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English
Date: 16/10/2008

European Union
Community Plant Variety Office

PROTOCOL FOR DISTINCTNESS, UNIFORMITY AND STABILITY TESTS

Portulaca oleracea L.

PORTULACA

UPOV Species Code: PORTU_OLE

Adopted on 16/10/2008

Entered into force on 29/10/2008

I - SUBJECT OF THE PROTOCOL

The protocol describes the technical procedures to be followed in order to meet the requirement 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 and UPOV Guideline TG/241/1 dated 9th April 2008 for the conduct of tests for Distinctness, Uniformity and Stability. This protocol applies to all varieties of ***Portulaca oleracea*** **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 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 viruses, 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 variety 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 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:

(a) Plant: growth habit (characteristic 1)
(b) Flower: petaloid staminodes (characteristic 14)
(c) Flower: diameter (characteristic 16)
(d) Petal: number of colours (macule excluded) (characteristic 20)
(e) Petal: main colour (macule excluded) (characteristic 21)
(f) Only varieties with more than one colour
Petal: secondary colour (macule excluded) (characteristic 22)
(g) Only varieties with more than one colour (characteristic 23)
Petal: distribution of secondary colour

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 for vegetatively propagated varieties or 40 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.

For vegetatively propagated varieties, all observations on single plants 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 test.

For seed propagated varieties, all observations on single plants determined by measurement or counting, should be made on 20 plants or parts taken from each of 20 plants and any other observations made on all plants in the test.

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 for vegetatively propagated and self pollinated seed propagated varieties 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 self pollinated seed propagated varieties, only 2 off-types are allowed.

For the assessment of uniformity of seed propagated varieties which are cross pollinated or hybrids, the recommendations in the UPOV General Introduction for cross pollinated or hybrid varieties should be followed, as appropriate.

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 summarized 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.

VI – ENTRY INTO FORCE

The present protocol enters into force on 29/10/2008. Any ongoing DUS examination of candidate varieties started before the aforesaid date will not be affected by the approval of the new TP. 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.

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ANNEXES TO FOLLOW

ANNEX I PAGE

Legend:

QL Qualitative characteristic
QN Quantitative characteristic
PQ Pseudo-qualitative characteristic
(a) – (f) See explanations on the Table of characteristics
(+) See explanations on the Table of characteristics
(*) Important characteristic to be included in the UPOV variety description

ANNEX II

ANNEX 1
TABLE OF CHARACTERISTICS

CPVO N°	UPOV N°		Characteristics		Examples	Note
1.	**1.** **(*)** **(+)**		**Plant: growth habit**			
	QL	**(a)**		semi-upright	Summer Duet Rose	1
				creeping	Yubi Apricot	2
2.	**2.**		**<u>Only semi-upright varieties</u>:** **Plant: height**			
	QN	**(a)**		short		3
				medium	Summer Baby Orange	5
				tall		7
3.	**3.** **(*)** **(+)**		**Plant: width**			
	QN	**(a)**		narrow	Summer Joy Rose	3
				medium	Summer Baby Orange	5
				broad		7
4.	**4.** **(*)**		**Plant: number of shoots**			
	QN	**(a)**		few		3
				medium	Summer Baby Pink	5
				many	Summer Baby Orange	7
5.	**5.** **(*)** **(+)**		**Shoot: anthocyanin coloration**			
	QN	**(a)**		absent or very weak	Sun White	1
				weak	Summer Joy Pink	3
				medium	Yubi Apricot	5
				strong	Yubi Rose	7

CPVO N°	UPOV N°		Characteristics		Examples	Note
6.	**6. (*)**		**Leaf: petiole**			
	QL	**(b)**		absent	Sun White	1
				present	Yubi Rose	9
7.	**7.**		**Leaf blade: length**			
	QN	**(b)**		short		3
				medium	Summer Joy Deep Rose	5
				long		7
8.	**8. (*)**		**Leaf blade: width**			
	QN	**(b)**		narrow	Valencia Ivory Poach	3
				medium	Summer Joy Red	5
				broad		7
9.	**9. (*) (+)**		**Leaf blade: shape**			
	QL	**(b)**		elliptic	Sun Yellow	1
				spatulate	Summer Baby Orange	2
10.	**10. (*)**		**Leaf blade: intensity of green colour**			
	QN	**(b) (c)**		light	Summer Baby Pink	3
				medium	Yubi Apricot	5
				dark		7
11.	**11. (*)**		**Leaf blade: variegation**			
	QL	**(b) (c)**		absent	Yubi Apricot	1
				present	Flare Cherry	9

CPVO N°	UPOV N°		Characteristics		Examples	Note
12.	**12. (*)**		**Leaf blade: colour of variegation**			
	PQ	**(b) (c)**		light green yellow	Yubi Duet Song	1
				greyish green	Flare Cherry	2
				pink white	Valencia Ivory Poach	3
13.	**13. (*)**		**Leaf blade: anthocyanin coloration of margin**			
	QL	**(b) (c)**		absent	Yubi Apricot	1
				present	Summer Baby Orange	9
14.	**14. (*) (+)**		**Flower: petaloid staminodes**			
	QL	**(d)**		absent	Summer Joy Pink	1
				present	Summer Baby Orange	9
15.	**15. (*) (+)**		**Only varieties with petaloid staminodes absent: Flower: shape in lateral view**			
	QN	**(d)**		flat or slightly concave	Summer Duet Rose	1
				moderately concave	Summer Joy Golden	2
				strongly concave	Summer Joy Red	3
16.	**16. (*)**		**Flower: diameter**			
	QN	**(d)**		small	Valencia Ivory Poach	3
				medium	Yubi Apricot	5
				large	Summer Joy Red	7
17.	**17.**		**Calyx: anthocyanin coloration**			
	QL	**(d)**		absent	Sun White	1
				present	Yubi Rose	9

CPVO N°	UPOV N°		Characteristics		Examples	Note
18.	**18.** **(*)** **(+)**		**Petal: macule**			
	QL	**(d)** **(e)**		absent	Summer Joy Red	1
				present	Yubi Apricot	9
19.	**19.** **(*)**		**Petal: colour of macule**			
	PQ	**(d)** **(e)**		RHS Colour Chart (indicate reference number)		
20.	**20.** **(*)** **(+)**		**Petal: number of colours (macule excluded)**			
	QL	**(d)** **(e)**		one	Summer Joy Red	1
				two	Sun Rise	2
				more than two		3
21.	**21.** **(*)** **(+)**		**Petal: main colour (macule excluded)**			
	PQ	**(d)** **(e)**		RHS Colour Chart (indicate reference number)		
22.	**22.** **(*)** **(+)**		**<u>Only varieties with more than one colour</u>: Petal: secondary colour (macule excluded)**			
	PQ	**(d)** **(e)**		RHS Colour Chart (indicate reference number)		

CPVO N°	UPOV N°		Characteristics		Examples	Note
23.	**23.** **(*)** **(+)**		**<u>Only varieties with more than one colour</u>: Petal: distribution of secondary colour (macule excluded)**			
	PQ	**(d)** **(e)**		in stripes	Yubi Apricot	1
				colour gradient towards tip	Summer Duet Ero	2
				on margin	Summer Duet Rose	3
24.	**24.** **(*)** **(+)**		**<u>Only varieties with more than two colours</u>: Petal: distribution of tertiary colour (macule excluded)**			
	PQ	**(d)** **(e)**		in stripes	Yubi Apricot	1
				colour gradient towards tip	Summer Duet Ero	2
				on margin	Summer Duet Rose	3
25.	**25.**		**Petal: length**			
	QN	**(d)**		short	Valencia Ivory Poach	3
				medium	Summer Joy Wine Red	5
				long	Summer Joy Red	7
26.	**26.**		**Petal: width**			
	QN	**(d)**		narrow	Summer Baby Orange	3
				medium	Sono Pink	5
				broad	Summer Joy Pink	7
27.	**27.** **(*)** **(+)**		**Petal: emargination**			
	QN	**(d)** **(e)**		absent or shallow	Yubi Apricot	1
				medium	Yubi Rose	2
				deep		3

CPVO N°	UPOV N°		Characteristics		Examples	Note
28.	**28. (*)**		**Petaloid staminodes: main colour**			
	PQ	**(d) (e)**		RHS Colour Chart (indicate reference number)		
29.	**29.**		**Style: anthocyanin coloration**			
	QN	**(d)**		absent or very weak	Sono Cream	1
				weak	Valencia Ivory Poach	3
				medium	Yubi Rose	5
				strong	Yubi Apricot	7
30.	**30. (*)**		**Time of beginning of flowering**			
	QN			early	Summer Baby Lemon Yellow	3
				medium	Summer Joy Ero	5
				late	Valencia Ivory Poach	7

EXPLANATIONS ON THE TABLE OF CHARACTERISTICS

Explanations covering several characteristics

Unless otherwise noted, all characteristics should be observed at 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) Observations which should be made at one month after first flowering.
(b) Observations on the leaf which should be made on fully expanded leaves in the middle third of the flowering shoot at one month after first flowering.
(c) Observations of the leaf colour which should be made on the upper side.
(d) Observations on the flower which should be made on a fully opened flower at anther dehiscence.
(e) Observations of the petal which should be made on the upper side.

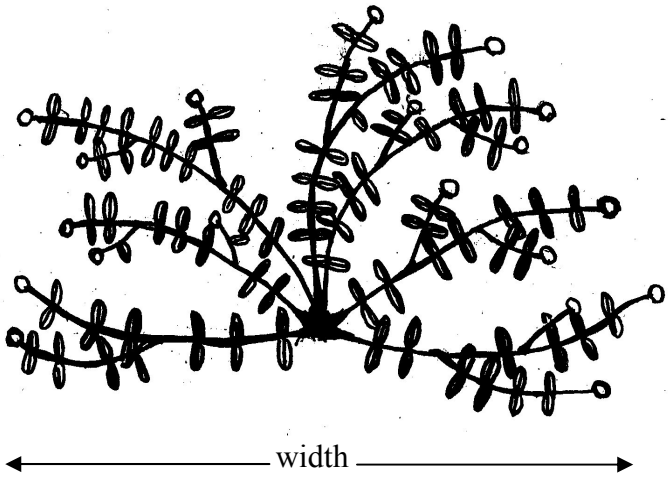
Explanations for individual characteristics

Ad. 1: Plant: growth habit

1
semi-upright

2
creeping

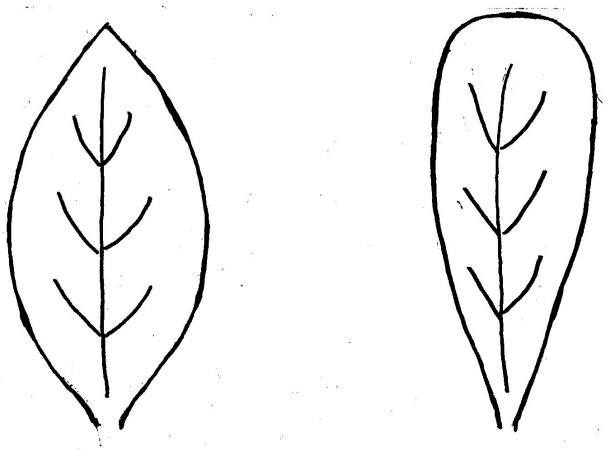
Ad. 3: Plant: width



Ad. 5: Shoot: anthocyanin coloration

The anthocyanin coloration should be observed in the middle of the shoot.

Ad. 9: Leaf blade: shape



1
elliptic

2
spatulate

Ad. 14: Flower: petaloid staminodes

1
absent

9
present

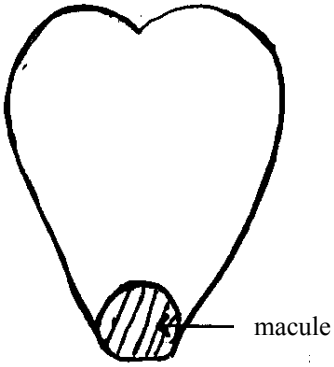
Ad. 15: Only varieties with petaloid staminodes absent: Flower: shape in lateral view

1
flat to slightly concave

2
moderately concave

3
strongly concave

Ad. 18: Petal: macule



Ad. 20: Petal: number of colours (macule excluded)

1
one

2
two

Ad. 21: Petal: main colour (macule excluded)
Ad. 22: Only varieties with more than one colour: Petal: secondary colour (macule excluded)
Ad. 23: Only varieties with more than one colour: Petal: distribution of secondary colour (macule excluded)
Ad. 24: Only varieties with more than two colours: Petal: distribution of tertiary colour (macule excluded)

The main colour is the colour with the largest surface area.
The secondary colour is the colour with secondary large surface area.
The tertiary colour is the colour with the third largest surface area.

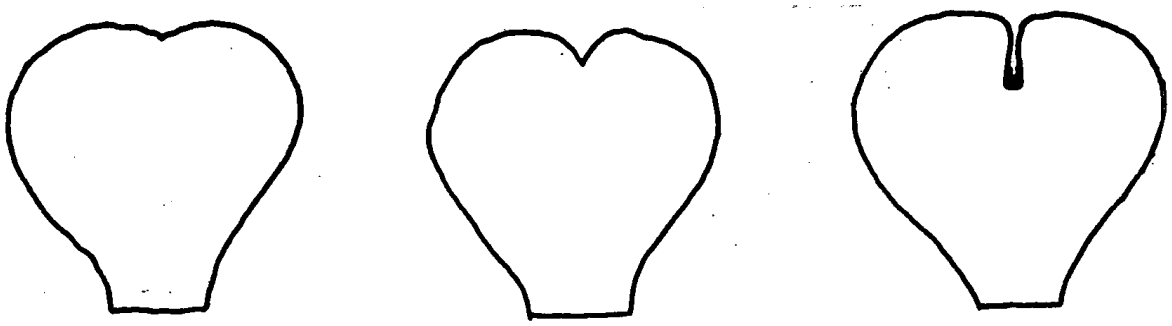
Ad. 23: Only varieties with more than one colour: Petal: distribution of secondary colour (macule excluded)
Ad. 24: Only varieties with more than two colours: Petal: distribution of tertiary colour (macule excluded)

1
in stripes

2
colour gradient towards tip

3
on margin

Ad. 27: Petal: emargination



1
absent or shallow

2
medium

3
deep

LITERATURE

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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

***Portulaca oleracea* L.**

PORTULACA

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)..... [ ]

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

(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 Protocol; please mark the state of expression which best corresponds).

Characteristics		Example varieties	Note
5.1 (1) Plant: growth habit			
	semi-upright	Summer Duet Rose	1 [ ]
	creeping	Yubi Apricot	2 [ ]
5.2 (14) Flower: petaloid staminodes			
	absent	Summer Joy Pink	1 [ ]
	present	Summer Baby Orange	9 [ ]

Characteristics		Example varieties	Note
5.3 (16)	**Flower: diameter**		
	small	Valencia Ivory Poach	3[ ]
	medium	Yubi Apricot	5[ ]
	large	Summer Joy Red	7[ ]
5.4 (20)	**Petal: number of colors (macule excluded)**		
	one	Summer Joy Red	1[ ]
	two	Sun Rise	2[ ]
	more than two		3[ ]
Please fill in point (i) if possible, otherwise point (ii)			
5.5 (i) (21)	**Petal: main colour (macule excluded)**		
	RHS Colour Chart (indicate reference number) ……..		
5.5(ii) (21)	**Petal: main colour (macule excluded)**		
	white		1[ ]
	yellow		2[ ]
	yellow orange		3[ ]
	orange		4[ ]
	pink		5[ ]
	red		6[ ]
	purple		7[ ]
	violet		8[ ]
	other colour (indicate) ……		9[ ]

Characteristics	Example varieties	Note
Please fill in point (i) if possible, otherwise point (ii) **5.6 (i) <u>Only varieties with more than one colour</u>:** **(22) Petal: secondary colour (macule excluded)** RHS Colour Chart (indicate reference number) ……..		
5.6(ii) (22) **<u>Only varieties with more than one colour</u>: Petal: secondary colour (macule excluded)**		
yellow		1[ ]
orange		2[ ]
orange brown		3[ ]
red		4[ ]
purple		5[ ]
violet		6[ ]
other colour (indicate) ……		7[ ]
5.7 (23) **<u>Only varieties with more than one colour</u>: Petal: distribution of secondary colour (macule excluded)**		
in stripes	Yubi Apricot	1[ ]
colour gradient towards tip	Summer Duet Ero	2[ ]
on margin	Summer Duet Rose	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

[ ] 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 EC/2001/18 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]