European Union
Community Plant Variety Office

PROTOCOL FOR DISTINCTNESS, UNIFORMITY AND STABILITY TESTS

***Saintpaulia* H. Wendl.**

SAINTPAULIA

UPOV Species Code: SAINT

Adopted on 18th November 2004

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/17/5 + Corr. dated 4th November 1994 + 18th October 1996 for the conduct of tests for Distinctness, Uniformity and Stability. This protocol applies to all varieties of ***Saintpaulia* H. Wendl.**.

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.

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 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 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:

(i) Plant: type (characteristic 1)
(ii) Flower: shape (characteristic 24)
(iii) Petal: number of colours (characteristic 27)
(iv) Petal colour:
- self-coloured flowers: colour of middle of upper side (characteristic 29)
- bi-coloured flowers: main colour (characteristic 31) with the following colour groups:

Gr. 1: white
Gr. 2: pink
Gr. 3: light red
Gr. 4: dark red
Gr. 5: violet
Gr. 6: light blue
Gr. 7: dark 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 for vegetatively propagated varieties should include a total of 18 plants. As a minimum, each test for seed propagated varieties should include a total of 40 plants.

All observations on vegetatively propagated varieties, determined by measurement or counting should be made on 10 plants or parts taken from each of 10 plants.

All observations on seed propagated varieties, determined by measurement or counting should be made on 20 plants or parts taken from each of 20 plants.

All observations should be made at the time of full flowering.

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

Vegetatively propagated varieties:

Plant material:	20 budded plants from leaf cuttings, not with open flowers, to be used as mother plants.
Taking of leaf cuttings:	Non-miniature varieties: mid-September Miniature varieties: beginning of October
Time of potting:	mid-January

Seed propagated varieties:

Plant material:	45 young plants from seed, ready to be potted into 8 or 9 cm pot.
Time of potting:	mid-January

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 of vegetatively propagated varieties and seed propagated varieties which are self-pollinated, a population standard of 1% with an acceptance probability of at least 95% should be applied.

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

For a sample size between 36 and 82 plants for seed propagated varieties which are self-pollinated, only 2 off-types are 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 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

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Technical questionnaire

ANNEX 1
TABLE OF CHARACTERISTICS

CPVO N°	UPOV N°	Characteristics		Examples	Note
1.	**1.**	**Plant: type**	non-miniature	Heidrun	1
			miniature	Rapunzel	2
2.1	**2.1**	**<u>For non-miniature varieties only</u>:** **Plant: diameter**	small		3
			medium	Ramofi	5
			large	Rumiko	7
2.2	**2.2**	**<u>For miniature varieties only</u>:** **Plant: diameter**	small		3
			medium	Rapunzel	5
			large	Pinoblau	7
3.	**3.**	**<u>For non-miniature varieties only</u>:** **Plant: number of inflorescences (including shoots with only buds)**	few	Lemara	3
			medium	Ramofi	5
			many	Rumiko	7
4.	**4.**	**<u>Young</u> leaf: intervenal anthocyanin coloration on lower side**	absent	Tamara	1
			present	Heidrun	9
5.	**5.**	**<u>Young</u> leaf: intensity of intervenal anthocyanin coloration on lower side**	weak	Annegret	3
			medium	Tomi	5
			strong	Heidrun	7
6.	**6.**	**<u>Young</u> leaf: anthocyanin coloration on veins on lower side**	absent	Tamara	1
			present	Vivian	9

CPVO N°	UPOV N°	Characteristics		Examples	Note
7.1	**7.1**	**<u>For non-miniature varieties only</u>: Mature leaf: length of blade**			
			short		3
			medium	Sabrina	5
			long	Tomi	7
7.2	**7.2**	**<u>For miniature varieties only</u>: Mature leaf: length of blade**			
			short		3
			medium	Rapunzel	5
			long	Pinoblau	7
8.1	**8.1**	**<u>For non-miniature varieties only</u>: Mature leaf: width**			
			narrow	Lemara	3
			medium	Rumiko	5
			broad	Vivian	7
8.2	**8.2**	**<u>For miniature varieties only</u>: Mature leaf: width**			
			narrow		3
			medium	Rapunzel	5
			broad	Debby	7
9. (+)	**9. (+)**	**Mature leaf: type**			
			type 1	Rumiko	1
			type 2	Anna Rokoko	2
10.	**10.**	**Mature leaf: green colour of upper side**			3
			light		
			medium	Queen	5
			dark	Emi	7
11.	**11.**	**Mature leaf: interveinal anthocyanin coloration on lower side**			
			absent	Tamara	1
			present	Emi	9

CPVO N°	UPOV N°	Characteristics		Examples	Note
12.	**12.**	**Mature leaf: intensity of intervenal anthocyanin coloration on lower side**	weak	Saku	3
			medium	Heidrun	5
			strong	Emi	7
13.	**13.**	**Mature leaf: anthocyanin coloration on veins on lower side**	absent	Emi	1
			present	Dulsita	9
14.	**14.**	**Mature leaf: apex**	pointed	Rapunzel	1
			obtuse	Kristel	2
			rounded	Rumiko	3
15.	**15.**	**Mature leaf: undulation of margin**	absent or very weak	Heidrun	1
			weak		3
			medium	Miki	5
			strong	Gerda	7
			very strong		9
16.	**16.**	**Mature leaf: rugosity**	weak	Richarda	3
			medium	Bertina, Silberdollar	5
			strong	Evelyn	7
17.	**17.**	**<u>For non-miniature varieties only</u>: Petiole: length**	short	Claudia	3
			medium	Heidi	5
			long	Kewena	7
18.	**18.**	**Petiole: anthocyanin coloration on upper side**	absent	Tamara	1
			present	Emi	9

CPVO N°	UPOV N°	Characteristics		Examples	Note
19.1	**19.1**	**<u>For non-miniature varieties only</u>: Inflorescence: number of flowers (including buds)**			
			few	Violetta	3
			medium	Tamara	5
			many	Tomi	7
19.2	**19.2**	**<u>For miniature varieties only</u>: Inflorescence: number of flowers (including buds)**			
			few	Debby	3
			medium	Traumblau	5
			many		7
20.1	**20.1**	**<u>For non-miniature varieties only</u>: Inflorescence: length of peduncle**			
			short		3
			medium	Lord	5
			long	Lexana	7
20.2	**20.2**	**<u>For miniature varieties only</u>: Inflorescence: length of peduncle**			
			short		3
			medium	Debby	5
			long	Pinoblau	7
21.	**21.**	**Inflorescence: anthocyanin coloration on peduncle**			
			absent	Tamara	1
			present	Heidrun	9
22.	**22.**	**Inflorescence: intensity of anthocyanin coloration on peduncle**			
			weak		3
			medium	Vivian	5
			strong	Heidrun	7

CPVO N°	UPOV N°	Characteristics		Examples	Note
23.1	**23.1**	**<u>For non-miniature varieties only</u>:** **Flower: diameter**	very small		1
			small	Minnie	3
			medium	Lexana	5
			large	Tamiko	7
			very large	Rumiko, Vivian	9
23.2	**23.2**	**<u>For miniature varieties only</u>:** **Flower: diameter**	small		3
			medium	Pünktchen	5
			large	Rapunzel	7
24.	**24.**	**Flower: shape**	zygomorphic (violet-like)	Queen	1
			actinomorphic (star-shaped)	Saturn	2
25.	**25.**	**Flower: type**	single	Queen, Rapunzel	1
			double	Dulsita, Pünktchen	2
26.	**26.**	**<u>Double varieties only</u>:** **Flower: number of petals**	few	Belafi	3
			medium	Dulsita	5
			many	Pünktchen	7
27.	**27.**	**Petal: number of colours**	self-coloured		1
			bi-coloured		2
28.	**28.**	**<u>Only varieties with self-coloured flowers</u>:** **Petal: colour of <u>margin</u> of upper side**	RHS-Colour Chart (indicate reference number)		
29.	**29.**	**<u>Only varieties with self-coloured flowers</u>:** **Petal: colour of <u>middle</u> of upper side**	RHS-Colour Chart (indicate reference number)		

CPVO N°	UPOV N°	Characteristics		Examples	Note
30.	**30.**	**<u>Only varieties with self-coloured flowers</u>:** **Petal: colour of <u>base</u> of upper side**	RHS-Colour Chart (indicate reference number)		
31.	**31.**	**<u>Only varieties with bi-coloured flowers</u>:** **Petal: main colour (larger coloured part)**	RHS-Colour Chart (indicate reference number)		
32.	**32.**	**<u>Only varieties with bi-coloured flowers</u>:** **Petal: secondary colour (smaller coloured part)**	RHS-Colour Chart (indicate reference number)		
33.	**33.**	**<u>Only varieties with bi-coloured flowers</u>:** **Flower: distribution of secondary colour (smaller coloured part)**	on upper two petals only		1
			on upper and lower petals	Emi	2
34. **(+)**	**34.** **(+)**	**<u>Only for varieties with bi-coloured flowers</u>:** **Flower: occurrence of secondary colour**	at distal parts only		1
			at distal parts and at base		2
			at base only		3
			at margins only		4
			in stripes		6
			on whole surface of upper petals only		7
35.	**35.**	**Petal: undulation of margin**	absent or very weak	Violetta	1
			weak	Emi	3
			medium	Belafi	5
			strong	Miyako	7
			very strong		9

CPVO N°	UPOV N°	Characteristics		Examples	Note
36.1	**36.1**	**<u>For non-miniature varieties only</u>: Time of beginning of flowering**			
			early	Vivian	3
			medium	Queen	5
			late	Kristel	7
36.2	**36.2**	**<u>For miniature varieties only</u>: Time of beginning of flowering**			
			early	Rapunzel	3
			medium		5
			late	Pinoblau	7

EXPLANATIONS AND METHODS

Ad 9 :

Mature leaf: type

1
type 1

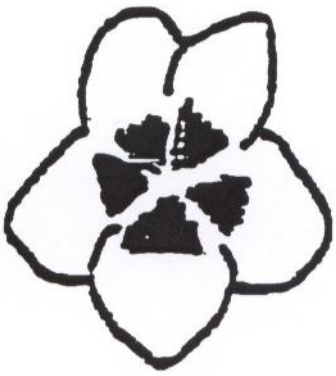
2
type 2

Ad 34:

Only for varieties with bi-coloured flowers:
Flower: occurrence of secondary colour

1
at distal parts only

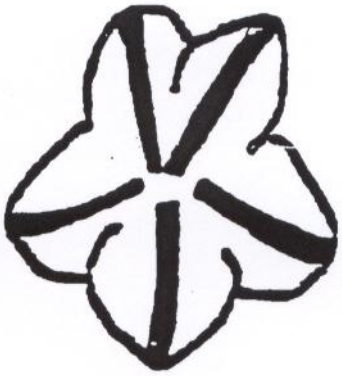
2
at distal parts and at base



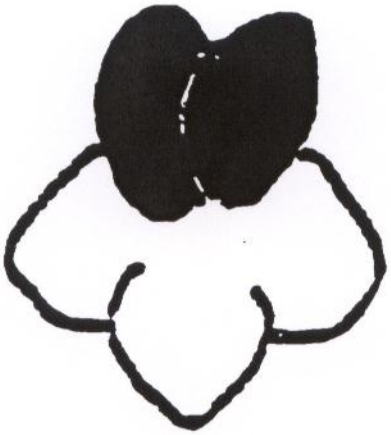
3
at base only

4
at margins and base

5
at margins only



6
in stripes



7
on whole surface of upper petals only

Literature

- CLEMENTS, Tony, 1992: "African Violets," David & Charles, Newton Abbot, Devon, GB

- ERHARDT, Anne & SCHOENE Walter, 1993: "Usambaraveilchen und andere Gesnerien," Eugen Ulmer Verlag, Stuttgart, DE

- WALL, Bill, 1990: "African Violets and Related Plants," RHS, London, GB.

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:

***Saintpaulia* H. Wendl.**

AFRICAN VIOLET

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) Leaf cuttings ..... [ ]

(b) Tissue culture ..... [ ]

(c) Seed ..... [ ]

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

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

4.3 Other information on genetic and breeding method

<u>In the case of seed propagated varieties</u> method of production:

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

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

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

(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.

……

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 (1)	**Plant: type**		
	non-miniature	Heidrun	1 [ ]
	miniature	Rapunzel	2 [ ]

	Characteristics		Example varieties	Note
5.2 (9)	**Mature leaf: type**			
		type 1	Rumiko	1 [ ]
		type 2	Anne Rokoko	2 [ ]
5.3 (10)	**Mature leaf: green colour of upper side**			
		light		3 [ ]
		medium	**Queen**	5 [ ]
		dark	**Emi**	7 [ ]
5.4 (11)	**Mature leaf: interveinal anthocyanin coloration on lower side**			
		absent	Tamara	1 [ ]
		present	Emi	9 [ ]
5.5 (24)	**Flower: shape**			
		zygomorphic (violet-like)	Queen	1 [ ]
		actinomorphic (star-shaped)	Saturn	2 [ ]
5.6 (25)	**Flower: type**			
		single	Queen, Rapunzel	1 [ ]
		double	Dulsita, Pünktchen	2 [ ]
5.7 (27)	**Petal: number of colours**			
		self-coloured		1 [ ]
		bi-coloured		2 [ ]

	Characteristics	Example varieties	Note
	Please fill in point (i) if possible, otherwise point (ii)		
5.8 (i) **(29)**	**<u>Only varieties with self-coloured flowers</u>:** **Petal: colour of <u>middle</u> of upper side** **RHS Colour Chart** **(indicate reference number)**		
5.8 (ii)	**<u>Only varieties with self-coloured flowers</u>:** **Petal: colour of <u>middle</u> of upper side**		
	white		1 [ ]
	pink		2 [ ]
	light red		3 [ ]
	dark red		4 [ ]
	violet		5 [ ]
	light blue		6 [ ]
	dark blue		7 [ ]
5.9 **(31)**	**<u>Only varieties with bi-coloured flowers</u>:** **Petal: main colour (larger coloured part)** **RHS Colour Chart** **(indicate reference number)**		
5.10 **(32)**	**<u>Only varieties with bi-coloured flowers</u>:** **Petal: secondary colour (smaller coloured part)** **RHS Colour Chart** **(indicate reference number)**		
5.11 **(34)**	**<u>Only for varieties with bi-coloured flowers</u>:** **Flower: occurrence of secondary colour**		
	at distal parts only		1 [ ]
	at distal parts and at base		2 [ ]
	at base only		3 [ ]
	at margins only		4 [ ]
	in stripes		6 [ ]
	on whole surface of upper petals only		7 [ ]

Characteristics		Example varieties	Note
5.12 (35)	**Petal: undulation of margin**		
	absent or very weak	Violetta	1 [ ]
	weak	Emi	3 [ ]
	medium	Belafi	5 [ ]
	strong	Miyako	7 [ ]
	very strong		9 [ ]

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

[ ] 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 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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