



European Union
Community Plant Variety Office

PROTOCOL FOR DISTINCTNESS, UNIFORMITY AND STABILITY TESTS

Exacum L.

EXACUM

UPOV Species Code: EXACU

Adopted on 31st October 2002

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/114/3 dated 21st October 1988 for the conduct of tests for Distinctness, Uniformity and Stability. This protocol applies to all varieties of *Exacum 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

Survey of final dates for request for technical examination and sending of Technical Questionnaire by the CPVO as well as submission date of plant material by the applicant, and quantity of plant material to be supplied by the applicant in one sample.

	Request of examination	Plant material	
DENMARK Vegetative	01/12	Week 14	20 plantlets of commercial standard (potting size)
DENMARK Seed	01/12	Week 6	1000 seeds, germination capacity 50%

Quality: The plant material supplied should be visibly healthy, not lacking in vigour or affected by any important pest or disease, especially virus.

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 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 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° 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) Flower: type (characteristic 9)
- b) Petal: Colour (characteristic 12) with the colour groups:
 - Gr.1: white
 - Gr.2: rose
 - Gr.3: blue

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 15 plants for vegetative propagated varieties and 20 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 determined by measurement or counting should be made on 10 plants or parts taken from each of 10 plants when 5 flowers are open above the leaves.

The test should normally be conducted at one place. If any important characteristics of the variety cannot be seen at that place, the variety may be tested at an additional place.

The test should be carried out in the glasshouse, in pots with well aired substrate with good water drainage under the following growing conditions.

Vegetatively propagated varieties:

Potting: week 14 or 15

Soil: peat compost with clay

Irrigation: relatively low amounts; the bench must dry out between irrigations

Temperature: first week after potting the temperature should be maintained at 22°C. Ventilated at 25°C.

Light: as much as possible, just before flowering the glasshouse should be shaded to avoid pale flowers

Seed propagated varieties:

Sowing: week 7 or 8

Potting: week 14 or 15

Soil: peat substrate

Irrigation: relatively low amounts; the bench must dry out between irrigations

Temperature: during germination: 24-26°C. After potting: minimum 22°C, ventilation at 25°C.

Light: as much as possible, just before flowering the greenhouse should be shaded to avoid pale flowers

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.

For vegetatively propagated varieties, the candidate will be considered to be sufficiently uniform if the number of off-types does not exceed 1 in 15 plants examined.

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 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.

ANNEXES TO FOLLOW

ANNEX I	<u>PAGE</u>
Table of characteristics	9
Legend:	
(+) See explanations on the Table of characteristics	
Explanations on the table of characteristics	12
Literature	14

ANNEX II

Technical questionnaire

ANNEX I

TABLE OF CHARACTERISTICS

CPVO N°	UPOV N°	Characteristics	Examples	Note	
1.	1.	Plant: growth habit	upright	Best Blue	1
			pendulous	Blue Ropen	2
2.	2.	Plant: height	short	Blue Ropen	3
			medium	Best Blue	5
			tall	Blue Rococo	7
3.	3.	Plant: width	narrow		3
			medium	Best Blue	5
			broad	Blue Rococo	7
4.	4.	Stem: anthocyanin coloration of nodes	absent	Whitestar	1
			present	Best Blue	9
5.	5.	Stem: extension of anthocyanin coloration of internodes starting from the nodes	short	Blue Ropen	3
			medium	Best White	5
			long	Elfin	7

CPVO N°	UPOV N°	Characteristics	Examples	Note	
6.	6.	Leaf: length	short	3	
			medium	Best Blue	5
			long		7
7.	7.	Leaf: width	narrow	Blue Ropen	3
			medium	Best Blue	5
			broad		7
8. (+)	8. (+)	Leaf blade: predominant shape of base	acute	Best Blue	3
			broad acute		4
			obtuse		5
			broad obtuse		6
			straight		7
9. (+)	9. (+)	Flower: type	single	Best Blue	1
			semi-double		2
			double	Blue Rococo	3
10. (+)	10. (+)	Flower: rosette	absent	Blue Rococo	1
			present	Blue Rosette	9

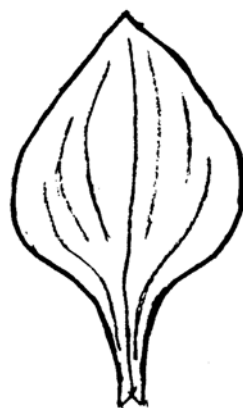
CPVO N°	UPOV N°	Characteristics	Examples	Note	
11.	11.	Flower: diameter	small	Whitestar	3
			medium	Best Blue	5
			large	Elfin	7
12.	12.	Petal: color	RHS Colour Chart (Indicate reference number) 		
13.	13.	Flower: overlapping of petals	absent		1
			present	Best Blue	9

EXPLANATIONS ON THE TABLE OF CHARACTERISTICS

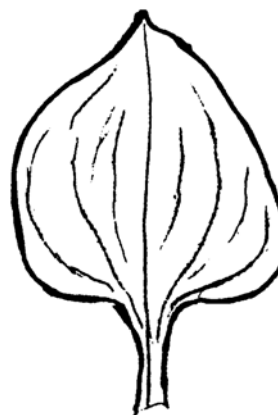
Ad. 8: Leaf blade: predominant shape of base



3
acute



5
obtuse



7
straight

Ad. 9: Flower: type



1
single



2
semi-double



3
double

Ad. 10: Flower: rosette



presence of rosette

LITERATURE

No specific literature

ANNEX II



European Union
Community Plant Variety Office

TECHNICAL QUESTIONNAIRE

to be completed in connection with an application for Community Plant Variety Rights
Please answer all questions. A question without any answer will lead to a non-attribution
of an application date. In cases where a field / question is not applicable, please state so.

- 1. Botanical taxon: Name of the genus, species or sub-species to which the variety belongs and common name:**

Exacum L.

EXACUM

Species (indicate)

- 2. Applicant(s): Name(s) and address(es), phone and fax number(s), e-mail address, and where appropriate name and address of the procedural representative**

.....

.....

- 3. Variety denomination**

a) Where appropriate proposal for a variety denomination:

.....

b) Provisional designation (breeder's reference):

.....

4. Information on origin, maintenance and reproduction of the variety

4.1 Origin

(a) Seedling (indicate parent varieties) []

.....
.....
.....
.....

(b) Mutation (indicate parent variety) []

.....
.....
.....
.....

(c) Discovery (indicate where, when and how the variety has been developed): []

.....
.....
.....
.....

(d) Other (please specify) []

.....
.....
.....
.....

4.2 Method of propagation

(a) Cuttings []

(b) *In vitro* propagation []

(c) Seed []

(d) Other (please specify): []

.....
.....
.....
.....
.....
.....

4.3 Other information

In the case of seed propagated varieties method of production:

(a) Self-pollinated []

(b) Cross-pollinated (please give details)..... []

.....
.....
.....
.....

(c) Hybrid (please give details)..... []

.....
.....
.....
.....
.....
.....

4.4 Geographical origin of the variety: the region and the country in which the variety was bred or discovered and developed.

.....

5. Characteristics of the variety to be indicated: (the number in brackets refers to the corresponding characteristic in the CPVO Technical Protocol; please mark the state of expression which best corresponds).

Characteristics		Example varieties	Note
5.1 (9)	Flower: type		
	single	Best Blue	1 []
	semi-double		2 []
	double	Blue Rococo	3 []
5.2 (7)	Flower: rosette		
	absent	Blue Rococo	1 []
	present	Blue Rosette	9 []

Characteristics	Example varieties	Note	
Please fill in point (i) if possible, otherwise point (ii)			
5.3 (i) Petal: colour (12)	RHS Colour Chart (indicate reference number)		
5.3 (ii) Petal: colour	white pink blue	1 [] 2 [] 3 []	
6. Similar varieties and differences from these varieties:			
Denomination of similar variety	Characteristic in which the similar variety is different ¹⁾	State of expression of similar variety	State of expression of candidate variety
.....
.....
.....
.....
.....
¹⁾ In the case of identical states of expressions of both varieties, please indicate the size of the difference			
7. Additional information which may help to distinguish the variety			
A representative printed-out colour photo of the variety must be added to the technical questionnaire.			
7.1 Resistance to pests and diseases			
.....			
7.2 Special conditions for the examination of the variety			
<input type="checkbox"/> YES, please specify			
<input type="checkbox"/> NO			

7.3 Other information

YES, please specify

NO

8. GMO-information required

The variety represents a Genetically Modified Organism within the meaning of Article 2(2) of Council Directive 2001/18/EC of 12/03/2001.

YES NO

If yes, please add a copy of the written attestation of the responsible authorities stating that a technical examination of the variety under Articles 55 and 56 of the Basic Regulation does not pose risks to the environment according to the norms of the above-mentioned Directive.

9. Information on plant material to be examined

9.1 The expression of a characteristic or several characteristics of a variety may be affected by factors, such as pests and disease, chemical treatment (e.g. growth retardants or pesticides), effects of tissue culture, different rootstocks, scions taken from different growth phases of a tree, etc.

9.2 The plant material should not have undergone any treatment which would affect the expression of the characteristics of the variety, unless the competent authorities allow or request such treatment. If the plant material has undergone such treatment, full details of the treatment must be given. In this respect, please indicate below, to the best of your knowledge, if the plant material to be examined has been subjected to:

- (a) Microorganisms (e.g. virus, bacteria, phytoplasma) Yes No
- (b) Chemical treatment (e.g. growth retardant or pesticide) Yes No
- (c) Tissue culture Yes No
- (d) Other factors Yes No

Please provide details of where you have indicated "Yes":

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

I/We hereby declare that to the best of my/our knowledge the information given in this form is complete and correct.

Date

Signature

Name

[End of document]