

**UNITED KINGDOM PLANT BREEDERS RIGHTS TECHNICAL PROTOCOL FOR THE OFFICIAL  
EXAMINATION OF DISTINCTNESS, UNIFORMITY AND STABILITY (DUS)**

**ROSE**  
(*Rosa* L.)

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**SECTION A - GENERAL INFORMATION****1 PURPOSE**

- 1.1 This Protocol sets out the procedures for conducting tests and assessments in relation to official examinations of DUS for Plant Breeders' Rights (PBR).

**2 SCOPE**

- 2.1 These procedures apply to vegetatively propagated varieties of Garden Rose. Garden Rose, as a category, covers any variety intended for outdoor, garden or amenity planting, including rootstocks and stem builders. Special procedures and responsibilities for Genetically Modified (GM) varieties are set out in Sections A5 and A6.
- 2.2 Except where specified in this protocol or authorised by the Animal and Plant Health Agency (APHA), only Plant Breeders' Rights candidates, candidates for Foreign Authorities and the reference varieties may be incorporated in the DUS tests.

**3 RESPONSIBILITIES**

- 3.1 The growing tests and assessments in this protocol are carried out under the responsibility of the Secretary of State for Environment, Food and Rural Affairs, Scottish Ministers, Welsh Ministers and the Minister for Agriculture and Rural Development in Northern Ireland (the National Authorities).
- 3.2 They are supervised, on behalf of the National Authorities, by officials of the Testing Authorities, that is APHA, the Scottish Government(SG), the Department of Agriculture and Rural Development for Northern Ireland (DARDNI) and the Welsh Government (WG).
- 3.3 This protocol is authorised by the Controller of Plant Variety Rights. It cannot be amended without the Controller's approval. Requests and suggestions for amendment of the protocol should be put in writing to the Plant Varieties and Seeds Team, APHA, either directly or via the Test Centre.
- 3.4 The procedures are administered by:

Plant Varieties and Seeds  
Animal and Plant Health Agency  
Eastbrook  
Shaftesbury Road  
Cambridge  
CB2 8DR

Tel No 0300 060 0497  
Fax No 0300 060 2115

- 3.5 Test Centre

The DUS growing tests and assessments in this protocol are co-ordinated and carried out by the Test Centre:

Ornamental Crops, Varieties and Seeds Centre,  
NIAB  
Huntingdon Road  
Cambridge  
CB3 0LE

Tel No. 01223 342200  
Fax No. 01223 277602

- 3.6 The Test Centre is responsible for providing the appropriate facilities.

## 4 NON COMPLIANCE WITH THE PROTOCOL

- 4.1 Where the protocol uses the word “must” for any action then failure to carry out this action will result in non-compliance. Where non-compliance occurs or there are concerns regarding the validity of any data or tests this must be reported to APHA. Where this protocol uses the word “should” for any action this is the method to be followed unless there are clear reasons not to do so which can be justified by the Test Centre as technically sound.

## 5 RESPONSIBILITY FOR GM RELEASES

- 5.1 GM Release Consent Holders are responsible for GM releases. All parties involved in DUS work operating under a GM Release Consent must adhere to the instructions of the Release Consent Holder where necessary, to comply with the relevant consent conditions. Where DUS protocol non-compliance occurs, this must be reported to the consent holder and the Test Centre who will notify APHA.

## 6 PROCEDURES FOR GM VARIETIES

- 6.1 Applicants intending to enter GM candidates must consult APHA, well in advance of their application, about specific requirements under GM regulations.
- 6.2 The Test Centre must ensure that no test or trial sites are planted with GM candidates and/or varieties until APHA has given the specific clearances.

## 7 ASSOCIATED DOCUMENTS

- 7.1 The following documents are associated with this protocol

Reference	Title
UK Plant Varieties Act	UK Plant Varieties Act 1997
Council Regulation 27.7.1994	Council Regulation 2100/94/EC on Community Plant Variety Rights.
UPOV TG/1/3 19.4.2002	General Introduction to the Examination of Distinctness, Uniformity and Stability and the Development of Harmonised Descriptions of New Varieties of Plants.
UPOV TGP/9/1 11.4.2008	Examining Distinctness
UPOV TGP/10/1 30.10.2008	Examining Uniformity
UPOV TG 11/8 Rev 24.3.2010	UPOV Guidelines for the Conduct of Tests for Distinctness, Uniformity and Stability for Rose ( <i>Rosa L.</i> )
CPVO-TP 011/2 1.4.2009	Community Plant Variety Rights (CPVO) Protocol for Distinctness, Uniformity and Stability tests of Rose

**SECTION B - APPLICATION REQUIREMENTS****1 PURPOSE**

- 1.1 The purpose of this section is to identify the specific requirements for Plant Breeders' Rights applications.

**2 SCOPE**

- 2.1 These procedures apply to all applications for UK PBR.

**3 RESPONSIBILITIES**

- 3.1 The applicants are responsible for ensuring that these procedures are complied with.

**4 RECEIPT OF APPLICATIONS**

- 4.1 The latest date for receipt of applications for Plant Breeders' Rights, which is set administratively by APHA, is 30<sup>th</sup> September. Applications received after this date will not be considered for inclusion in the current year's tests and trials.
- 4.2 The procedures for the submission of Plant Breeders' Rights applications, technical questionnaires and for payment of administration fees are set out on the GOV website at <https://www.gov.uk/national-lists-of-agricultural-and-vegetable-crops>.
- 4.3 Applicants should notify APHA of special DUS characteristics, which may require additional examinations. These claims should, in addition, be noted in the TQ accompanying the application.

**5 RECEIPT OF PLANT MATERIAL**

- 5.1 Plant material must be submitted between 1<sup>st</sup> November and 15<sup>th</sup> November. The submission period is set administratively by APHA. Plant material received outside this period will be refused. Instructions for the delivery of plant material will be made available to applicants by APHA.
- 5.2 It is the responsibility of the applicant to deliver the material direct to the Test Centre, to pay all delivery charges, and to fulfil all necessary Customs and Phytosanitary requirements where relevant, including meeting any associated charges.
- 5.3 If no satisfactory sample is received by the end of the submission period, an Interim Report will be sent to APHA for a decision as to the future of the application.

**6 PLANT MATERIAL QUALITY REQUIREMENTS**

- 6.1 The plants must be vegetatively propagated, visually healthy and not treated in any way that will affect subsequent development. They must be suitable for planting at the period the applicant submits them, and of sufficient size and maturity to flower and show their representative characteristics in the first year. Plants should be on their own roots or a frost-hardy rootstock; ideally they should not be produced by micropropagation. If they have been so produced, this must be clearly indicated on the TQ.
- 6.2 If insufficient plants are submitted or if any material is in poor condition on arrival, be it damaged, diseased etc., this will be reported immediately to APHA. If still within the submission period, the applicant will be offered the chance to submit further material.

**7 PLANT QUANTITY**

7.1 The sample size is 8 plants.

7.2 If during the trial and despite appropriate cultural care, any plants fail to establish and the sample falls below the minimum number indicated in the UPOV Guideline or CPVO protocol, this will be referred to APHA for a decision as to how to proceed.

**8 LABELLING REQUIREMENTS, INCLUDING PROVISIONS FOR GM VARIETIES**

8.1 Each plant must be clearly and indelibly labelled with the reference number and the denomination or breeders' reference for the variety. If more than one variety is to be submitted at the same time, care must be taken to ensure the varieties cannot become mixed in transit.

8.2 All packages of GM material must be clearly labelled as "GMO" or "Genetically Modified Organism".

**SECTION C – GROWING TEST PROCEDURES****1 PURPOSE**

- 1.1 The purpose of this section is to provide details of the procedures used in the growing trials for testing of DUS.

**2 SCOPE**

- 2.1 These procedures apply to all varieties of Rose as listed in Section A.

**3 RESPONSIBILITIES**

- 3.1 The Test Centre is responsible for conducting these procedures.
- 3.2 The Test Centre will be responsible for ensuring that no material supplied to them is used for any other purpose than the conduct of these procedures.
- 3.3 At the end of the trial all test material will be destroyed, unless required for reference purposes at the Test Centre, or unless APHA makes a specific request to have it retained for a particular purpose.
- 3.4 Exceptionally, material may be exchanged with other Official Test Centres for Garden Roses to solve any particular problems arising during the test.

**4 REFERENCE VARIETIES**

- 4.1 The principles governing the selection of reference varieties are set out in Appendix 1.
- 4.2 Plant material of reference varieties will be obtained by the Test Centre. In the case of PBR protected varieties, the material will be requested from the owner of the rights. If the material is not sent, the Granting Authority will be informed and their assistance requested.

**5 DESIGN OF TESTS**

- 5.1 The Test Centre is responsible for selecting a suitable site, using fresh beds each year which are at least 5 years from the last rose clearance. The site must be surrounded by a fence of at least 1.5m to effectively exclude vermin including Muntjac deer.
- 5.2 Field husbandry should follow best local practice for all operations and particularly as regards ground preparation, cultivation, planting, fertiliser and spray application, weeding or weed suppression, use of irrigation, deadheading, pruning and control of pests and diseases.
- 5.3 Each candidate variety will be planted in close proximity to any reference varieties deemed to be similar, and any other possibly similar candidates, to enable direct visual comparison.
- 5.4 DUS Growing Test

The trial should be laid out in such a way as to give appropriate space to each growth type, and to allow adequate access to the plants for assessment procedures. Generally beds about 1m wide have proved successful, using the following approximate spacing:

Type of rose	Minimum plant spacing along bed [approx.]	Plants across bed [approx.]
Dwarf (miniature, patio)	750mm	One plant in centre of bed
Bed (hybrid tea, floribunda, dwarf polyantha)	750mm	One plant in centre of bed
Shrub	750mm	One plant in centre of bed
Ground cover	750mm	One plant in centre of bed
Climber	750mm	One plant in centre of bed
Rambler	750mm	One plant in centre of bed

All climbing varieties should have supporting wires fixed to strong posts set in place immediately after planting. Wires or other supports should be at least 1.8 m high.

#### 5.5 Candidate Varieties:

Number of Planting Years:	A minimum of 1
Number of Trial Sites:	1
Total Number of Plants Examined/Variety:	A minimum of 6

#### 5.6 Protocol and Procedures

All trials must follow UPOV Guidelines TG 11/8 for the Conduct of Tests for Distinctness, Uniformity and Stability for Rose (*Rosa* L.), and CPVO Protocol TP/11/2 Rev., Community Plant Variety Rights (CPVO) Protocol for Distinctness, Uniformity and Stability tests of Rose.

### 6 RECORDS AND RECORDING

6.1 All records and data should be in a form determined and validated by the Test Centre.

6.2 Characteristics, recording details and instructions are given in Section D. Any variant and abnormal plants or plants resulting from an adverse reaction to husbandry practice, or disease, are recorded but excluded from the sample.

6.3 If, during the test, it becomes apparent that the applicant may have submitted the wrong variety, i.e. the plants do not match the information submitted with the application, the situation will be referred to APHA for resolution. Recording on the submitted sample will continue until a decision is reached.

6.4 If the Test Centre notices unusual or novel characters in candidate varieties a note may be made of these at any time and a photographic record made. All visible attributes of the plant are considered and no significant factor, e.g. presence of leaf variegation, should go unrecorded and unassessed on the basis that it is not in the table of characteristics. Before considering the use of such information the Test Centre must consult APHA.

**7 COMMUNICATIONS WITH THE APPLICANT**

- 7.1 The Test Centre will notify the applicant or their agent of any DUS problems at the earliest practical opportunity. Notifications will be sent via APHA, which has the responsibility to notify the applicant in a timely fashion.
- 7.2 Notifications will be in the form of an Interim Report, and will be accompanied where relevant by a digital picture.
- 7.3 If confidentiality considerations allow, the applicant should be informed which variety is similar and be invited to submit any information, which may help to distinguish them.
- 7.3 If DUS problems arise, applicants will be invited to visit the DUS test by arrangement, within an appropriate time limit, so that the material can be examined and discussions held with the Test Centre. APHA will be informed of the outcomes of such visits.
- 7.4 After each recording season, if the tests are inconclusive, the results to date will be summarised on an Interim Report which will be sent to APHA for forwarding to the applicant.
- 7.5 For procedures for completed tests see Section G.

## **SECTION D - SUMMARY OF DUS CHARACTERISTICS TO BE ASSESSED, METHOD OF ASSESSMENT AND STANDARDS APPLIED**

### **1 PURPOSE**

1.1 The purpose of this section is to summarise the characteristics to be assessed.

### **2 SCOPE**

2.1 This section summarises characteristics, states of expression, method of observation and standards required for DUS assessment.

### **3 RESPONSIBILITIES**

3.1 The Test Centre is responsible for co-ordinating the procedures in this summary.

### **4 ORGANISATION**

4.1 The minimum duration of tests should normally be one growing period if the results are conclusive. If any aspect of D, U or S is unclear, one or more additional growing periods will be recommended by the Test Centre to APHA.

4.2 Except in cases where the sample is affected by damage or disease, the entire test is conducted on the submitted sample and no further material is accepted.

### **5 DUS CHARACTERISTICS TO BE ASSESSED**

5.1 The following table summarises the DUS characteristics to be routinely examined.

5.2 All characteristics are observed and visually scored on the whole plot in the field, with the exception of colour assessments made using the Royal Horticultural Society [RHS] Colour Chart. Characteristics are observed according to UPOV Guidelines TG 11/8 Rev and CPVO Technical Protocol TP 11/2 Rev.

5.3 Colour assessments using the RHS Colour Chart must be made by staff with normal colour vision as checked by a standard test, and according to the recommendations given in the UPOV Guideline TG/11/8 Rev. The edition of the Chart used should be recorded and mentioned in the variety description.

5.4 In addition to recording characteristics, the Test Centre should also make suitable photographic records of each variety.

5.5 To ensure consistent and harmonised assessment of characteristics, the Test Centre will maintain a small living collection of "benchmark" varieties for training and standardisation purposes.

### **Table of characteristics**

#### Type of rose

The table of characteristics covers all types of Rose. Where characteristics are only relevant to certain types, they are indicated as follows:

- (C) cut-flower type
- (G) garden type
- (P) pot type

Only characteristics relevant to Garden Roses [G] are recorded.

### Explanations

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

- (a) Observations on the leaves and the leaflets should be made on the middle third of the stem.
- (b) Observations on the flower which should be made on a just fully “opened” flower (at the time of anther dehiscence).
- (c) Observations on the petal which should be made on:

Double flowers: on a petal from the 3<sup>rd</sup> outer whorl .

Semi double flowers: on a petal from the middle whorl.

### Grouping characteristics:

The following have been agreed as useful grouping characteristics:

- (a) Plant: growth type (characteristic 1) [G] and [P] only
- (b) Flower: type (characteristic 21)
- (c) Flower: colour group (characteristic 23)
- (d) Flower: diameter (characteristic 26)
- (e) Petal: number of colours on inner side (basal spot excluded) (characteristic 40)
- (f) Petal: main colour on the outer side (only if clearly different from inner side) (characteristic 50) with the following groups:
  - Group 1: green
  - Group 2: light yellow
  - Group 3: medium yellow
  - Group 4: orange
  - Group 5: pink
  - Group 6: red
  - Group 7: purple red
  - Group 8: brown red

### Types of characteristic

QL	Qualitative characteristic
QN	Quantitative characteristic
PQ	Pseudo-qualitative characteristic

The type of characteristic is indicated in column 1; see UPOV TG/1/3 for full explanation.

### Intermediate states

For each characteristic, a state of expression other than those listed can be recorded where it is clear that the characteristic is on a continuous scale. For example, characteristic 9 gives 3 example states but states between these examples and at either end are possible and should be recorded.

CPVO TP 11/2 Rev.	Rose type Explanation	Characteristic and states of expression	Note
1.  PQ	[G] [P]	<b>Plant: growth type</b>  miniature dwarf bed shrub climber ground cover	1 2 3 4 5 6
2.  QN	[G] [P]	<b><u>Excluding varieties with growth type climber:</u> Plant: growth habit</b>  upright semi upright intermediate moderately spreading strongly spreading	1 3 5 7 9
3.  QN	[C] [G]	<b>Plant: height (during second flush)</b>  very short short medium tall very tall	1 3 5 7 9
4.  QL		<b>Young shoot: anthocyanin coloration</b>  absent present	1 9

CPVO TP 11/2 Rev.	Rose type Explanation	Characteristic and states of expression	Note
5.		<b>Young shoot: intensity of anthocyanin colouration</b>	
QN		very weak	1
		weak	3
		medium	5
		strong	7
		very strong	9
6.		<b>Stem: number of prickles (excluding very small and hair-like prickles)</b>	
QN		absent or very few	1
		few	3
		medium	5
		many	7
		very many	9
7.		<b>Prickles: predominant colour (as for 6)</b>	
PQ	(a)	greenish	1
		yellowish	2
		reddish	3
		purplish	4
8.		<b>Leaf: size</b>	
QN	(a)	small	3
		medium	5
		large	7
9.		<b>Leaf: intensity of green colour (upper side)</b>	
QN	(a)	light	3
		medium	5
		dark	7

CPVO TP 11/2 Rev.	Rose type Explanation	Characteristic and states of expression	Note
<b>10.</b>	<b>[G] [P]</b>	<b>Leaf: anthocyanin colouration</b>	
<b>QL</b>	<b>(a)</b>	absent	1
		present	9
<b>11.</b>		<b>Leaf: glossiness of upper side</b>	
<b>QN</b>	<b>(a)</b>	absent or very weak	1
		weak	3
		medium	5
		strong	7
		very strong	9
<b>12.</b>		<b>Leaflet: undulation of margin</b>	
<b>QN</b>	<b>(a)</b>	absent or very weak	1
		weak	3
		medium	5
		strong	7
		very strong	9
<b>13.</b>		<b>Terminal leaflet: shape of blade</b>	
<b>PQ</b>	<b>(a)</b>	narrow elliptic	1
		medium elliptic	2
		ovate	3
		circular	4
<b>14.</b>	<b>[C]</b>	<b>Terminal leaflet: shape of base of blade</b>	
<b>PQ</b>	<b>(a)</b>	acute	1
		obtuse	2
		rounded	3
		cordate	4

CPVO TP 11/2 Rev.	Rose type Explanation	Characteristic and states of expression	Note
15.		<b>Terminal leaflet: shape of apex of blade</b>	
PQ	(a)	acuminate	1
		acute	2
		obtuse	3
		rounded	4
16.	[G] [P]	<b>Flowering shoot: flowering laterals</b>	
QL		absent	1
		present	9
17.	[G] [P]	<b>Flowering shoot: number of flowering laterals</b>	
QN		very few	1
		few	3
		medium	5
		many	7
		very many	9
18.	[G] [P]	<b><u>Only varieties with no flowering laterals:</u> Flowering shoot: number of flowers</b>	
QN		very few	1
		few	3
		medium	5
		many	7
		very many	9
19.	[G] [P]	<b><u>Only varieties with flowering laterals:</u> Flowering shoot: number of flowers per lateral</b>	
QN		very few	1
		few	3
		medium	5
		many	7
		very many	9

CPVO TP 11/2 Rev.	Rose type Explanation	Characteristic and states of expression	Note
20.	[G] [P]	<b>Flower bud: shape in longitudinal section</b>	
PQ		elliptic	1
		medium ovate	2
		broad ovate	3
21.	[G] [P]	<b>Flower: type</b>	
QN	(b)	single	1
		semi-double	2
		double	3
22.		<b>Flower: number of petals</b>	
QN	(b)	very few	1
		few	3
		medium	5
		many	7
		very many	9

CPVO TP 11/2 Rev.	Rose type Explanation	Characteristic and states of expression	Note
<b>23.</b>		<b>Flower: colour group</b>	
<b>PQ</b>	<b>(b)</b>	white or near white	1
		white blend	2
		green	3
		yellow	4
		yellow blend	5
		orange	6
		orange blend	7
		pink	8
		pink blend	9
		red	10
		red blend	11
		red purple	12
		purple	13
		violet blend	14
		brown blend	15
		multicoloured	16

CPVO TP 11/2 Rev.	Rose type Explanation	Characteristic and states of expression	Note
24.  PQ	[G]  (b)	<b><u>Varieties with double flowers only:</u> Flower: colour of the centre</b>  green yellow orange pink red purple	  1 2 3 4 5 6
25.  QN	[G] [P]  (b)	<b><u>Varieties with double flowers only:</u> Flower: density of petals</b>  very loose loose medium dense	  1 3 5 7
26.  QN	  (b)	<b>Flower: diameter</b>  very small small medium large very large	  1 3 5 7 9
27.  PQ	  (b)	<b>Flower: shape</b>  round irregularly rounded star-shaped	  1 2 3
28.  PQ	[C] [G]  (b)	<b>Flower: profile of upper part</b>  flat flattened convex convex	  1 2 3

CPVO TP 11/2 Rev.	Rose type Explanation	Characteristic and states of expression	Note
29.  PQ	[C] [G]  (b)	<b>Flower: profile of lower part</b>  concave flat flattened convex convex	1 2 3 4
30.  QN	(b)	<b>Flower: fragrance</b>  absent or weak medium strong	1 2 3
31.  QN	(b)	<b>Sepal: extensions</b>  absent or very weak weak medium strong very strong	1 3 5 7 9
32.  QL	(b)  (c)	<b>Petals: reflexing of petals one-by-one</b>  absent present	1 9
33.  PQ	(b)  (c)	<b>Petal: shape</b>  elliptic transverse elliptic obovate obcordate rounded	1 2 3 4 5

CPVO TP 11/2 Rev.	Rose type Explanation	Characteristic and states of expression	Note
34.		<b>Petal: incisions</b>	
QN	(b)	absent or very weak	1
	(c)	weak	3
		medium	5
		strong	7
		very strong	9
35.		<b>Petal: reflexing of margin</b>	
QN	(b)	absent or very weak	1
	(c)	weak	3
		medium	5
		strong	7
		very strong	9
36.		<b>Petal: undulation</b>	
QN	(b)	absent or very weak	1
	(c)	weak	3
		medium	5
		strong	7
		very strong	9
37.	<b>[G] [P]</b>	<b>Petal: size</b>	
QN		very small	1
	(b)	small	3
	(c)	medium	5
		large	7
		very large	9

CPVO TP 11/2 Rev.	Rose type Explanation	Characteristic and states of expression	Note
38.	[C]	<b>Petal: length</b>	
QN	(b)	very short	1
	(c)	short	3
		medium	5
		long	7
		very long	9
39.	[C]	<b>Petal: width</b>	
QN	(b)	very narrow	1
	(c)	narrow	3
		medium	5
		broad	7
		very broad	9
40.		<b>Petal: number of colours on inner side (basal spot excluded)</b>	
QL	(b)	one	1
	(c)	two	2
		more than two	3
41.		<b><u>Only varieties with one colour on inner side of petal:</u> Petal: intensity of colour (basal spot excluded)</b>	
QN	(b)	lighter towards the base	1
	(c)	even	2
		lighter towards the top	3
42.		<b>Petal: main colour on the inner side (main colour is that with largest surface area)</b>	
PQ	(b)	RHS Colour Chart (indicate reference number)	
	(c)		
43.		<b><u>Only varieties with two or more colours on inner side of petal:</u> Petal: secondary colour (basal spot excluded)</b>	
PQ	(b)	RHS Colour Chart (indicate reference number)	
	(c)		

CPVO TP 11/2 Rev.	Rose type Explanation	Characteristic and states of expression	Note
44.		<b><u>Only varieties with more than two colours on inner side of petal:</u></b> <b>Petal: tertiary colour (basal spot excluded)</b>	
PQ	(b)	white	1
	(c)	green	2
		light yellow	3
		medium yellow	4
		orange	5
		pink	6
		red	7
		purple red	8
		brown red	9
		purple	10
45.		<b><u>Only varieties with two or more colours on inner side of petal:</u></b> <b>Petal: distribution of secondary colour on inner side (basal spot excluded)</b>	
PQ	(b)	at base	1
	(c)	at apex	2
		at marginal zone	3
		as a flush	4
		as segments or stripes	5
		as speckles	6
46.		<b><u>Only varieties with more than two colours on inner side of petal:</u></b> <b>Petal: distribution of tertiary colour on inner side (basal spot excluded)</b>	
PQ	(b)	at base	1
	(c)	at apex	2
		at marginal zone	3
		as a flush	4
		as segments or stripes	5
		as speckles	6

CPVO TP 11/2 Rev.	Rose type Explanation	Characteristic and states of expression	Note
47.		<b>Petal: basal spot on the inner side</b>	
QL	(b)	absent	1
	(c)	present	9
48.		<b>Petal: size of basal spot on inner side</b>	
QN	(b)	very small	1
	(c)	small	3
		medium	5
		large	7
		very large	9
49.		<b>Petal: colour of basal spot on inner side</b>	
PQ	(b)	white	1
	(c)	greenish	2
		light yellow	3
		medium yellow	4
		orange yellow	5
		orange	6
50.		<b>Petal: main colour on the outer side (only if clearly different from inner side)</b>	
PQ	(b)	RHS Colour Chart (indicate reference number)	
	(c)		

CPVO TP 11/2 Rev.	Rose type Explanation	Characteristic and states of expression	Note
51.  PQ	  (b)	<b>Outer stamen: predominant colour of filament</b>  white green light yellow medium yellow orange pink red brown red purple	  1 2 3 4 5 6 7 8 9
52.  QN	[G]	<b>Seed vessel: size (at petal fall)</b>  very small small medium large very large	  1 3 5 7 9
53.  PQ	[G]	<b>Hip: shape in longitudinal section</b>  funnel-shaped pitcher-shaped pear-shaped	  1 2 3
54.  PQ	[G: hip varieties only]	<b>Hip: colour (at mature stage)</b>  yellow orange red brown black	  1 2 3 4 5

5.7 A.1.1.1.  
Additional DUS Characteristics

B.1.1.1. Applicants may suggest additional characters on the Technical Questionnaire for testing DUS or after notification by the DUS Test Centre of distinctness problems. For procedures see Section F.

C.1.1.1.

D.1.1.1.

E.1.1.1.

F.1.1.1.

**SECTION E - REFERENCE SAMPLE MAINTENANCE****1 PURPOSE**

- 1.1. The plant sample submitted with the application is considered to be the definitive stock of the variety.
- 1.2. Following the conclusion of the DUS test, the material is destroyed unless required for comparison with another candidate or for the Benchmark Collection. No permanent living reference collection is maintained for Rose.

**SECTION F- PROCEDURES FOR ASSESSMENT OF ADDITIONAL DUS CHARACTERS****1 PURPOSE**

- 1.1 This Section sets out the procedures for assessment of additional DUS characters for varieties of Rose entered for UK PBR.

**2 SCOPE**

- 2.1 These procedures apply to applications where additional DUS characteristics, not included in the UPOV Guideline, are requested for use for determinations of DUS.

**3 RESPONSIBILITIES**

- 3.1 The Test Centre is responsible for liaising with the applicant to produce a proposed procedure for the conduct of new tests. This procedure must ensure that Distinctness, Uniformity and Stability will be assessed.
- 3.2 All additional characteristics must be authorised by the Controller and, where relevant, the President of the CPVO.

**4 REFERENCE VARIETIES**

- 4.1 The reference varieties will include only those varieties from which the candidate variety is not distinct, as well as other appropriate varieties for control purposes.
- 4.2 Material of the reference varieties will be obtained by the Test Centre.

**5 PROCEDURES**

- 5.1 Details of the proposed special test or assessments will be submitted to the Controller to consider the feasibility of setting up a test acceptable to the UK Authorities. The applicant will be advised by APHA of arrangements and costs.
- 5.2 The Controller will consider the results of the commissioned test or trial when reaching his/her recommendation on the granting of Plant Breeders' Rights.
- 5.3 Where the test for a character is approved it should be subsequently listed in Section D under Additional Characteristics.

**SECTION G - PROCEDURES FOR DUS DECISIONS****1 PURPOSE**

1.1 This section sets out the procedures for assessing DUS decisions on varieties of Rose.

**2 SCOPE**

2.1 These procedures apply to all varieties of Rose entered for Plant Breeders' Rights tests and those being tested for Foreign Authorities.

**3 RESPONSIBILITIES**

3.1 The Test Centre is responsible for applying the criteria for DUS, set out in this procedure.

3.2 The Test Centre is responsible for producing the DUS reports in accordance with these procedures and for ensuring that they are in accordance with the UPOV Guideline and CPVO protocol.

**4 REFERENCE VARIETIES**

4.1 Appendix 1 sets out which varieties are considered as reference varieties for these procedures.

4.2 Appendix 2 sets out the role of the Controller's Advisory Panel for Roses.

**5 DISTINCTNESS**

5.1 In accordance with associated document UPOV TG 1/3 varieties can be considered distinct where they have a different expression in a grouping character eg flower colour group or growth type.

5.2 Within these groups it is necessary to establish that the candidate variety is Distinct from other similar varieties, i.e. potential reference varieties, existing at the time of the application. See Appendix 1.

5.3 Distinctness is assessed by means of direct visual comparison between the candidate and existing closely similar reference varieties in the growing trial.

5.4 Existing similar reference varieties are selected for the trial by a process of "pre-screening". Test Centre staff are assisted in this process by the members of the PVRO Controller's Advisory Panel for Roses. See Appendix 2.

5.5 On the basis of the information on the Technical Questionnaire and the photograph[s] supplied, each application is evaluated for its similarity to existing varieties within the same type and colour group using, as and where necessary:

- the technical expertise of the Test Centre staff and that of the Controller's Advisory Panel
- information from reference collections held at the Test Centre as living plants, images or databases
- official information about varieties protected by or under trial for PBR in other UPOV MS or the EU and exchange of technical information with other Test Centres working on Garden Roses
- information from literature, commercial catalogues, botanical and horticultural institutions, other outside experts, the world-wide web and any other relevant source

5.6 On the completion of this process, any selected reference varieties are obtained for the trial. To be considered, living material of the reference variety must be available to the Test Centre with

reasonable effort. If situations occur where an existing variety is thought to be very similar but no material can be obtained, the matter will be referred to the Requesting Authority for decision.

- 5.7 During the growing trial the candidate variety is further evaluated by technical staff and the Controller's Advisory Panel for Roses to ensure the correct reference varieties have actually been selected. If the TQ information was in any way not representative of the actual plants, or further information comes to light, the process may have to be repeated and a further year of test may be required.
- 5.8 Distinctness is assessed by visual observation of the candidate and similar varieties in direct side by side comparison, following UPOV TGP/9/1, Examining Distinctness, Section 5. The basis for distinctness will be clearly recorded using the characteristics in Section D.
- 5.9 Having taken into account the existing similar varieties, a candidate variety will be considered to be distinct if it meets the requirements of Article 7 of the UPOV Convention.

## **6 UNIFORMITY**

- 6.1 Any plants deemed by the Test Centre to be diseased or damaged will be excluded from the assessment.
- 6.2 The test plants will be visually assessed for Uniformity by means of Off-Types, using the methods in document UPOV TC/34/5 Rev., "Testing of Uniformity of Self-Fertilised and vegetatively Propagated Species using Off-Types".
- 6.3 Excluding any damaged or diseased plants as at 6.1, all Off-Types regardless of origin are included in the assessment, including any resulting from accidental admixture by the applicant.
- 6.4 Occasionally it is not clear during the trial if apparent variation is due to an off-type, or to transitory establishment or environmental effects. In these cases the plants should be tagged and observed during the season and if necessary, for another year. In some cases re-propagation may be necessary, to see if apparent differences between the suspect plants and the rest of the sample are maintained in the following generation.
- 6.5 A population standard of 1% with an acceptance probability of at least 95% will be applied. For a sample size of between 6 and 35 plants, the candidate will be considered to be sufficiently uniform if the number of off-types does not exceed 1.

## **7 STABILITY**

- 7.1 A variety is considered sufficiently stable when there is no evidence to indicate that it lacks uniformity or fails to conform to the essential characteristics of its description in different submissions or in different tests.
- 7.2 In cases of doubt, stability may be tested, either by re-propagation, or by testing a new plant stock to ensure that it exhibits the same characteristics as those shown by the previous material supplied.

## **8 DUS REPORT AND VARIETY DESCRIPTION**

- 8.1 Upon completion of the DUS examination the final DUS report will be submitted to APHA by the specified date. Positive reports will be accompanied by a full variety description; the characteristics to be used in the description are identified in Section D. Negative reports will be accompanied by an explanatory annex.

**APPENDIX 1.****REFERENCE COLLECTION VARIETIES****1 PLANT BREEDERS RIGHTS**

- 1.1 The DUS reference collection, for PBR purposes, for any given category of plant variety comprises the following at the time when the application for the candidate is made:
  - 1.1.1 All other candidate varieties already in DUS test in the UK, or entering DUS testing at the same time as the candidate, including those being tested for other Member States or the Community Plant Variety Office (CPVO).
  - 1.1.2 Varieties protected in the UK, EC or in a UPOV Member State, which are known to be similar to the candidate variety.
  - 1.1.3 Other available comparable varieties in common knowledge.

**APPENDIX 2****DEFRA Plant Variety Rights Office: Controller's Advisory Panels on Plant Breeders' Rights****Role Specification**

A. Role title:	Panel Member – Controller's Advisory Panel for Rose
B. Reports to:	Panel Chairman

**C. Organisation**

The Controller's Advisory Panel on Plant Breeders' Rights for Rose consists of a number of suitably qualified and experienced crop experts, working under a Chairman appointed from within the Panel. The number of members is not fixed and depends on the required spread of expertise. The Panel is convened and advised by the Secretary, who is a member of the permanent trials staff at the Test Centre.

**D. Main Purpose**

The main purpose of the Panel is to visit the flowering DUS trials one or more times per season, as necessary according to the spread of flowering of the varieties, to give advice mainly as to the Distinctness, but also as to the Uniformity and Stability, of candidates for Plant Breeders' Rights. Panel members are also consulted during the trial planning "pre-screening" stage, to assist in deciding what existing reference varieties should be planted in the first year trial alongside the candidates.

**E. Key Duties**

To use their knowledge of existing varieties of common knowledge [protected or not] already available on the market or otherwise known, to advise as to whether candidates for PBR can be recommended as distinct, or whether further direct comparisons with other reference varieties will be necessary.

To assist in the assessment of uniformity and [less frequently] stability [for instance, to give an opinion on whether apparent problems could be the result of environment].

**Controller's Advisory Panel - Roses Panel Member: Person Specification****Essential Experience**

A broad, up to date and long-standing knowledge of varieties of Rose in a European context, gained through trade (growers, buyers or cut flower companies etc.), research, membership of an appropriate amateur society (at committee or judging level), holding a National Collection, or other appropriate technical background.

Furthermore Panel members must be in a situation where they are able to keep their knowledge of new varieties up to date.

**Desirable Experience**

A knowledge of how to grow Roses commercially, to provide background advice on any unusual growing problems.

**Knowledge and Skills**

A broad and accurate knowledge of existing Rose varieties.

An understanding of the PBR system and the criteria and standards necessary for grant of PBR in the particular species. [Note: training and explanations are provided prior to and at the first meeting, this is not a prior requirement].

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A consistent and unbiased approach.

#### Personal Qualities

Ability to work as part of a team.

Ability to understand the confidential and occasionally sensitive nature of the work.

#### Other criteria

Panel members should be supporters of the idea of PBR in general, and have no direct commercial interest, either as PBR applicants, agents for PBR applications, or members of firms with such interests. If the latter situation changes after appointment, they must inform PVRO of the details.

Panel members will be appointed for a limited period of time, as defined by PVRO. If appropriate, Panel members may be re-appointed.