leaf blade: colour of upper side</b>	yellow green	1	
			light green	Sunmaririho	2
			medium green	Sunvop	3
			dark green	Wynena	4
			grey green		5
<b>11.</b> <b>QL</b>	<b>11.</b> <b>(*)</b> <b>QL</b>	<b>Leaf blade: anthocyanin colouration on upper side</b>	absent	Wynena	1
			present	Sunmarisu	9
<b>12.</b> <b>QN</b>	<b>12.</b> <b>QN</b>	<b>Leaf blade: intensity of anthocyanin colouration</b>	weak		3
			medium		5
			strong		7
<b>13.</b> <b>QN</b>	<b>13.</b> <b>(*)</b> <b>QN</b>	<b>Petiole: length</b>	short	Lan Pureye	3
			medium	Scarlana	5
			long	Wynena	7
<b>14.</b> <b>QN</b>	<b>14.</b> <b>(*)</b> <b>QN</b>	<b>Inflorescence: diameter</b>	small		3
			medium	Blancena	5
			large	Scarlana	7

CPVO N°	UPOV N°	Characteristics	Examples	Note	
<b>15.</b> <b>PQ</b> (+)	<b>15.</b> (* <b>PQ</b> (+)	<b>Inflorescence: shape in profile</b>			
			broad ovate		1
			broad obovate	Wynena	2
			broad cylindrical	Sunmarisu	3
		narrow cylindric	Verbena hastata	4	
<b>16.</b>	-	<b>Flowerbud: colour (just before opening)</b>			
			RHS Colour Chart (indicate) .....		
<b>17.</b>	-	<b>Flower: type</b>			
			single		1
		double		2	
<b>18.</b> <b>QN</b> (+)	<b>16.</b> (* <b>QN</b> (+)	<b>Flower: arrangement of corolla lobes</b>			
			free	Scarlena	1
			touching	Blancena, Sunmarisu	2
		overlapping		3	
<b>19</b> <b>QN</b>	<b>17.</b> (* <b>QN</b>	<b>Flower: diameter of corolla</b>			
			small	Sunvop	3
			medium	Blancena, Sunmarisu	5
		large	Scarlena	7	
<b>20.</b> <b>QL</b>	<b>18.</b> (* <b>QL</b>	<b>Calyx: anthocyanin colouration</b>			
			absent	Kieversil, Lobena	1
		present	Scarlena	9	

CPVO N°	UPOV N°	Characteristics	Examples	Note	
<b>21.</b> <b>PQ</b>	<b>19.</b> <b>(*)</b> <b>PQ</b>	<b>Calyx: distribution of anthocyanin colouration</b>	at the base	1	
			upper part	Sunmarisa	2
			teeth only	White Parfait	3
			entire calyx		4
<b>22.</b> <b>QN</b>	<b>20.</b> <b>(*)</b> <b>QN</b>	<b>Corolla tube: length</b>	short	Balazpima	3
			medium	Kieversil, Sunvop	5
			long	Sunmariba, Sunmariribu	7
<b>23.</b> <b>PQ</b>	<b>21.</b> <b>(*)</b> <b>PQ</b>	<b>Corolla tube: colour of tip of protruding hairs</b>	white	Balazpima	1
			light green yellow	White Parfait	2
			pink		3
			red		4
			purple	Sunvivabupan	5
			grey purple	Balazplum	6
			light grey	Sunmariribu	7
<b>24.</b> <b>QN</b>	<b>22.</b> <b>(*)</b> <b>QN</b>	<b>Corolla lobe: curvature of longitudinal axis</b>	incurved	Sunvat	1
			straight	Sunmaririho	2
			recurved	Wynena, Blancena	3

CPVO N°	UPOV N°	Characteristics	Examples	Note	
25. QN	23. (* QN	<b>Corolla lobe: undulation of margin</b>	weak	Lan Pureye	3
			medium	Balazplum, Balazdapi	5
			strong		7
26. QL	24. (* QL	(a) <b>Corolla: number of colours</b>	one	White Parfait	1
			two	Kieverstar	2
			more than two		3
27. PQ	25. (* PQ	(a) <b>Corolla: colour pattern</b>	even	White Parfait	1
			shaded	Kieverstar	2
			star-shaped		3
			speckled		4
			speckled and striped	Kieversil	5
28. QL	26. (* QL	(a) <b><u>Shaded varieties only:</u> Corolla: distribution of colour</b>	lighter towards base		1
			lighter towards apex		2
29. PQ	27. (* PQ	(a) <b>Corolla: main colour</b>	RHS Colour Chart		
30. PQ	28. (* PQ	(a) <b>Corolla: secondary colour</b>	RHS Colour Chart		

CPVO N°	UPOV N°	Characteristics	Examples	Note	
<b>31.</b> <b>QL</b>	<b>29.</b> <b>(*)</b> <b>QL</b>	<b>Corolla: eye</b>	absent	Sunmarisu	1
			present	Spikena	9
<b>32.</b> <b>QN</b>	<b>30.</b> <b>(*)</b> <b>QN</b>	<b>Corolla: diameter of eye</b>	small	Sunmaririho	3
			medium	Spikena	5
			large	Sumverb 09	7
<b>33.</b> <b>PQ</b>	<b>31.</b> <b>(*)</b> <b>PQ</b>	<b>(a) Corolla: colour of eye</b>	whitish green	Sunvivaripi	1
			green yellow	Balazlavi, Vertis	2
			pink	Balazpima	3
			red	QuHa 237V	4
			purple	Balazdapi	5
<b>34.</b> <b>QN</b>	<b>32.</b> <b>(*)</b> <b>QN</b>	<b>(a) Corolla: change of colour with age</b>	strongly fading		1
			weakly fading		2
			no change	Blancena, Lobena	3
			weakly intensifying		4
			strongly intensifying		5

## EXPLANATIONS AND METHODS

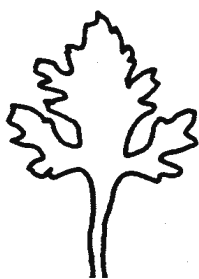
### Explanations covering several characteristics

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

- (a) All observations concerning the flower colour should be made on the upper side of the flower.

### Explanations for individual characteristics

#### Ad. 8: Leaf blade: type of division



1  
lobed



2  
divided



3  
dissected

#### Ad. 9: Leaf blade: type of incisions of margin



1  
crenate



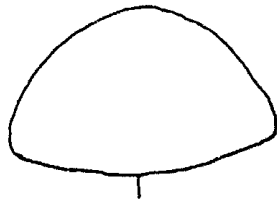
2  
dentate



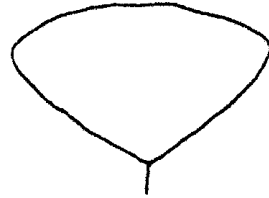
3  
serrate



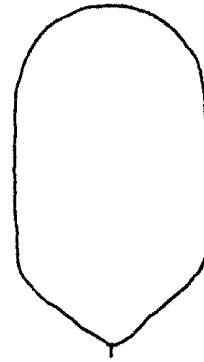
Ad. 15: Inflorescence: shape in profile



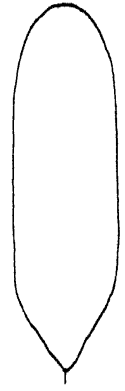
1  
broad ovate



2  
broad obovate



3  
broad cylindrical



4  
narrow cylindrical

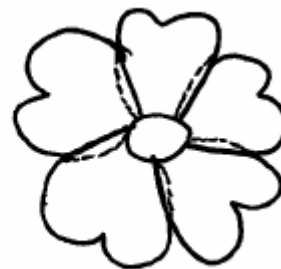
Ad. 18 (UPOV 16): Flower: arrangement of corolla lobes



1  
free



2  
touching



3  
overlapping

## **LITERATURE**

No specific literature.

## **ANNEX II**

The Technical Questionnaire is available on the CPVO website under the following reference:  
CPVO-TQ/220/1