

UPOV

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**INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS**  
GENEVA

**ST. JOHN'S WORT**

UPOV Code: HYPER\_PER

*Hypericum perforatum* L.

\*

**GUIDELINES**

**FOR THE CONDUCT OF TESTS**

**FOR DISTINCTNESS, UNIFORMITY AND STABILITY**

Alternative Names: \*

| <i>Botanical name</i>          | <i>English</i>                                                                            | <i>French</i> | <i>German</i> | <i>Spanish</i>                                              |
|--------------------------------|-------------------------------------------------------------------------------------------|---------------|---------------|-------------------------------------------------------------|
| <i>Hypericum perforatum</i> L. | St. John's Wort,<br>Common St. John's<br>Wort, Goat weed,<br>Klamath weed,<br>Tipton weed | Millepertuis  | Johanniskraut | Hipericón, Hipérico,<br>Hierba de San Juan,<br>Corazoncillo |

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](http://www.upov.int)), for the latest information.]

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## 1. Subject of these Test Guidelines

These Test Guidelines apply to all varieties of *Hypericum perforatum* 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 seed.

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

5 g.

The seed should meet the minimum requirements for germination, species and analytical purity, health and moisture content, specified by the competent authority. In cases where the seed is to be stored, the germination capacity should be as high as possible and should, be stated by the applicant.

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*

3.3.1 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.

### 3.3.2 Type of observation

The recommended method of observing the characteristic is indicated by the following key in the second column of the Table of Characteristics:

MG: single measurement of a group of plants or parts of plants  
MS: measurement of a number of individual plants or parts of plants  
VG: visual assessment by a single observation of a group of plants or parts of plants  
VS: visual assessment by observation of individual plants or parts of plants

### 3.4 *Test Design*

3.4.1 Each test should be designed to result in a total of at least 60 plants, which should be divided between two or more replicates.

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.

### 3.5 *Number of Plants / Parts of Plants to be Examined*

Unless otherwise indicated, all observations on single plants should be made on 20 plants or parts taken from each of 20 plants and any other observation should be made 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, a population standard of 2% and an acceptance probability of at least 95% should be applied. In the case of a sample size of 60 plants, 3 off-types are 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 seed 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 has been agreed as a useful grouping characteristic:

- (a) Stem: number of flowering shoots (characteristic 4)
- (b) Time of beginning of flowering (characteristic 19)

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

MG, MS, VG, VS: See Chapter 3.3.2

(a)-(c) 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/<br>Exemples/<br>Beispielssorten/<br>Variedades ejemplo | Note/<br>Nota |
|-------------------|------------|-----------------------------------------------------------|-------------------------------------------------------------------------------------------|------------------------------------------------------------------|---------------------------------------------------------------------|---------------------------------------------------------------------------|---------------|
| <b>1. (*)</b>     | <b>VG</b>  | <b>Plant: number of stems</b>                             | <b>Plante : nombre de tiges</b>                                                           | <b>Pflanze: Anzahl Stängel</b>                                   | <b>Planta: número de tallos</b>                                     |                                                                           |               |
| <b>QN</b>         | <b>(a)</b> | few                                                       | petit                                                                                     | gering                                                           | bajo                                                                | Hyperivo                                                                  | 3             |
|                   |            | medium                                                    | moyen                                                                                     | mittel                                                           | medio                                                               | Anthos, Topaz                                                             | 5             |
|                   |            | many                                                      | grand                                                                                     | groß                                                             | alto                                                                |                                                                           | 7             |
| <b>2. (*)</b>     | <b>MG</b>  | <b>Plant: height</b>                                      | <b>Plante : hauteur</b>                                                                   | <b>Pflanze: Höhe</b>                                             | <b>Planta: altura</b>                                               |                                                                           |               |
| <b>QN</b>         | <b>(b)</b> | short                                                     | basse                                                                                     | niedrig                                                          | baja                                                                |                                                                           | 3             |
|                   |            | medium                                                    | moyenne                                                                                   | mittel                                                           | media                                                               | Topaz                                                                     | 5             |
|                   |            | tall                                                      | haute                                                                                     | hoch                                                             | alta                                                                | Hyperiflor                                                                | 7             |
| <b>3. (+)</b>     | <b>MS</b>  | <b>Plant: distance between highest and lowest flowers</b> | <b>Plante : espacement entre les fleurs les plus hautes et les fleurs les plus basses</b> | <b>Pflanze: Abstand zwischen höchsten und niedrigsten Blüten</b> | <b>Planta: distancia entre las flores más altas y las más bajas</b> |                                                                           |               |
| <b>QN</b>         | <b>(b)</b> | short                                                     | petit                                                                                     | gering                                                           | corta                                                               |                                                                           | 3             |
|                   |            | medium                                                    | moyen                                                                                     | mittel                                                           | media                                                               | Motiv                                                                     | 5             |
|                   |            | long                                                      | grand                                                                                     | groß                                                             | larga                                                               | Topaz                                                                     | 7             |
| <b>4. (*) (+)</b> | <b>VG</b>  | <b>Stem: number of flowering shoots</b>                   | <b>Tige : nombre de rameaux florifères</b>                                                | <b>Stängel: Anzahl blütentragender Seitentriebe</b>              | <b>Tallo: número de tallos florales</b>                             |                                                                           |               |
| <b>QN</b>         | <b>(b)</b> | few                                                       | petit                                                                                     | gering                                                           | bajo                                                                | Hyperiflor, Topaz                                                         | 3             |
|                   |            | medium                                                    | moyen                                                                                     | mittel                                                           | medio                                                               | Hyperixtrakt                                                              | 5             |
|                   |            | many                                                      | grand                                                                                     | groß                                                             | alto                                                                | Goldstern, Taubertal                                                      | 7             |
| <b>5.</b>         | <b>VG</b>  | <b>Stem: thickness</b>                                    | <b>Tige : grosueur</b>                                                                    | <b>Stängel: Dicke</b>                                            | <b>Tallo: espesor</b>                                               |                                                                           |               |
| <b>QN</b>         | <b>(a)</b> | thin                                                      | mince                                                                                     | dünn                                                             | delgado                                                             | Goldstern                                                                 | 3             |
|                   |            | medium                                                    | moyenne                                                                                   | mittel                                                           | medio                                                               | Vitan                                                                     | 5             |
|                   |            | thick                                                     | épaisse                                                                                   | dick                                                             | grueso                                                              | Hyperivo 7                                                                | 7             |

|     |     | English                              | français                              | Deutsch                                  | español                           | Example Varieties/<br>Exemples/<br>Beispielssorten/<br>Variedades ejemplo | Note/<br>Nota |
|-----|-----|--------------------------------------|---------------------------------------|------------------------------------------|-----------------------------------|---------------------------------------------------------------------------|---------------|
| 6.  | VG  | Stem: anthocyanin coloration         | Tige : pigmentation anthocyanique     | Stängel: Anthocyan-färbung               | Tallo: pigmentación antociánica   |                                                                           |               |
| QN  | (a) | absent or very weak                  | nulle ou très faible                  | fehlend oder sehr gering                 | ausente o muy débil               | Vitan                                                                     | 1             |
|     |     | weak                                 | faible                                | gering                                   | débil                             | Motiv, Topaz                                                              | 3             |
|     |     | medium                               | moyenne                               | mittel                                   | media                             | Hyperixtrakt, Taubertal                                                   | 5             |
|     |     | strong                               | forte                                 | stark                                    | fuerte                            |                                                                           | 7             |
|     |     | very strong                          | très forte                            | sehr stark                               | muy fuerte                        |                                                                           | 9             |
| 7.  | MS  | Leaf blade: length                   | Limbe : longueur                      | Blattspreite: Länge                      | Limbo: longitud                   |                                                                           |               |
| QN  | (a) | short                                | court                                 | kurz                                     | corta                             |                                                                           | 3             |
|     | (c) | medium                               | moyen                                 | mittel                                   | media                             | Hyperiflor, Topaz                                                         | 5             |
|     |     | long                                 | long                                  | lang                                     | larga                             |                                                                           | 7             |
| 8.  | MS  | Leaf blade: width                    | Limbe : largeur                       | Blattspreite: Breite                     | Limbo: anchura                    |                                                                           |               |
| QN  | (a) | narrow                               | étroit                                | schmal                                   | estrecha                          | Goldstern                                                                 | 3             |
|     | (c) | medium                               | moyen                                 | mittel                                   | media                             | Topaz                                                                     | 5             |
|     |     | broad                                | large                                 | breit                                    | ancha                             | Hyperixtrakt                                                              | 7             |
| 9.  | MS  | Leaf blade: ratio width/length       | Limbe : rapport largeur/longueur      | Blattspreite: Verhältnis Breite/ Länge   | Limbo: relación anchura/longitud  |                                                                           |               |
| QN  | (a) | small                                | petit                                 | klein                                    | pequeña                           |                                                                           | 3             |
|     | (c) | medium                               | moyen                                 | mittel                                   | media                             |                                                                           | 5             |
|     |     | large                                | grand                                 | groß                                     | grande                            |                                                                           | 7             |
| 10. | VG  | Leaf blade: intensity of green color | Limbe : intensité de la couleur verte | Blattspreite: Intensität der Grünfärbung | Limbo: intensidad del color verde |                                                                           |               |
| QN  | (a) | light                                | claire                                | hell                                     | clara                             |                                                                           | 3             |
|     | (c) | medium                               | moyenne                               | mittel                                   | media                             | Topaz                                                                     | 5             |
|     |     | dark                                 | foncée                                | dunkel                                   | oscura                            | Anthos                                                                    | 7             |



|            |            | English                                             | français                                               | Deutsch                                               | español                                                    | Example Varieties/<br>Exemples/<br>Beispielssorten/<br>Variedades ejemplo | Note/<br>Nota |
|------------|------------|-----------------------------------------------------|--------------------------------------------------------|-------------------------------------------------------|------------------------------------------------------------|---------------------------------------------------------------------------|---------------|
| <b>11.</b> | <b>VG</b>  | <b>Leaf blade: number of translucent oil glands</b> | <b>Limbe : nombre de glandes à huile transparentes</b> | <b>Blattspreite: Anzahl farbloser Öldrüsen</b>        | <b>Limbo: número de glándulas oleaginosas translúcidas</b> |                                                                           |               |
| <b>QN</b>  | <b>(a)</b> | few                                                 | petit                                                  | gering                                                | bajo                                                       | Topaz                                                                     | 3             |
|            | <b>(c)</b> | medium                                              | moyen                                                  | mittel                                                | medio                                                      | Hyperivo 7                                                                | 5             |
|            |            | many                                                | grand                                                  | groß                                                  | alto                                                       | Anthos                                                                    | 7             |
| <b>12.</b> | <b>MS</b>  | <b>Flower: diameter</b>                             | <b>Fleur : diamètre</b>                                | <b>Blüte: Durchmesser</b>                             | <b>Flor: diámetro</b>                                      |                                                                           |               |
| <b>QN</b>  | <b>(b)</b> | small                                               | petit                                                  | klein                                                 | pequeño                                                    | Uperikon                                                                  | 3             |
|            |            | medium                                              | moyen                                                  | mittel                                                | medio                                                      | Anthos, Taubertal                                                         | 5             |
|            |            | large                                               | grand                                                  | groß                                                  | grande                                                     |                                                                           | 7             |
| <b>13.</b> | <b>MS</b>  | <b>Flower: length of petal</b>                      | <b>Fleur : longueur du pétale</b>                      | <b>Blüte: Länge des Kronblattes</b>                   | <b>Flor: longitud del pétalo</b>                           |                                                                           |               |
| <b>QN</b>  | <b>(b)</b> | short                                               | court                                                  | kurz                                                  | corta                                                      |                                                                           | 3             |
|            |            | medium                                              | moyen                                                  | mittel                                                | media                                                      | Hyperiflor, Topaz                                                         | 5             |
|            |            | long                                                | long                                                   | lang                                                  | larga                                                      |                                                                           | 7             |
| <b>14.</b> | <b>MS</b>  | <b>Flower: width of petal</b>                       | <b>Fleur : largeur du pétale</b>                       | <b>Blüte: Breite des Kronblattes</b>                  | <b>Flor: anchura del pétalo</b>                            |                                                                           |               |
| <b>QN</b>  | <b>(b)</b> | narrow                                              | étroit                                                 | schmal                                                | estrecha                                                   |                                                                           | 3             |
|            |            | medium                                              | moyen                                                  | mittel                                                | media                                                      | Anthos, Hyperigold                                                        | 5             |
|            |            | broad                                               | large                                                  | breit                                                 | ancha                                                      |                                                                           | 7             |
| <b>15.</b> | <b>MS</b>  | <b>Flower: ratio length/width of petal</b>          | <b>Fleur : rapport longueur/largeur du pétale</b>      | <b>Blüte: Verhältnis Länge/Breite des Kronblattes</b> | <b>Flor: relación longitud/anchura del pétalo</b>          |                                                                           |               |
| <b>QN</b>  | <b>(b)</b> | small                                               | petit                                                  | klein                                                 | pequeña                                                    |                                                                           | 3             |
|            |            | medium                                              | moyen                                                  | mittel                                                | media                                                      | Topaz                                                                     | 5             |
|            |            | large                                               | grand                                                  | groß                                                  | grande                                                     |                                                                           | 7             |

|                       | English                                             | français                                        | Deutsch                                     | español                                            | Example Varieties/<br>Exemples/<br>Beispielssorten/<br>Variedades ejemplo | Note/<br>Nota |
|-----------------------|-----------------------------------------------------|-------------------------------------------------|---------------------------------------------|----------------------------------------------------|---------------------------------------------------------------------------|---------------|
| <b>16. VG (+)</b>     | <b>Flower: intensity of yellow color</b>            | <b>Fleur : intensité de la couleur jaune</b>    | <b>Blüte: Intensität der gelben Farbe</b>   | <b>Flor: intensidad del color amarillo</b>         |                                                                           |               |
| <b>QN</b>             | light                                               | claire                                          | hell                                        | clara                                              | Anthos, Uperikon                                                          | 1             |
|                       | medium                                              | moyenne                                         | mittel                                      | media                                              |                                                                           | 2             |
|                       | dark                                                | foncée                                          | dunkel                                      | oscura                                             | Hyperixtrakt, Topaz                                                       | 3             |
| <b>17. VG (*) (+)</b> | <b>Flower: conspicuousness of glandular streaks</b> | <b>Fleur : netteté des rayures glandulaires</b> | <b>Blüte: Ausprägung der Drüsenstreifen</b> | <b>Flor: visibilidad de las líneas glandulares</b> |                                                                           |               |
| <b>QN (b)</b>         | weak                                                | faible                                          | gering                                      | débil                                              | Vitan                                                                     | 3             |
|                       | medium                                              | moyenne                                         | mittel                                      | media                                              | Hyperiflor                                                                | 5             |
|                       | strong                                              | forte                                           | stark                                       | fuerte                                             | Motiv                                                                     | 7             |
| <b>18. VG (*) (+)</b> | <b>Fruit: anthocyanin coloration</b>                | <b>Fruit : pigmentation anthocyanique</b>       | <b>Frucht: Anthocyanfärbung</b>             | <b>Fruto: pigmentación antocíánica</b>             |                                                                           |               |
| <b>QN</b>             | weak                                                | faible                                          | gering                                      | débil                                              | Uperikon                                                                  | 3             |
|                       | medium                                              | moyenne                                         | mittel                                      | media                                              | Hyperixtrakt                                                              | 5             |
|                       | strong                                              | forte                                           | stark                                       | fuerte                                             | Anthos                                                                    | 7             |
| <b>19. MG (*) (+)</b> | <b>Time of beginning of flowering</b>               | <b>Époque de début de floraison</b>             | <b>Zeitpunkt des Blühbeginns</b>            | <b>Época de inicio de la floración</b>             |                                                                           |               |
| <b>QN</b>             | early                                               | précoce                                         | früh                                        | temprana                                           | Vitan                                                                     | 3             |
|                       | medium                                              | moyenne                                         | mittel                                      | media                                              | Hyperiflor                                                                | 5             |
|                       | late                                                | tardive                                         | spät                                        | tardía                                             | Topaz                                                                     | 7             |

## 8. Explanations on the Table of Characteristics

### 8.1 *Explanations covering several characteristics*

Characteristics containing the following key in the second column of the Table of Characteristics should be examined as indicated below:

- (a) The observations should be made at the beginning of flowering (see Ad. 19).
- (b) The observations should be made at the time of full flowering. The time of full flowering of a variety has been reached when approximately 80% of the flowers are open and approximately 20% of the buds are visible.
- (c) All observations on the leaf should be made on leaves taken from the middle of the stem.

### 8.2 *Explanations for individual characteristics*

#### Ad. 3: Plant: distance between highest and lowest flowers

Observations should be made on cut plants.



Ad. 4: Stem: number of flowering shoots

Observations should be made on cut plants.

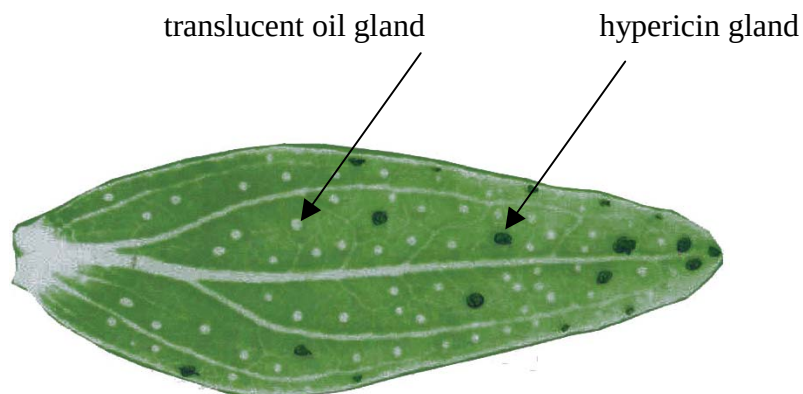


3  
few

7  
many

Ad. 11: Leaf blade: number of translucent oil glands

Observations should be made on the lower side of the leaf. The translucent glands containing essential oil can be observed when holding the leaf against the light. The dark glands contain hypericin.

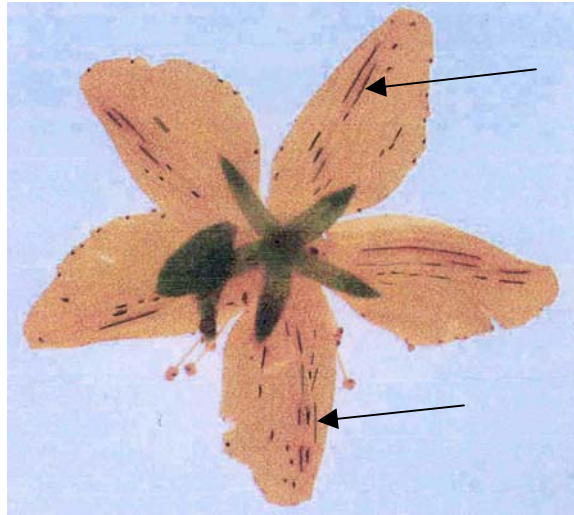


Ad. 16: Flower: intensity of yellow color

Observations should be made at the beginning of the full flowering stage.

Ad. 17: Flower: conspicuousness of glandular streaks

The observation should be made on the lower side of the flower.



Ad. 18: Fruit: anthocyanin coloration

The observation should be made at the time of fruit maturity. Maturity of the fruits of a variety is reached when nearly all fruits are formed and only a few flowers remain.

Ad. 19: Time of beginning of flowering

The time of beginning of flowering has been reached when 10% of the plants have at least one flower.

9. Literature

Dachler, M., Pelzmann, H., 1999: "Arznei- und Gewürzpflanzen", Österreichischer Agrarverlag, Klosterneuburg, AT.

10. Technical Questionnaire

|                                                                                                         |                                                      |                                                             |
|---------------------------------------------------------------------------------------------------------|------------------------------------------------------|-------------------------------------------------------------|
| TECHNICAL QUESTIONNAIRE                                                                                 | Page {x} of {y}                                      | Reference Number:                                           |
|                                                                                                         |                                                      | Application date:<br>(not to be filled in by the applicant) |
| TECHNICAL QUESTIONNAIRE<br>to be completed in connection with an application for plant breeders' rights |                                                      |                                                             |
| 1. Subject of the Technical Questionnaire                                                               |                                                      |                                                             |
| 1.1 Botanical name                                                                                      | <input type="text" value="Hypericum perforatum L."/> |                                                             |
| 1.2 Common names                                                                                        | <input type="text" value="St. John's Wort"/>         |                                                             |
| 2. Applicant                                                                                            |                                                      |                                                             |
| Name                                                                                                    | <input type="text"/>                                 |                                                             |
| Address                                                                                                 | <input type="text"/>                                 |                                                             |
| Telephone No.                                                                                           | <input type="text"/>                                 |                                                             |
| Fax No.                                                                                                 | <input type="text"/>                                 |                                                             |
| E-mail address                                                                                          | <input type="text"/>                                 |                                                             |
| Breeder (if different from applicant)                                                                   | <input type="text"/>                                 |                                                             |
| 3. Proposed denomination and breeder's reference                                                        |                                                      |                                                             |
| Proposed denomination<br>(if available)                                                                 | <input type="text"/>                                 |                                                             |
| Breeder's reference                                                                                     | <input type="text"/>                                 |                                                             |

| TECHNICAL QUESTIONNAIRE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Page {x} of {y} | Reference Number: |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-------------------|
| <p>#4. Information on the breeding scheme and propagation of the variety</p> <p>4.1 Breeding scheme</p> <p>Variety resulting from:</p> <p>4.1.1 Crossing</p> <div style="margin-left: 40px;"> <p>(a) controlled cross <span style="float: right;">[    ]</span><br/>(please state parent varieties)</p> <p>(b) partially known cross <span style="float: right;">[    ]</span><br/>(please state known parent variety(ies))</p> <p>(c) unknown cross <span style="float: right;">[    ]</span></p> </div> <p>4.1.2 Mutation <span style="float: right;">[    ]</span><br/>(please state parent variety)</p> <p>4.1.3 Discovery and development <span style="float: right;">[    ]</span><br/>(please state where and when discovered<br/>and how developed)</p> <p>4.1.4 Other <span style="float: right;">[    ]</span><br/>(please provide details)</p> |                 |                   |

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# 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: |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-------------------|
| <p>4.2 Method of propagating the variety</p> <p>4.2.1 Seed-propagated varieties</p> <p>(a) Self-pollination [ ]</p> <p>(b) Cross-pollination</p> <p>(i) population [ ]</p> <p>(ii) synthetic variety [ ]</p> <p>(c) Hybrid [ ]</p> <p>4.2.2 Other [ ]</p> <p>(please provide details)</p> |                 |                   |

| TECHNICAL QUESTIONNAIRE                                                                                                                                                                       | Page {x} of {y}      | Reference Number: |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-------------------|
| <p>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).</p> |                      |                   |
| Characteristics                                                                                                                                                                               | Example Varieties    | Note              |
| <b>5.1 Plant: height</b><br><b>(2)</b>                                                                                                                                                        |                      |                   |
| short                                                                                                                                                                                         |                      | 3[ ]              |
| medium                                                                                                                                                                                        | Topaz                | 5[ ]              |
| tall                                                                                                                                                                                          | Hyperiflor           | 7[ ]              |
| <b>5.2 Stem: number of flowering shoots</b><br><b>(4)</b>                                                                                                                                     |                      |                   |
| few                                                                                                                                                                                           | Hyperiflor,<br>Topaz | 3[ ]              |
| medium                                                                                                                                                                                        | Hyperixtract         | 5[ ]              |
| many                                                                                                                                                                                          | Goldstern, Taubertal | 7[ ]              |
| <b>5.3 Leaf blade: number of translucent oil glands</b><br><b>(11)</b>                                                                                                                        |                      |                   |
| few                                                                                                                                                                                           | Topaz                | 3[ ]              |
| medium                                                                                                                                                                                        | Hyperivo 7           | 5[ ]              |
| many                                                                                                                                                                                          | Anthos               | 7[ ]              |
| <b>5.4 Flower: diameter</b><br><b>(12)</b>                                                                                                                                                    |                      |                   |
| small                                                                                                                                                                                         | Uperikon             | 3[ ]              |
| medium                                                                                                                                                                                        | Anthos, Taubertal    | 5[ ]              |
| large                                                                                                                                                                                         |                      | 7[ ]              |
| <b>5.5 Time of beginning of flowering</b><br><b>(19)</b>                                                                                                                                      |                      |                   |
| early                                                                                                                                                                                         | Vitan                | 3[ ]              |
| medium                                                                                                                                                                                        | Hyperiflor           | 5[ ]              |
| late                                                                                                                                                                                          | Topaz                | 7[ ]              |

|                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                         |                                                                                      |                                                                                    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| TECHNICAL QUESTIONNAIRE                                                                                                                                                                                                                                                                                                                                                                                                 | Page {x} of {y}                                                                         | Reference Number:                                                                    |                                                                                    |
| <p>6. Similar varieties and differences from these varieties</p> <p><i>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.</i></p> |                                                                                         |                                                                                      |                                                                                    |
| 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 <b>similar</b> variety(ies) | Describe the expression of the characteristic(s) for <b>your</b> candidate variety |
| <i>Example</i>                                                                                                                                                                                                                                                                                                                                                                                                          | <i>Flower: diameter</i>                                                                 | <i>small</i>                                                                         | <i>large</i>                                                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                         |                                                                                      |                                                                                    |
|                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                         |                                                                                      |                                                                                    |
|                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                         |                                                                                      |                                                                                    |
| <p>Comments:</p>                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                         |                                                                                      |                                                                                    |

| TECHNICAL QUESTIONNAIRE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Page {x} of {y} | Reference Number: |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-------------------|
| <p>#7. Additional information which may help in the examination of the variety</p> <p>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?</p> <p>Yes     <input type="checkbox"/>                                      No     <input type="checkbox"/></p> <p>(If yes, please provide details)</p> <p>7.2 Are there any special conditions for growing the variety or conducting the examination?</p> <p>Yes     <input type="checkbox"/>                                      No     <input type="checkbox"/></p> <p>(If yes, please provide details)</p> <p>7.3 Other information</p> |                 |                   |
| <p>8. Authorization for release</p> <p>(a) Does the variety require prior authorization for release under legislation concerning the protection of the environment, human and animal health?</p> <p>Yes     <input type="checkbox"/>                                      No     <input type="checkbox"/></p> <p>(b) Has such authorization been obtained?</p> <p>Yes     <input type="checkbox"/>                                      No     <input type="checkbox"/></p> <p>If the answer to (b) is yes, please attach a copy of the authorization.</p>                                                                                                                               |                 |                   |

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| TECHNICAL QUESTIONNAIRE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Page {x} of {y}      | Reference Number:         |                                                        |                      |        |                                                           |                      |                           |                    |         |        |                   |         |        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|---------------------------|--------------------------------------------------------|----------------------|--------|-----------------------------------------------------------|----------------------|---------------------------|--------------------|---------|--------|-------------------|---------|--------|
| <p>9. Information on plant material to be examined or submitted for examination.</p> <p>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.</p> <p>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:</p> <table><tbody><tr><td>(a) Microorganisms (e.g. virus, bacteria, phytoplasma)</td><td>Yes [ ]</td><td>No [ ]</td></tr><tr><td>(b) Chemical treatment (e.g. growth retardant, pesticide)</td><td>Yes [ ]</td><td>No [ ]</td></tr><tr><td>(c) Tissue culture</td><td>Yes [ ]</td><td>No [ ]</td></tr><tr><td>(d) Other factors</td><td>Yes [ ]</td><td>No [ ]</td></tr></tbody></table> <p>Please provide details for where you have indicated "yes".</p> <p>.....</p> |                      |                           | (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 [ ] |
| (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 [ ]                    |                                                        |                      |        |                                                           |                      |                           |                    |         |        |                   |         |        |
| <p>10. I hereby declare that, to the best of my knowledge, the information provided in this form is correct:</p> <table><tbody><tr><td>Applicant's name</td><td colspan="2"><input type="text"/></td></tr><tr><td>Signature</td><td><input type="text"/></td><td>Date <input type="text"/></td></tr></tbody></table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                      |                           | Applicant's name                                       | <input type="text"/> |        | Signature                                                 | <input type="text"/> | Date <input type="text"/> |                    |         |        |                   |         |        |
| Applicant's name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <input type="text"/> |                           |                                                        |                      |        |                                                           |                      |                           |                    |         |        |                   |         |        |
| Signature                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <input type="text"/> | Date <input type="text"/> |                                                        |                      |        |                                                           |                      |                           |                    |         |        |                   |         |        |

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