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UPOV

# INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

GENEVA

# DRAFT

[*]

## HYDRANGEA

UPOV Code: HYDRN

*Hydrangea* L.

## GUIDELINES

## FOR THE CONDUCT OF TESTS

## FOR DISTINCTNESS, UNIFORMITY AND STABILITY

*prepared by experts from France*

*to be considered by the*
*Technical Working Party for Ornamental Plants and Forest Trees*
*at its forty-second session, to be held in Angers, France, from September 14 to 18, 2009*

Alternative Names:[*]

| *Botanical name* | *English* | *French* | *German* | *Spanish* |
|---|---|---|---|---|
| *Hydrangea* L. | Hydrangea | Hortensia | Hortensie | Hortensia, Hidrangea |

The purpose of these guidelines ("Test Guidelines") is to elaborate the principles contained in the General Introduction (document TG/1/3), and its associated TGP documents, into detailed practical guidance for the harmonized examination of distinctness, uniformity and stability (DUS) and, in particular, to identify appropriate characteristics for the examination of DUS and production of harmonized variety descriptions.

## ASSOCIATED DOCUMENTS

These Test Guidelines should be read in conjunction with the General Introduction and its associated TGP documents.

[*] These names were correct at the time of the introduction of these Test Guidelines but may be revised or updated. [Readers are advised to consult the UPOV Code, which can be found on the UPOV Website (www.upov.int), for the latest information.]

TABLE OF CONTENTS PAGE

## 1. Subject of these Guidelines

These Test Guidelines apply to all varieties of *Hydrangea* L. (*Saxifragaceae*). They have been established mainly on the basis of varieties of *Hydrangea macrophylla* (Thunb. ex Murr.) Ser., *Hydrangea anomala D. Don ssp. petiolaris* (Sieb. et Zucc.) McClintock, *Hydrangea paniculata* Sieb., *Hydrangea quercifolia* Bartr. and *Hydrangea aspera* D. Don, but they may also be used for other species of *Hydrangea* L.

## 2. Material Required

2.1 The competent authorities decide on the quantity and quality of the plant material required for testing the variety and when and where it is to be delivered. Applicants submitting material from a State other than that in which the testing takes place must ensure that all customs formalities and phytosanitary requirements are complied with.

2.2 The material is to be supplied in the form of rooted cuttings capable of flowering and expressing all relevant characteristics of the variety during the first growing cycle.

2.3 The minimum quantity of plant material, to be supplied by the applicant, should be:

8 plants

2.4 The plant material supplied should be visibly healthy, not lacking in vigor, nor affected by any important pest or disease.

2.5 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 it has been treated, full details of the treatment must be given.

## 3. Method of Examination

### *3.1 Number of Growing Cycles*

The minimum duration of tests should normally be two independent growing cycles.

### *3.2 Testing Place*

Tests are normally conducted at one place. In the case of tests conducted at more than one place, guidance is provided in TGP/9 “Examining Distinctness”.

### *3.3 Conditions for Conducting the Examination*

The tests should be carried out under conditions ensuring satisfactory growth for the expression of the relevant characteristics of the variety and for the conduct of the examination.

*3.4 Test Design*

3.4.1 Each test should be designed to result in a total of at least 8 plants.

3.4.2 The design of the tests should be such that plants or parts of plants may be removed for measurement or counting without prejudice to the observations which must be made up to the end of the growing cycle.

3.4.3 FR proposal
The color of varieties could depend on the acidity of the soil.
The blue color is caused by too much acidity in the soil maybe caused by aluminum ions and by peat too rich in potassium.

NZ proposal
The sepal colour is strongly influenced by the pH of the growing media. For media with low pH the sepal colouration is likely to be inclined towards the blue to purple ranges. For media with higher pH the sepal colouration is likely to be inclined towards the red purple to reddish ranges. It is recommended that each variety is grown in media with a pH level that will result in truly representative sepal colouration for that variety

*3.5 Number of Plants / Parts of Plants to be examined*

Unless otherwise indicated, all observations should be made on 8 plants or parts taken from each of 8 plants and any other observations on all plants in the test.

*3.6 Additional Tests*

Additional tests, for examining relevant characteristics, may be established.

## 4. Assessment of Distinctness, Uniformity and Stability

*4.1 Distinctness*

4.1.1 General Recommendations

It is of particular importance for users of these Test Guidelines to consult the General Introduction prior to making decisions regarding distinctness. However, the following points are provided for elaboration or emphasis in these Test Guidelines.

4.1.2 Consistent Differences

The differences observed between varieties may be so clear that more than one growing cycle is not necessary. In addition, in some circumstances, the influence of the environment is not such that more than a single growing cycle is required to provide assurance that the differences observed between varieties are sufficiently consistent. One means of ensuring that a difference in a characteristic, observed in a growing trial, is sufficiently consistent is to examine the characteristic in at least two independent growing cycles.

4.1.3 Clear Differences

Determining whether a difference between two varieties is clear depends on many factors, and should consider, in particular, the type of expression of the characteristic being examined, i.e. whether it is expressed in a qualitative, quantitative, or pseudo-qualitative manner. Therefore, it is important that users of these Test Guidelines are familiar with the recommendations contained in the General Introduction prior to making decisions regarding distinctness.

*4.2 Uniformity*

4.2.1 It is of particular importance for users of these Test Guidelines to consult the General Introduction prior to making decisions regarding uniformity. However, the following points are provided for elaboration or emphasis in these Test Guidelines:

4.2.2 For the assessment of uniformity of vegetatively propagated varieties, a population standard of 1% and an acceptance probability of at least 95% should be applied. In the case of a sample size of 8 plants, 1 off-type is allowed.

*4.3 Stability*

4.3.1 In practice, it is not usual to perform tests of stability that produce results as certain as those of the testing of distinctness and uniformity. However, experience has demonstrated that, for many types of variety, when a variety has been shown to be uniform, it can also be considered to be stable.

4.3.2 Where appropriate, or in cases of doubt, stability may be tested, either by growing a further generation, or by testing a new plant stock to ensure that it exhibits the same characteristics as those shown by the previous material supplied.

## 5. Grouping of Varieties and Organization of the Growing Trial

5.1 The selection of varieties of common knowledge to be grown in the trial with the candidate varieties and the way in which these varieties are divided into groups to facilitate the assessment of distinctness are aided by the use of grouping characteristics.

5.2 Grouping characteristics are those in which the documented states of expression, even where produced at different locations, can be used, either individually or in combination with other such characteristics: (a) to select varieties of common knowledge that can be excluded from the growing trial used for examination of distinctness; and (b) to organize the growing trial so that similar varieties are grouped together.

5.3 The following have been agreed as useful grouping characteristics:

a) Stem: fasciation (characteristic 4)
b) Stem: color (characteristic 5)
c) Inflorescence: shape (characteristic 21)
d) Inflorescence: conspicuousness of fertile flowers (characteristic 24)
e) Sterile flower: intensity of coloration (characteristic 27)
f) Sterile flower: number of colors (characteristic 28)

g) Sterile flower: main color (characteristic 29)
white
light pink
dark pink
purple pink
red

h) Sterile flower: type (characteristic 30)

5.4 Guidance for the use of grouping characteristics, in the process of examining distinctness, is provided through the General Introduction.

## 6. Introduction to the Table of Characteristics

### *6.1 Categories of Characteristics*

#### 6.1.1 Standard Test Guidelines Characteristics

Standard Test Guidelines characteristics are those which are approved by UPOV for examination of DUS and from which members of the Union can select those suitable for their particular circumstances.

#### 6.1.2 Asterisked Characteristics

Asterisked characteristics (denoted by *) are those included in the Test Guidelines which are important for the international harmonization of variety descriptions and should always be examined for DUS and included in the variety description by all members of the Union, except when the state of expression of a preceding characteristic or regional environmental conditions render this inappropriate.

### *6.2 States of Expression and Corresponding Notes*

States of expression are given for each characteristic to define the characteristic and to harmonize descriptions. Each state of expression is allocated a corresponding numerical note for ease of recording of data and for the production and exchange of the description.

### *6.3 Types of Expression*

An explanation of the types of expression of characteristics (qualitative, quantitative and pseudo-qualitative) is provided in the General Introduction.

### *6.4 Example Varieties*

Where appropriate, example varieties are provided to clarify the states of expression of each characteristic.

### *6.5 Legend*

(*) Asterisked characteristic – see Chapter 6.1.2

QL: Qualitative characteristic – see Chapter 6.3
QN: Quantitative characteristic – see Chapter 6.3
PQ: Pseudo-qualitative characteristic – see Chapter 6.3

(a) See Explanations on the Table of Characteristics in Chapter 8.1
(+) See Explanations on the Table of Characteristics in Chapter 8.2

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

| | | English | français | deutsch | español | Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo | Note/ Nota |
|---|---|---|---|---|---|---|---|
| **1.** | | **Plant : type** | **Plante : type** | | JP propose to delete | | |
| **QL** | | climbing | grimpante | | Nana Y. | Nana Yakushimamaum | 1 |
| | | non-climbing | non grimpant | | | Merveille | 2 |
| **2.** | | **Non-climbing varieties only: Plant: growth habit** | **Variété à port non grimpant seulement : Plante : port** | | Uk correction not drooping but spreading | | |
| **PQ** | | upright | dressé | | | Merveille | 1 |
| | | semi upright | demi dressé | | | Nana Yakushimanum | 2 |
| | | ~~drooping~~ | retombant | | | | 3 |
| **3.** | | **Non-climbing varieties only: Plant: natural height** | **Variété à port non grimpant seulement : Plante : hauteur** | | | | |
| **QL** | **(a)** | short | courte | | | Hörnli | 3 |
| | | medium | moyenne | | | Merveille | 5 |
| | | tall | haute | | | Maman | 7 |
| **4.** | | **Stem: fasciation** | **Tige : fasciation** | | | | |
| **(+)** | | | | | | | |
| **QL** | | absent | absente | | | Merveille | 1 |
| | | present | présente | | | Domotoi | 9 |
| **5.** | | **Stem: color** | **Tige : couleur** | | | | |
| **PQ** | | green | verte | | | Merveille | 1 |
| | | brownish | brunâtre | | | | 2 |
| | | purplish | pourpre | | | | 3 |
| | | blackish | noirâtre | | | Nigra | 4 |

| | English | français | deutsch | español | Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo | Note/ Nota |
|---|---|---|---|---|---|---|
| **6.** | **Stem: lenticels** | **Tige : lenticelles en automne** | | | | |
| **QL?** | absent or few | absentes ou peu nombreuses | | | Zorro | 1 |
| | medium | moyennement nombreuses | | | Merveille | 2 |
| | many | nombreuses | | | | 3 |
| **7.** | **Stem: color of lenticels** | **Tige : couleur des lenticelles** | | | | |
| **PQ** | white | blanche | | | Paniculata grandiflora | 1 |
| | red | rouge | | | Leuchtfeuer | 2 |
| | black | noire | | | Merveille | 3 |
| **8.** | **Leaf blade: length** | **Feuille : longueur** | | | | |
| **QN** | short | courte | | | Hörnli | 3 |
| | medium | moyenne | | | Rosita | 5 |
| | long | longue | | | Merveille | 7 |
| **9.** | **Leaf blade: width** | **Feuille : largeur** | | | Varieties proposed by Jp | |
| **QN** | narrow | étroite | | | Shichidanka | 3 |
| | medium | moyenne | | | Mrs Kumiko | 5 |
| | broad | large | | | Snowflake | 7 |
| **10.** | **Leaf blade: lobing** | **Feuille : lobe** | | | | |
| **QL** | absent | absente | | | Merveille | 1 |
| | present | présente | | | Harmony | 9 |
| **11.** | **Leaf blade: shape (only for no lobed varieties)** | **Feuille : forme (seulement pour les feuilles non lobées)** | | | | |
| **PQ** | ovate | ovale | | | Merveille | 1 |
| | elliptic | elliptique | | | Blue Ware | 2 |
| | circular | circulaire | | | Rosita | 3 |

| | English | français | deutsch | español | Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo | Note/ Nota |
|---|---|---|---|---|---|---|
| **12.** **(+)** | **Leaf blade: shape of apex (excluding tip)** | **Feuille : forme de l'apex (en excluant l'extrémité)** | | | | |
| **QN** | acuminate | acuminée | | | Madame Plumecoq, Raymond Draps | 1 |
| | acute | pointue | | | Sea Foam | 2 |
| | rounded | ronde | | | Rouget de l'Isle | 3 |
| **13.** | **Leaf blade: shape of base** | **Feuille : forme de la base** | | | | |
| **PQ** | acute | pointue | | | Europa | 1 |
| | obtuse | obtuse | | | Bosco, Hamburg | 2 |
| | rounded | ronde | | | Rosabelle | 3 |
| | cordate | en forme de coeur | | JP variety | Annabelle | 4 |
| **14.** | **Leaf blade: depth of incisions** | **Feuille : profondeur des incisions** | | | | |
| **QN** | shallow | peu profonde | | | King George | 3 |
| | medium | moyenne | | | Europa | 5 |
| | deep | profonde | | | Altona | 7 |
| **15.** | **Leaf blade: variegation** | **Feuille : panachure** | | | | |
| **QL** | absent | absente | | | Merveille | 1 |
| | present | présente | | | Tricolor | 9 |
| **16.** **(+)** | **Leaf blade: main color** | **Feuille : couleur principale** | | | | |
| **PQ** | yellow | jaune | | | Ogonda | 1 |
| | green | vert | | | Merveille | 2 |
| | purple | pourpre | | | Merveille Sanguinea | 3 |

| | English | français | deutsch | español | Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo | Note/ Nota |
|---|---|---|---|---|---|---|
| **17.** | **Leaf blade: intensity of main color** | **Feuille : intensité de la couleur principale** | | **Jp/Fr : for all the colors, not only green but we must provide others ex.varieties for yellow, purple..** | | |
| **QN** | light | claire | | | Rapa | 1 |
| | medium | moyenne | | | Merveille | 2 |
| | dark | foncée | | | Rambo | 3 |
| **18.** | **Leaf blade: secondary color** | **Feuille : couleur secondaire** | | | | |
| **PQ** | white only | seulement blanche | | | Variegata | |
| | yellow only | seulement jaune | | | Lemen wave | |
| | white and yellow | blanche et jaune | | | Tricolor | |
| **19.** | **Leaf blade: glossiness of upper side** | **Feuille : brillance de la face supérieure** | | | | |
| **QL** | absent | absente | | | Maman | 1 |
| | present | présente | | | Merveille | 9 |
| **20.** | **Leaf blade: blistering** | **Feuille : cloqûre** | | | | |
| **QN** | weak | faible | | | Mme Mouillère | 1 |
| | medium | moyenne | | | Rosita | 2 |
| | strong | forte | | | Merveille | 3 |
| **21.** **(+)** | **Inflorescence: shape** | **Inflorescence : forme** | | NZ proposal | | |
| **PQ** | flattened | aplatie | | narrow transverse elliptic | Mousmée, Sea Foam | 1 |
| | globular | globuleuse | | oblate | Merveille | 2 |
| | conical | conique | | triangular | Snowflake | 3 |

| | English | français | deutsch | español | Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo | Note/ Nota |
|---|---|---|---|---|---|---|
| **22.** | **Inflorescence: height** | **Inflorescence : hauteur** | | | JP example varieties | |
| **QN** | short | courte | | | Shichidanka | 3 |
| | medium | moyenne | | | Mrs Kumiko | 5 |
| | tall | haute | | | Snowflake | 7 |
| **23.** | **Inflorescence: diameter** | **Inflorescence : diamètre** | | | | |
| **QN** | small | petit | | | Hörnli | 3 |
| | medium | moyen | | | Merveille | 5 |
| | large | grand | | | Maman | 7 |
| **24.** **(+)** | **Inflorescence: conspicuousness of fertile flowers** | **Inflorescence : netteté des fleurs fertiles** | | | | |
| **PQ** | inconspicuous | peu nette | | | Merveille | 1 |
| | conspicuous | nette | | | Mousmée, Sea Foam | 2 |
| **25.** **(+)** | **Only varieties with conspicuous fertile flowers: Inflorescence: arrangement of sterile flowers** | **Seulement pour les variétés à fleurs fertiles nettes : inflorescence : répartition des fleurs stériles** | | | | |
| **PQ** | irregular | irrégulière | | | Vetchie | 1 |
| | in one whorl | en un cercle | | | Tricolor | 2 |
| | in two or more whorls | en deux ou plusieurs cercles | | | Jogasaki | 3 |
| **26.** **(+)** | **Sterile flower: diameter** | **fleur stérile : diamètre** | | **Nz proposal to add : calyx** | | |
| **QN** | small | petit | | Nz proposes to re-order 26,30,31,32,33,28,29, 35,36 | Hörnli | 3 |
| | medium | moyen | | | Alpenglühen | 5 |
| | large | large | | | Freudenstein | 7 |

| | English | français | deutsch | español | Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo | Note/ Nota |
|---|---|---|---|---|---|---|
| **27.** | **Sterile flower: intensity of coloration** | **Fleur stérile : intensité de la couleur** | **NZ/Fr proposal to delete because cover by 29:RHS color** | **JP proposal : to move after char.28**<br><br>**To add: sterile flowers with one color only** | | |
| **QN** | absent or very weak | absente ou très faible | | | Soeur Thérèse | 1 |
| | weak | faible | | | Marie Claire | 3 |
| | medium | moyenne | | | Freudenstein | 5 |
| | strong | forte | | | Doris | 7 |
| | very strong | très forte | | | Leuchtfeuer | 9 |
| **28.** | **Sterile flower: number of colors** | **Fleur stérile : nombre de couleurs** | | **Nz proposal : number of sepal colors** | | |
| **PQ** | one | une | | | Rosita | 1 |
| | more than one | plusieurs | | | Sensation 75 | 2 |
| **29.** | **Sterile flower: main color** | **Fleur stérile : couleur principale** | | Nz proposal: main color of sepal | | |
| **PQ** | RHS Colour Chart (indicate reference number) | Code RHS des couleurs (indiquer le numéro de référence) | | | | |
| **30.** | **Sterile flower: type** | **Fleur stérile : type** | | | | |
| **(+)** | | | | | | |
| **PQ** | single | simple | | | Merveille | 1 |
| | double | double | | | Amethyst, Izu-no-Hana | 2 |

| | English | français | deutsch | español | Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo | Note/ Nota |
|---|---|---|---|---|---|---|
| **31.**<br>**(+)** | **Sterile flower: overlapping of sepals** | **Fleur stérile : chevauchement des sépales** | | JP proposes to add 2 new Char:<br>Sterile flowers: shape of petal : 1 rhomboid, 2 elliptic, 3 ovate 4 broad ovate<br>Sterile flowers: depth of incisions of margins: shallow, deep | | |
| **QL** | absent | absent | | | Hörnli | 1 |
| | present | présent | | | Rosita | 9 |
| **32.**<br>**(+)** | **Sterile flower: degree of overlapping of sepals** | **Fleur stérile : degré de chevauchement des sépales** | | | | |
| **QN** | weak | faible | | | Madame Plumecoq | 3 |
| | medium | moyen | | | Bichon | 5 |
| | strong | fort | | | Heinrich Siedel, Madame Gilles Goujon | 7 |
| **33.**<br>**(+)** | **Sterile flower: incisions of margin of sepal** | **Fleur stérile : incisions du bord du sépale** | | | | |
| **QN** | absent on all sepals | absentes sur tous les sépales | | | Maman, Merveille | 1 |
| | present on some sepals | présentes sur quelques sépales | | | Gloria | 2 |
| | present on all sepals | présentes sur tous les sépales | | | Europa | 3 |
| **34.**<br>**New Char** | **Sterile flower: secondary color** | **Fleur stérile : couleur secondaire** | | NZ/Jp proposal to delete because cover by Char.28 | | |
| **QL** | absent | absente | | | Merveille | 1 |
| | present | présente | | | Sandra | 9 |

| | English | français | deutsch | español | Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo | Note/ Nota |
|---|---|---|---|---|---|---|
| **35. New chara (+)** | **Sterile flower: secondary color** | **Fleur sterile: couleur secondaire** | | NZ: second color of sepal | | |
| | white | blanc | | | Raberah | 1 |
| | pink | rose | | | Sandra | 2 |
| | red | rouge | | | Ripple | 3 |
| **36. New char. (+)** | **Sterile flower: distribution of secondary color** | **Fleur stérile : répartition de la couleur secondaire** | | JP proposal to replace | border by at apex | |
| **PQ** | border | liseré | | Nz proposal to replace border by on edge only | Ripple | 1 |
| | marginal zone | bordée | | | Sandra | 2 |
| | diffuse | diffuse | | | Rosalba | 3 |
| **37.** | **<u>Varieties with conspicuous fertile flowers only</u>: Fertile flower: color of petal** | **<u>Seulement pour les variétés à fleurs fertiles nettes</u> : Fleurs fertiles : couleur des pétales** | | Nz/JP/to delete because conspicuous fertile flowers are to small | | |
| **PQ** | RHS Colour Chart (indicate reference number) | Code RHS des couleurs (indiquer le numéro de référence) | | | | |
| **38.** | **Fertile flower: color of petal** | **Fleur fertile : couleur des pétales** | | JP proposal : **<u>Varieties with conspicuous fertile flowers only</u>: Fertile flower: color of petal** | | |
| **PQ** | white | blanche | | FR comments: the organ described for fertile flower are petals | Rosalba | 1 |
| | pink | rose | | | Tricolor | 2 |
| | purple | mauve (pourpre?) | | | Lemen wave | 3 |

| | English | français | deutsch | español | Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo | Note/ Nota |
|---|---|---|---|---|---|---|
| **39.** | **<u>Varieties with conspicuous fertile flowers only</u>: Fertile flower: color of anthers** | | Comment: NZ/FR proposal to delete this char. | | | |
| **PQ** | RHS Colour Chart (indicate reference number) | | | | | |
| **40.** | **Time of beginning of flowering** | **Époque de début de la floraison** | | | | |
| **QN** | early | précoce | | | Freudenstein | 3 |
| | medium | moyenne | | | Maman, Marveille | 5 |
| | late | tardive | | | Europa, Hörnli, Magicien | 7 |

JP proposes to add a new characteristic:
Flowering habit in current year's shoot

| | | | | |
|---|---|---|---|---|
| QL | absent | | | 1 |
| | present | | Bailmer | 9 |

8. Explanations on the Table of Characteristics

*8.1 Explanations covering several characteristics*

(a) Plants should be examined when flowering.

*8.2 Explanations for individual characteristics*

Ad. 4: Stem: fasciation


Ad. 12: Leaf blade: shape of apex (excluding tip)

1
acuminate

2
acute

3
rounded

Ad. 16: Leaf blade: main color

Main color is the color with the largest surface area

Ad. 21: Inflorescence: shape

1
flattened
NZ proposal
narrow transverse elliptic

2
globular
oblate

3
conical
triangular

Ad. 24: Inflorescence: conspicuousness of fertile flowers

Fertile flowers tend to have a small inconspicuous calyx and sterile flowers have a large prominent calyx.

1
inconspicuous

2
conspicuous

Ad. 25: Only varieties with conspicuous fertile flowers: Inflorescence: arrangement of sterile flowers

1
irregular

2
in one whorl

no illustration

3
in two or more whorls

Ad. 26: Sterile flower: xxx

Female sterility because of an atrophy of female organs, the ovary can't be fertilized

Ad. 30: Sterile flower: type

single: when the number of sepals is 3 to 6
double: when the number of sepals is > 10

Ad. 31: Sterile flower: overlapping of sepals

1
absent

9
present

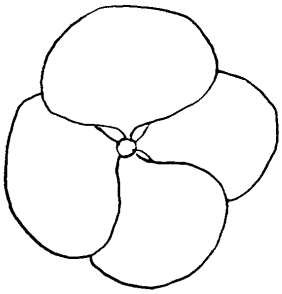
Ad. 32: Sterile flower: degree of overlapping of sepals

3
weak

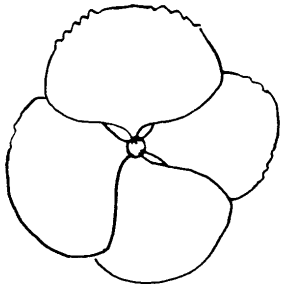
5
medium

7
strong

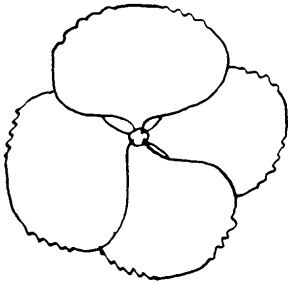
Ad. 33: Sterile flower: incisions of margin of sepal



1
absent on all sepals



2
present on some sepals



3
present on all sepals

Ad. 35: Sterile flower: secondary color (New char.)

1
white

2
pink

3
red

Ad. 36: Sterile flower: distribution of secondary color: (New char)

1
border

2
marginal zone

3
diffuse

Jp proposal
Ad. 36: Sterile flower: distribution of secondary color: (New char)

at apex

marginal zone

diffuse

Jp proposes to add picotee

## 9. Literature

Bertrand H., Becue I., Relion D., 2007: INH, BRG. Ressources génétiques du genre Hydrangea L., collection nationale, texte et iconographie. Edition Janv 2007 (245 p).

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BRG, INH, Bertrand H., 2007: Répertoire des ressources génétiques Hydrangea. Réseau Hydrangea 2006 édition: février

Guerin V. Coord., 2002: Hydrangea: acquisitions nouvelles et applications. INRA Editions (133 p).

Haworth-Booth, M., 1984: The Hydrangeas. 5th Ed., Constable, London, GB (217p).

Lawson-Hall T. & Rothera B. 1995: Hydrangeas a Gardeners' Guide. Edition B.T. Batsford Ltd. London (160p).

Mohring, H.K., Kuhlen, H., Bosse, G., 1956: Die Hortensien. Verlag Dr. Rudolf Georgi, Aachen, DE (238p).

Rehder, A.: "Manual of Cultivated Trees and Shrubs," 2nd Ed., Macmillan Company, New York, USA (996 p.).

Vidalie, H., 1986: Les productions florales. 4e éd., Edition J.B. Baillière, Paris, FR

10. Technical Questionnaire

| TECHNICAL QUESTIONNAIRE | Page {x} of {y} | Reference Number: |
|---|---|---|

| | |
|---|---|
| | Application date:<br>(not to be filled in by the applicant) |

TECHNICAL QUESTIONNAIRE
to be completed in connection with an application for plant breeders' rights

1. Subject of the Technical Questionnaire

| | |
|---|---|
| 1.1.1 Botanical Name | *Hydrangea* L. |
| 1.1.2 Common Name | Hydrangea |
| 1.2 Species | |

2. Applicant

| | |
|---|---|
| Name | |
| Address | |
| Telephone No. | |
| Fax No. | |
| E-mail address | |
| Breeder (if different from applicant) | |

3. Proposed denomination and breeder's reference

| | |
|---|---|
| Proposed denomination (if available) | |
| Breeder's reference | |

| TECHNICAL QUESTIONNAIRE | Page {x} of {y} | Reference Number: |
|---|---|---|

[#]4. Information on the breeding scheme and propagation of the variety

4.1 Breeding scheme

Variety resulting from:

4.1.1 Seeding [ ]
(please state parent varieties)

4.1.2 Mutation [ ]
(please state parent variety)

4.1.3 Discovery and development [ ]
(please state where and when discovered and how developed)

4.1.4 Other [ ]
(please provide details)

4.2 Method of propagating the variety

4.2.1 Vegetative propagation

(a) cuttings [ ]
(b) in vitro propagation [ ]
(c) other (state method) [ ]

4.2.2 Seed [ ]

4.2.3 Other [ ]

[#] Authorities may allow certain of this information to be provided in a confidential section of the Technical Questionnaire.

| TECHNICAL QUESTIONNAIRE | Page {x} of {y} | Reference Number: |
|---|---|---|

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

| | Characteristics | Example Varieties | Note |
|---|---|---|---|
| **5.2 (21)** | **Inflorescence: shape** | | |
| | flattened | Mousmée, Sea Foam | 1[ ] |
| | globular | Merveille | 2[ ] |
| | conical | Snowflake | 3[ ] |
| **5.1 (24)** | **Inflorescence: conspicuousness of fertile flowers** | | |
| | inconspicuous | Merveille | 1[ ] |
| | conspicuous | Mousmée, Sea Foam | 2[ ] |
| **5.3 (27)** | **Sterile flower: intensity of coloration** | | |
| | absent or very weak | Soeur Thérèse | 1[ ] |
| | weak | Marie Claire | 3[ ] |
| | medium | Freudenstein | 5[ ] |
| | strong | Doris | 7[ ] |
| | very strong | Leuchtfeuer | 9[ ] |
| **5.4(i) (29)** | **Sterile flower: main color** | | |
| | RHS Colour Chart (indicate reference number) | | |
| **5.4(ii) (29)** | **Sterile flower: main color** | | |
| | white | | 1 [ ] |
| | light pink | | 2[ ] |
| | dark pink | | 3[ ] |
| | purple pink | | 4[ ] |
| | red | | 5[ ] |

| TECHNICAL QUESTIONNAIRE | Page {x} of {y} | Reference Number: |
|---|---|---|

6. Similar varieties and differences from these varieties

*Please use the following table and box for comments to provide information on how your candidate variety differs from the variety (or varieties) which, to the best of your knowledge, is (or are) most similar. This information may help the examination authority to conduct its examination of distinctness in a more efficient way.*

| Denomination(s) of variety(ies) similar to your candidate variety | Characteristic(s) in which your candidate variety differs from the similar variety(ies) | Describe the expression of the characteristic(s) for the **similar** variety(ies) | Describe the expression of the characteristic(s) for **your** candidate variety |
|---|---|---|---|
| *Example* | *Sterile flower* | *light pink* | *dark pink* |
| | | | |
| | | | |
| | | | |

Comments:

| TECHNICAL QUESTIONNAIRE | Page {x} of {y} | Reference Number: |
|---|---|---|

[#]7. Additional information which may help in the examination of the variety

7.1 In addition to the information provided in sections 5 and 6, are there any additional characteristics which may help to distinguish the variety?

Yes [ ] No [ ]

(If yes, please provide details)

7.2 Are there any special conditions for growing the variety or conducting the examination?

Yes [ ] No [ ]

(If yes, please provide details)

7.3 Other information

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 (b) is yes, please attach a copy of the authorization.

[#] Authorities may allow certain of this information to be provided in a confidential section of the Technical Questionnaire.

| TECHNICAL QUESTIONNAIRE | Page {x} of {y} | Reference Number: |
|---|---|---|

9. Information on plant material to be examined or submitted for examination.

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, pesticide) Yes [ ] No [ ]

(c) Tissue culture Yes [ ] No [ ]

(d) Other factors Yes [ ] No [ ]

Please provide details for where you have indicated “yes”.

……

10. I hereby declare that, to the best of my knowledge, the information provided in this form is correct:

Applicant’s name

Signature Date

[End of document]