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WORKING PAPER ON TEST GUIDELINES FOR IMPATIENS
(Impatiens walleriana Hook. f.)

Document prepared by experts from France

<u>TABLE OF CONTENTS</u>	<u>PAGE</u>
I. Subject of these Guidelines	3
II. Material Required	3
III. Conduct of Tests	3
IV. Methods and Observations.....	3
V. Grouping of Varieties	4
VI. Characteristics and Symbols	4
VII. Table of Characteristics	6
VIII. Explanations on the Table of Characteristics	12
IX. Literature	13
X. Technical Questionnaire	14

I. Subject of these Guidelines

This Test Guidelines apply to all varieties of *Impatiens walleriana* Hook. f. of the family Balsaminaceae.

II. Material Required

1. The competent authorities decide when, where and in what quantity and quality the plant material required for testing the variety is to be delivered. Applicants submitting material from a State other than that in which the testing takes place must make sure that all customs formalities are complied with. As a minimum, the following quantity of plant material is recommended:

20 rooted cuttings for vegetatively propagated varieties; or
1 gram of seed for seed propagated varieties.

2. The plant material supplied should be visibly healthy, not lacking in vigor or affected by any important pests or diseases.

3. The plant material must not have undergone any treatment unless the competent authorities allow or request such treatment. If it has been treated, full details of the treatment must be given.

III. Conduct of Tests

1. A test should normally be conducted for one growing period after the year of establishment. If distinctness and/or uniformity cannot be sufficiently established in one growing period, the test should be extended for a second growing period.

2. 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.

3. The tests should be carried out under conditions ensuring normal growth. The size of the plots should be such that plants or parts of plants may be removed for measurement and counting without prejudice to the observations which must be made up to the end of the growing period. Each test should include a total of 20 plants for vegetatively propagated varieties and 60 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.

4. Additional tests for special purposes may be established.

IV. Methods and Observations

1. All observations should be made on 10 plants or parts taken from each of 10 plants for vegetatively propagated varieties and on 20 plants or parts taken from each of 20 plants for seed propagated varieties.

2. For the assessment of uniformity of hybrid seed propagated varieties and vegetatively propagated varieties, a population standard of 1% with an acceptance probability of at least

95% should be applied. In the case of a sample size of 20 plants, the maximum number of off-types allowed would be 1. **(To be checked)**

3. For the assessment of uniformity of seed propagated varieties the breeding history of the variety has to be taken into consideration. For the assessment of uniformity of open pollinated seed propagated varieties a population standard of 3% and an acceptance probability of at least 95% should be applied. In the case of a sample size of 60 plants, the maximum number of off types allowed would be 4.

4. Unless otherwise indicated, all observations should be made on typical organs of 20 plants for vegetative propagated varieties and 60 plants of seed propagated varieties at the time of mid maturity, this being the time when petal color is at its most intense.

5. Because daylight varies, color determinations made against a color chart should be made either in a suitable cabinet providing artificial daylight or in the middle of the day in a room without direct sunlight. The spectral distribution of the illuminant for artificial daylight should conform with the CIE Standard of Preferred Daylight D 6500 and should fall within the tolerance set out in British Standard 950, Part I. These determinations should be made with the plant part placed against a white background.

V. Grouping of Varieties

1. The collection of varieties to be grown should 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. Their various states of expression should be fairly evenly distributed throughout the collection.

2. It is recommended that the competent authorities use the following characteristics for grouping varieties:

- (a) Leaf: variegation on upper side (characteristic 8)
- (b) Flower: type (characteristic 18)
- (c) Flower: number of colors (characteristic 20)
- (a) Flower: main color (characteristic 22) with the following groups:
 - Gr. 1: white
 - Gr. 2: pink
 - Gr. 3: blue pink
 - Gr. 4: orange
 - Gr. 5: red
 - Gr. 6: purple
 - Gr. 7: violet
 - Gr. 8: yellow (*to be checked*)
 - Gr. 9: other color

VI. Characteristics and Symbols

1. To assess distinctness, uniformity and stability, the characteristics and their states as given in the Table of Characteristics should be used.

2. Notes (numbers), for the purposes of electronic data processing, are given opposite the states of expression for each characteristic.

3. Legend:

(*) Characteristics that should be used on all varieties in every growing period over which examinations are made and always be included in the variety descriptions, except when the state of expression of a preceding characteristic or regional environmental conditions render this impossible.

(+) See Explanations on the Table of Characteristics in Chapter VIII.

VII. Table of Characteristics/Tableau des caractères/Merkmalstabelle/Tabla de caracteres

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
1. Plant: height of foliage (*)	Plante: hauteur du feuillage				
low	basse			Pink Ice	3
medium	moyenne			Rosebud Lavender	5
high	haute			Thomas, Mega Orange Star	7
2. Plant: width (*)	Plante: largeur				
narrow	étroite				3
medium	moyenne			Pink Ice	5
broad	large			Cesilie	7
3. Stem: anthocyanin (coloration?) at upper third	Tige: anthocyane au tiers supérieur				
absent or very weak	absente ou très faible			Gumbo	1
weak	faible			Piquant	3
medium	moyenne			Cesilie	5
strong	forte			Burgund	7
very strong	très forte				9
4. Leaf: length (including petiole) (*)	Feuille: longueur (pétiole compris)				
short	courte				3
medium	moyenne			Pink Ice	5
long	longue				7
5. Leaf: width (*)	Feuille: largeur				
narrow	étroite				3
medium	moyenne			Pink Ice	5
broad	large				7

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
6. Leaf: ratio length/width (*)	Feuille: rapport longueur/largeur				
small	petit				3
medium	moyen				5
large	grand				7
7. Leaf: shape	Feuille: forme				
elliptic	elliptique				1
ovate	ovale				2
8. Leaf: variegation of upper side (*)	Feuille: panachure sur la face supérieure				
TQ absent	absente			Gumbo	1
present	présente			Pink Ice	9
9. Leaf: ground color of upper side (*)	Feuille: couleur de fond face supérieure				
TQ light green	vert clair				1
green	verte			Gumbo	2
dark green	vert foncé				3
red	rouge				4
10. Leaf: intensity of ground color of upper side (*)	Feuille: intensité couleur de fond face supérieur				
light	claire				3
medium	moyenne			Cesilie	5
dark	foncée				7
11. Leaf: ornamentation of upper side	Feuille: ornementation de la face supérieure				
absent	absente				1
present	présente				9

Proposal to delete A. To be checked by FR. Czech Republic, France and FleurSelect want it.

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
12. Leaf: size of ornamentation of upper side	Feuille: taille de l'ornementation de la face supérieure				
small	petite				3
medium	moyenne				5
large	grande				7
Proposal to delete A. To be checked by FR. Czech Republic, France and FleurSelect want it.					
13. Leaf: color of ornamentation of upper side	Feuille: couleur de l'ornementation de la face supérieure				
cream	crème				1
yellow	jaune				2
yellow and red	jaune et rouge				3
Proposal to delete A. To be checked by FR. Czech Republic, France and FleurSelect want it.					
14. Leaf: color between veins of lower side	Feuille: couleur entre les nervures de la face intérieure				
green	verte				1
red	rouge				2
15. Leaf: color of veins on lower side	Feuille: couleur des nervures sur la face intérieure				
green	verte			Gumbo	1
red	rouge			Didi Orange	2
16. Petiole: anthocyanin coloration of upper side	Pétiole: anthocyan sur la face supérieure				
absent or very weak	absent ou très faible				1
weak	faible				3
medium	moyenne				5
strong	forte				7
very strong	très forte				9

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
17. Peduncle: anthocyanin coloration	Pédoncule: présence d'anthocyane				
absent or very weak	absent ou très faible			Gumbo	1
weak	faible			Didi Orange	3
medium	moyenne				5
strong	forte				7
very strong	très forte				9
18. Flower: type (*)	Fleur: type				
TQ single	simple			Gumbo	1
semi double	semi double				2
double	double			Didi Orange	3
Investigate semi-double seed propagated varieties: varieties no uniform for 100 % double. Czech Republic, France and FleurSelect want it.					
19. Flower: diameter (*)	Fleur: diamètre				
TQ very small	très petit			Fire Fly	1
small	petit			Pink Ice	3
medium	moyen				5
large	grand			Gumbo	7
very large	très grand			Mega Orange Star	9
To be checked by FR and DE. Czech Republic and France want it.					
20. Flower: number of (*) colors	Fleur: nombre de couleurs				
TQ one	une				1
two	deux				2
more than two	plus de deux				3

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
21. Flower: repartition of color	Fleur: répartition de la couleur				
edge	en bordure			Swirt	1
shade	diffuse			Salmon Sades	2
star	en étoile			Mega Orange Star	3
blotch (eye)	en "œil"			Salmon Blush	4
veined	veiné			Mosaic Pink	5
22. Flower: main color (*)	Fleur: couleur principale				
TQ	RHS Colour Chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)			
23. Flower: secondary color (*)	Fleur: couleur secondaire				
TQ	RHS Colour Chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)			
24. <u>Single flowering varieties only:</u> (*) (+) Upper petal: width	<u>Variétés à fleurs simples:</u> Pétale supérieur: largeur				
narrow	petite			Gumbo	3
medium	moyenne				5
broad	grande			Piquant	7
25. <u>Single flowers varieties only:</u> (*) (+) Lateral petal: width	<u>Variétés à fleurs simples:</u> Pétale latéral: largeur				
narrow	petite				3
medium	moyenne				5
broad	grande				7

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
26. (*)	Petal: differently colored zone at base	Pétale: zone colorée différemment à la base				
TQ	absent	absente			Gumbo	1
	present	présente			Piquant	9
27. (*)	Petal: size of differently colored zone at base	Pétale: taille de la zone colorée différemment à la base				
	small	petite				3
	medium	moyenne			Piquant	5
	large	grande				7
28. (*)	Petal: color of differently colored zone at base	Pétale: couleur de la zone colorée différemment à la base				
	RHS Colour Chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)				
29.	<u>Seed propagated varieties only:</u> time of beginning of flowering	<u>Variété à multiplication sexuée seulement:</u> époque de début de la floraison				
	early	précoce				3
	medium	moyenne				5
	late	tardive				7
30.	<u>Seed propagated varieties only:</u> duration of flowering	<u>Variétés à multiplication sexuée seulement:</u> durée de la floraison				
	short	courte				3
	medium	moyenne				5
	long	longue				7
To be checked by FR						

VIII. Explanations on the Table of Characteristics

Ad. 24: Single flowering varieties only: Upper petal: width

Diagram to be added

Ad. 25: Single flowers varieties only: Lateral petal: width

Diagram to be added

IX. Literature

X. Technical Questionnaire

	Reference Number (not to be filled in by the applicant)
<p>TECHNICAL QUESTIONNAIRE to be completed in connection with an application for plant breeders' rights</p>	
1. Species	<p style="text-align: center;"><i>Impatiens walleriana</i> Hook. f. IMPATIENS</p>
2. Applicant (Name and address)	
3. Proposed denomination or 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 and when)

..... []

(d) Other (specify)

..... []

4.2 Method of reproduction

– Seeds []

– Cuttings []

– *In vitro* propagation []

– Other (specify) []

.....

4.3 Other information

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

Characteristics	Example Varieties	Note
5.1 Leaf: variegation of upper side (8)		
absent	Gumbo	1[]
present	Pink Ice	9[]
5.2 Leaf: ground color on upper side (9)		
light green		1[]
green	Gumbo	2[]
dark green		3[]
red		4[]
5.3 Flower: type (18)		
single	Gumbo	1[]
semi double		2[]
double	Didi Pink	3[]
5.4 Flower: diameter (19)		
very small	Fire Fly	1[]
small	Pink Ice	3[]
medium		5[]
large	Gumbo	7[]
very large	Mega Orange Star	9[]
5.5 Flower : number of colors (20)		
one		1[]
two		2[]
more than two		3[]

Characteristics	Example Varieties	Note
5.6i Flower: main color (22)		
RHS Colour Chart (indicate reference number)	
5.6ii Flower: main color (22)		
white		1[]
pink		2[]
blue pink		3[]
orange		4[]
red		5[]
purple		6[]
violet		7[]
yellow (<i>to be checked</i>)		8[]
other color (indicate).....		9[]
5.7i Flower: secondary color (23)		
RHS Colour Chart (indicate reference number)	
5.7ii Flower: secondary color (23)		
white		1[]
pink		2[]
blue pink		3[]
orange		4[]
red		5[]
purple		6[]
violet		7[]
other color (indicate).....		8[]
5.8 Petal: differently colored zone at base (26)		
absent	Gumbo	1[]
present	Piquant	9[]

6. Similar varieties and differences from these varieties

Denomination of similar variety	Characteristic in which the similar variety is different ^{o)}	State of expression of similar variety	State of expression of candidate variety
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^{o)} 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

7.1 Resistance to pest and diseases

7.2 Special conditions for the examination of the variety

7.3 Other information

A representative color photo of the variety should be added to the Technical Questionnaire.

8. Authorization for release

- (a) Does the variety require prior authorization for release under legislation concerning the protection of the environment, human and animal health?

Yes [] No []

- (b) Has such authorization been obtained?

Yes [] No []

If the answer to that question is yes, please attach a copy of such an authorization.

[End of document]