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English
Date: 21/03/2007

European Union
Community Plant Variety Office

PROTOCOL FOR DISTINCTNESS, UNIFORMITY AND STABILITY TESTS

Freesia Eckl. ex Klatt

FREESIA

UPOV Species Code: FREES

Adopted on 21st March 2007

I - SUBJECT OF THE PROTOCOL

The protocol describes the technical procedures to be followed in order to meet the 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 and UPOV Guideline TG/27/6 dated 7th November 1984 for the conduct of tests for Distinctness, Uniformity and Stability. This protocol applies to all vegetatively propagated varieties of ***Freesia*** **Eckl. ex Klatt**.

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) 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;
- 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 (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:

Flower colour group:

white	Group 1
cream	Group 2
light yellow	Group 3
yellow	Group 4
dark yellow	Group 5
orange	Group 6
pink	Group 7
red	Group 8
violet-red	Group 9
violet	Group 10
blue-violet	Group 11
blue	Group 12

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 20 plants. 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 and any other observations made on all plants in the trial.

All observations on the inflorescence should be made on the first inflorescence.

All observations on the flower should be made on the first flower of the first inflorescence.

The test should normally be conducted at one place.

The test should be carried out in the greenhouse 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 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 20 plants examined.

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.

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ANNEXES TO FOLLOW

ANNEX I PAGE

ANNEX II

ANNEX I

TABLE OF CHARACTERISTICS

CPVO N°	UPOV N°	Characteristics		Examples	Note
1.	**2.**	**Plant: length**			
			short	Blue Heaven	3
			medium	Himalaya	5
			long	Midas	7
2.	**3.**	**Foliage: attitude**			
			erect	Himalaya	1
			pendulous	Blue Heaven	2
3.	**4.**	**Stem: length (from the point of attachment of the upper lateral branch to the top)**			
			short	Clazina	3
			medium	Midas	5
			long	Pico, Vaduro	7
4.	**5.**	**Stem: width (of same part as measured for 3 (UPOV 4))**			
			narrow	Pico, Yellow River	3
			medium	Midas	5
			broad	Vabolo	7
5.	**6.**	**Stem: surface**			
			smooth	Midas, Vacrona	1
			rough	Chloé	2
6.	**7.**	**Leaf: width**			
			narrow	Clazina, Magdalena	3
			medium	Blue Heaven	5
			broad	Midas	7

CPVO N°	UPOV N°	Characteristics		Examples	Note
7.	**8.**	**Inflorescence: length**			
			short	Golden Promise	3
			medium	Midas	5
			long	Vabladi	7
8.	**9.**	**Inflorescence: number of flowers**			
			few	Varubi	3
			medium	Midas	5
			many	Vabladi	7
9.	**10.**	**Inflorescence: distance between first and second flower**			
			short	Clazina, Magdalena	3
			medium		5
			long	Vacrona, Varandu	7
10.	**11.**	**Inflorescence: distance between second and third flower**			
			short	Himalaya, Vayello	3
			medium	Midas	5
			long	Elan, Vabella	7
11.	**12.**	**Inflorescence: degree of zigzagging of axis**			
			weak	Blue Heaven, Fortune	3
			medium	Midas	5
			strong	Côte d'Azur, Varandu	7
12.	**13.**	**Inflorescence: curvature of axis**			
			absent	Vabladi	1
			present	Fortune, Golden Promise, Himalaya	9

CPVO N°	UPOV N°	Characteristics		Examples	Note
13.	**14.**	**Inflorescence: angle between the rows of flowers**			
			absent or very small		1
			small		3
			medium		5
			large		7
			very large		9
14.	**15. (+)**	**Inflorescence: angle of distal ¾ with the peduncle**			
			small	Vabladi	3
			medium	Côte d'Azur	5
			large	Varedo, Vesuvius	7
15.	**16.**	**Flower bud: ratio length/width**			
			small	Rosamunde	3
			medium	Golden Promise, Moya	5
			large	Fortune, Varubi	7
16.	**17.**	**Flower: type**			
			single	Aurora	1
			semi-double	Aïda, Chloé	2
			double	Himalaya	3
17.	**18. (+)**	**Perianth: attitude of <u>inner</u> segments**			
			semi-erect		3
			nearly horizontal		5
			horizontal		7

CPVO N°	UPOV N°	Characteristics		Examples	Note
18.	**19. (+)**	**Perianth: shape of <u>outer</u> segments**			
			elliptic	Red Fox	1
			circular		2
			broad-elliptic	Vawilo	3
			obovate	Blue Heaven	4
19.	**20. (+)**	**Perianth: shape of <u>inner</u> segments**			
			elliptic		1
			circular	President	2
			broad-elliptic	Zwethlana	3
			ovate		4
			broad-ovate	Red Fox	5
20.	**21. (+)**	**Perianth: cross section of <u>inner</u> segments**			
			straight	Vacrona	1
			concave	Beethoven, Montmartre	2
21.	**22. (+)**	**Perianth: folds on margin of <u>inner</u> segments**			
			absent	Vacrona	1
			present	Morra	9
22.	**23. (+)**	**Perianth: main colour of <u>inner</u> side of <u>lateral outer</u> segments**	RHS Colour Chart (indicate reference number) ……..		
23.	**24. (+)**	**Perianth: main colour of <u>inner</u> side of <u>median outer</u> segments**	RHS Colour Chart (indicate reference number) ……..		

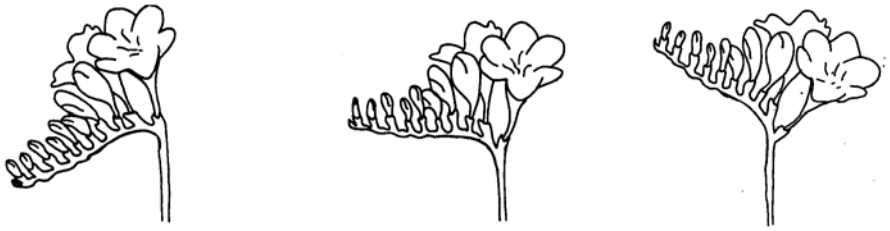
CPVO N°	UPOV N°	Characteristics		Examples	Note
24.	**25.** **(+)**	**Perianth: colour of <u>inner</u> side of <u>lateral inner</u> segments**			
			RHS Colour Chart (indicate reference number)		
			……..		
25.	**26.** **(+)**	**Perianth: colour of <u>inner</u> side of <u>median inner</u> segments**			
			RHS Colour Chart (indicate reference number)		
			……..		
26.	**27.** **(+)**	**Perianth: size of the macule (<u>inner</u> side)**	absent or very small	Demeter	1
			small	Morra	3
			medium	Christina	5
			large	Varandu	7
			very large		9
27.	**28.** **(+)**	**Perianth: colour of macule (<u>inner</u> side)**			
			RHS Colour Chart (indicate reference number)		
			……..		
28.	**29.** **(+)**	**Perianth: opening of the throat**			
			small	Christina	3
			medium	Midas	5
			large	Vavecrem	7
29.	**30.** **(+)**	**Perianth: main colour of <u>outer</u> side of throat**			
			RHS Colour Chart (indicate reference number)		
			……..		

CPVO N°	UPOV N°	Characteristics		Examples	Note
30.	**31. (+)**	**Perianth: main colour of <u>inner</u> side of throat**			
			RHS Colour Chart (indicate reference number)		
			……..		
31.	**32. (+)**	**Perianth: stripes on <u>ventral</u> part of <u>inner</u> side of throat**			
			absent or very weak	Demeter	1
			weak	Blue Heaven, Pico	3
			medium	Varubi	5
			strong	Venus	7
			very strong		9
32.	**33.**	**Perianth: length of tube**			
	(+)		short	Vesuvius	3
			medium	Vacrona	5
			long	Pico	7
33.	**34.**	**Stamen: main colour of filament**			
			white	Iceberg, Pico Vacrona	1
			yellow	Côte d'Azur	2
			blue	Fortune, Midas	3
34.	**35.**	**Anther: main colour of stoma (just before dehiscence)**			
			white	Pico	1
			violet	Côte d'Azur	2

CPVO N°	UPOV N°	Characteristics		Examples	Note
35.	**36.**	**Style: main colour**			
			white	Iceberg	1
			yellow	Côte d'Azur	2
			blue	Midas	3
36.	**37.**	**Stigma: position relative to anthers (time: as for 34 (UPOV 35))**			
			same level	Fortune	1
			above	Côte d'Azur, Blue Heaven	2
37.	**38.**	**Stigma: length of lobes**			
			short	Midas	3
			medium	Varubi	5
			long	Victoria	7
38.	**39.**	**Stigma: appearance of lobes**			
			fine	Victoria	3
			medium	Midas	5
			coarse	Red Star	7
39.	**40.**	**Stigma: colour in relation to <u>upper</u> part of the style (time: as for 34 (UPOV 35))**			
			lighter	Demeter	3
			same	Pico	5
			darker	Red Fox	7

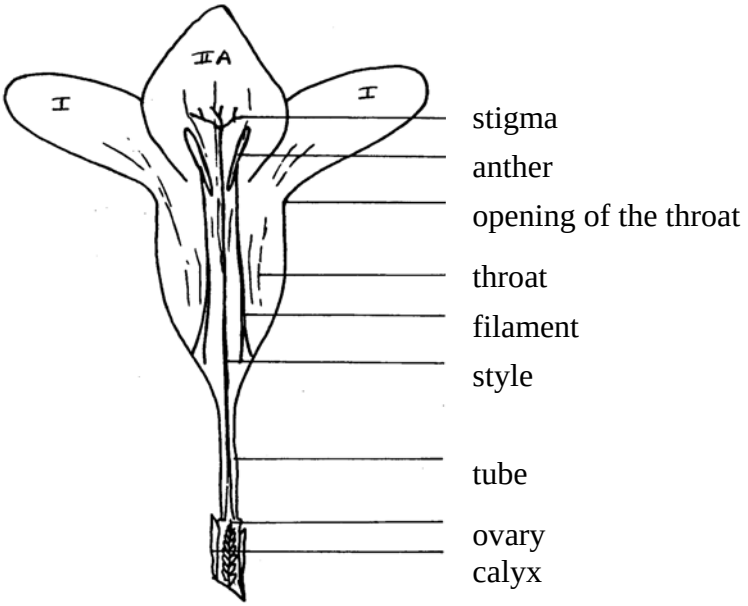
EXPLANATIONS ON THE TABLE OF CHARACTERISTICS

Ad 14 (UPOV 15): Inflorescence: angle of distal ¾ with the peduncle

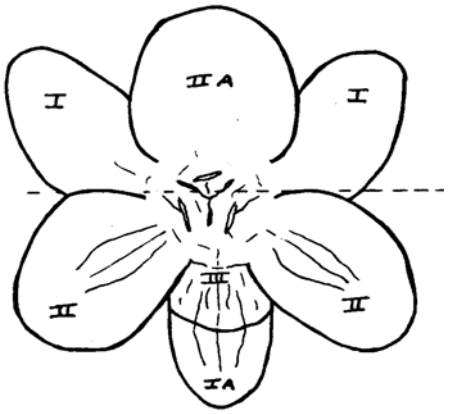


3	5	7
small	medium	large

Ad 17-32 (UPOV 18-33): Perianth : Longitudinal section of flower (dorsal half)



Top view of flower



Dorsal part of corolla

Ventral part of corolla

I : Lateral outer segments
IA: Median outer segments
II : Lateral inner segments
IIA: Median inner segments
III : Macule

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

***Freesia* Eckl. ex Klatt**

FREESIA

Hybrid ..... [ ]

Species (please indicate)..... [ ] .....

2. Applicant(s): Name(s) and address(es), phone and fax number(s), Email 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)..... [ ]

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(b) Mutation (indicate parent variety) ..... [ ]

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

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.....

(d) Other (please specify)..... [ ]

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4.2 Method of propagation

(a) Corms ..... [ ]

(b) *In vitro* propagation ..... [ ]

(c) Seed ..... [ ]

(d) Other (please specify): ..... [ ]

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4.3 Other information:

In the case of seed propagated varieties, method of production:

(a) Self-pollinated ..... [ ]

(b) Cross-pollinated:

controlled pollination..... [ ]

synthetic variety..... [ ]

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

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

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

Characteristics		Example varieties	Note
5.1 (16) Flower: type			
	single	Aurora	1 [ ]
	semi-double	Aïda, Chloé	2 [ ]
	double	Himalaya	3 [ ]

Please fill in point (i) if possible, otherwise point (ii).

5.2 (i) Flower: colour group

RHS Colour Chart

.....

Characteristics		Example varieties	Note
5.2 (ii) Flower: colour group			
	white	Iceberg, Pico	1 [ ]
	cream	Vacrona	2 [ ]
	light yellow	Demeter	3 [ ]
	yellow	Himalaya	4 [ ]
	dark yellow	Prince of Orange	5 [ ]
	orange	Varubi	6 [ ]
	pink	Venus	7 [ ]
	red	Vadura	8 [ ]
	violet-red	Elan	9 [ ]
	violet	Vaparos	10 [ ]
	blue-violet	Shocking Blue	11 [ ]
	blue	Côte d'Azur	12 [ ]
	Other colour (please specify):		13 [ ]
	……..		

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

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7.2.1 Plant: use

(a) Cutflower ..... [ ]

(b) Pot plant ..... [ ]

(c) Other (specify) ..... [ ]

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

7.2.2 Special conditions for the examination of the variety

[ ] YES, please specify .....

[ ] 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 2100/94 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":

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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

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