Helleborus
National protocol: NP/KST/5

Examination office:	Naktuinbouw	
Reference of the protocol:	NP/KST/5	
Date of preparation of the protocol:	01/11/2023	
Date of entry into force of the protocol:	01/04/2023	
Botanical taxon:	Helleborus L.	
Common Name (when known):	Christmas Rose	
Way of propagation of the plants to be examined:	Self or cross pollinated seed propagated ☐ Vegetatively propagated ☒	
Number of growing cycles:	1 ☒ 2 ☐ Other ☐ specify	
List of grouping characteristics:	Yes ☐ if yes put as annex No ☒	
Minimum number of plants in trial:	Vegetative:10	Seed: -
Minimum number of plants observed by measuring or counting:	Vegetative:1	Seed: -
Give description of when observations should take place:	See "EXPLANATIONS ON THE TABLE OF CHARACTERISTICS"	
Uniformity: - For the assessment of uniformity of vegetatively propagated, self-pollinated seed propagated varieties or F1-hybrids, a population standard of 1% and an acceptance probability of at least 95% should be applied. In the case of a sample size of 12 plants, 1 off-type is allowed. - For the assessment of uniformity for cross-pollinated varieties, the recommendations for cross-pollinated varieties in the General introduction of UPOV should be applied. The variability within the variety should not exceed the variability of comparable varieties already known.		
Table of characteristics:	Present ☒	

	Not available ☐
Literature: (when present, please annex to this document)	Present ☒ Absent ☐

TABLE OF CHARACTERISTICS

N°	Stage, Method	Characteristics	Examples	Note
1.	**MS/VG**	**Plant: height of foliage**		
QN	**(a)**	very short		1
		short		2
		medium		3
		tall		4
		very tall		5
2.	**MS/VG**	**Petiole: length**		
QN	**(a)**	very short	Winter Passion	1
		short	COSEH 6200	2
		medium	ET EPB 1717	3
		long	COSEH 6000	4
		very long	JHE00209	5
3.	**VG**	**Petiole: anthocyanin coloration**		
QN	**(a)**	absent or very weak	Hiljwlsdaca	1
		very weak	JHE00275	2
		weak	JHE00242	3
		weak to medium	COSEH 3130	4
		medium	JHE00326	5
		medium to strong	COSEH 5700	6
		strong	COSEH 6300	7
		strong to very strong	ET EPB SM14	8
		very strong	ET EPB 1717	9
4.	**MS/VG**	**Leaf: diameter**		
QN	**(a)**	very small	JHE00203	1
		small	JHE00277	2
		medium	ET EPB 1717	3
		large	Pink Princess	4
		very large	COSEH 6200	5

N°	Stage, Method	Characteristics	Examples	Note
5.	**MS/VG**	**Leaf: number of leaflets**		
QN	**(a)**	few	ET EPB 716	1
		medium	JHE00424	2
		many	COSEH 8100	3
6.	**VG**	**<u>Only varieties with marbled leaves:</u>**		
(+)		**Young terminal leaflet: pinkish color**		
QL		absent	ET EPB 716	1
		present	ET EPB 1717	9
7.	**MS/VG**	**Terminal leaflet: length**		
QN	**(b)**	very short	Mon Bijou	1
		short	ET EPB 716	2
		medium	Pink Princess	3
		long	JHE00209	4
		very long	JHE00208	5
8.	**MS/VG**	**Terminal leaflet: width**		
QN	**(b)**	very narrow	Mon Bijou	1
		narrow	JHE00242	2
		medium	COSEH 7300	3
		broad	ET EPB 1717	4
		very broad	ET EPB 716	5
9.	**VG**	**Terminal leaflet: main color of upper side**		
PQ	**(b)**	light green	HLR 190	1
		medium green	COSEH 6000	2
		dark green	COSEH 4100	3
10.	**VG**	**Terminal leaflet: area of marbling**		
(+)				
QN	**(b)**	absent or very small	COSEH 4200	1
		small	EPB 25	2
		medium	RD09	3
		large	Pink Princess	4
		very large	EPB 29	5

N°	Stage, Method	Characteristics	Examples	Note
11.	**VG**	**Terminal leaflet: glossiness of upper side**		
QN	**(b)**	absent or very weak	COSEH 7700	1
		weak	ET EPB 1717	2
		medium	COSEH 6400	3
		strong	COSEH 4000	4
		very strong		5
12.	**VG**	**Terminal leaflet: density of incisions of margin**		
QN	**(b)**	absent or very sparse	Mon Bijou	1
		sparse	JHE00424	2
		medium	ET EPB 731	3
		dense	Pink Princess	4
		very dense	JHE00221	5
13.	**VG**	**Terminal leaflet: depth of incisions of margin**		
QN	**(b)**	very shallow	JHE00202	1
		shallow	JHE00221	2
		medium	Pink Princess	3
		deep	ET EPB 731	4
		very deep	JHE00277	5
14.	**VG**	**Terminal leaflet: undulation of margin**		
QN	**(b)**	absent or very weak	JHE00277	1
		weak	JHE00221	2
		medium	COSEH 7300	3
		strong	COSEH 6400	4
		very strong		5
15. (+)	**MS/VG**	**Flowering stem: length**		
QN		very short	Mon Bijou	1
		short	COSEH 7700	2
		medium	COSEH 6200	3
		long	COSEH 7300	4
		very long	COSEH 6500	5

N°	Stage, Method	Characteristics	Examples	Note
16.	**MS/VG**	**Flowering stem: diameter**		
QN	**(c), (d)**	very thin	JHE00424	1
		thin	JHE00326	2
		medium	COSEH 6200	3
		thick	ET EPB 1717	4
		very thick	JHE00316	5
17.	**VG**	**Flowering stem: anthocyanin coloration**		
QN	**(c), (d)**	absent or very weak	JHE00203	1
		very weak to weak	JHE00275	2
		weak	JHE00194	3
		weak to medium	JHE00277	4
		medium	JHE00221	5
		medium to strong	JHE00316	6
		strong	COSEH 6300	7
		strong to very strong	ET EPB 731	8
		very strong	ET EPB 1717	9
18. (+)	**VG**	**Inflorescence: attitude**		
QN	**(c)**	erect	JHE00316	1
		semi-erect	COSEH 7700	2
		horizontal	Pirouette	3
		semi-drooping	JHE00221	4
		drooping	JHE00208	5
19. (+)	**VG**	**Flower: attitude**		
QN	**(c), (e)**	erect	JHE00209	1
		semi-erect	COSEH 6000	2
		horizontal	COSEH 5200	3
		semi-drooping	EPB 29	4
		drooping	RD09	5

N°	Stage, Method	Characteristics	Examples	Note
20.	**VG**	**Flower: type**		
PQ	**(c)**	single	JHE00424	1
		semi-double	Tutu	2
		double	JHE00214	3
21.	**MS/VG**	**Flower: diameter**		
QN	**(e)**	very small	Hiljwlsdaca	1
		small	JHE00277	2
		medium	JHE00424	3
		large	COSEH 5800	4
		very large	Pink Princess	5
22.	**VG**	**Flower: fragrance**		
QL	**(c)**	absent	JHE00424	1
		present	JHE00242	9
23.	**VG**	**Sepal: shape**		
PQ	**(f)**	broad ovate	EPB 29	1
		medium ovate	COSEH 5300	2
		narrow ovate	JHE00203	3
		broad elliptic		4
		medium elliptic	COSEH 6200	5
		narrow elliptic	JHE00326	6
24.	**VG**	**Sepal: ground color of upper side**		
PQ	**(e), (f)**	RHS Colour Chart (indicate reference number)		
25.	**VG**	**Sepal: color of margin of upper side**		
PQ	**(e), (f)**	RHS Colour Chart (indicate reference number)		
26.	**VG**	**Sepal: color of flush of upper side**		
PQ	**(e), (f)**	RHS Colour Chart (indicate reference number)		
27.	**VG**	**Sepal: color of veins of upper side**		
PQ	**(e), (f)**	RHS Colour Chart (indicate reference number)		
28.	**VG**	**Sepal: color of spots of upper side**		
PQ	**(e), (f)**	RHS Colour Chart (indicate reference number)		

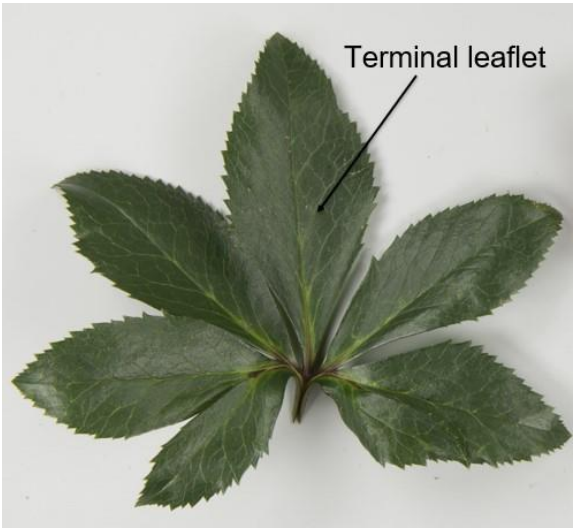
N°	Stage, Method	Characteristics	Examples	Note
29.	**VG**	**Sepal: main color of lower side**		
PQ	**(e), (f)**	RHS Colour Chart (indicate reference number)		
30.	**VG**	**Sepal: secondary color of lower side**		
PQ	**(e), (f)**	RHS Colour Chart (indicate reference number)		
31.	**VG**	**Nectary: anthocyanin coloration of distal quarter**		
QN	**(e)**	absent or very weak	JHE00424	1
		weak	JHE00242	2
		medium		3
		strong	ET EPB 716	4
		very strong	ET EPB 731	5
32. (+)	**VG**	**Nectary: color of distal quarter**		
PQ	**(e)**	whitish		1
		yellowish	JHE00424	2
		greenish	COSEH 6200	3
33.	**MS/VG**	**Filament: length**		
QN	**(e)**	very short	JHE00214	1
		short	JHE00221	2
		medium	COSEH 6400	3
		long	ET EPB 731	4
		very long	COSEH 5800	5
34.	**VG**	**Filament: anthocyanin coloration**		
QN	**(e)**	absent or very weak	JHE00424	1
		weak	COSEH 7300	2
		medium	COSEH 5300	3
		strong	COSEH 4900	4
		very strong		5
35. (+)	**VG**	**Filament: color**		
PQ	**(e)**	whitish	COSEH 7300	1
		yellowish		2
		greenish	COSEH 6200	3

N°	Stage, Method	Characteristics	Examples	Note
36. (+)	**VG**	**Style: anthocyanin coloration**		
QN	**(e)**	absent or very weak	JHE00424	1
		weak	Pink Princess	2
		medium	COSEH 6400	3
		strong	COSEH 6200	4
		very strong	COSEH 5800	5
37.	**VG**	**Style: color**		
PQ	**(e)**	whitish	COSEH 7700	1
		yellowish		2
		greenish	JHE00424	3
38.	**VG**	**Ovary: anthocyanin coloration**		
QN	**(e)**	absent or very weak	JHE00424	1
		weak	COSEH 4200	2
		medium	COSEH 6600	3
		strong	Miyohere Nyr	4
		very strong	COSEH 5300	5

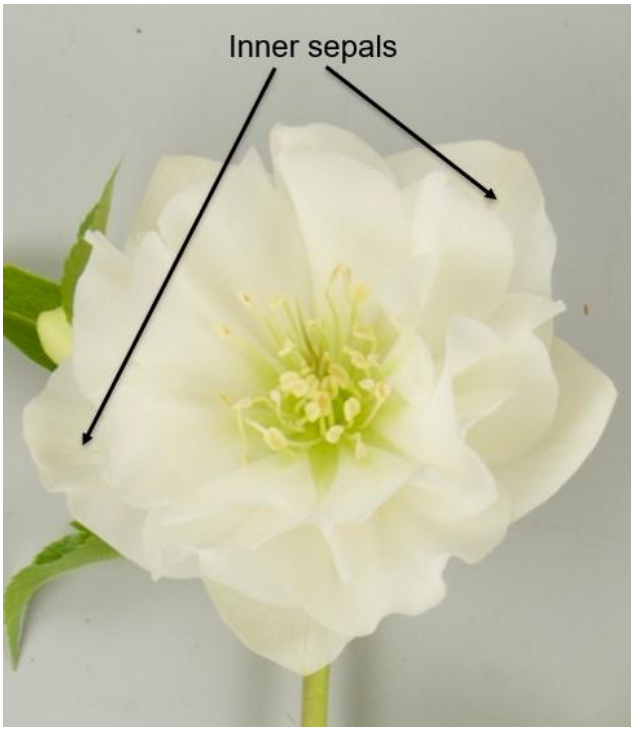
EXPLANATIONS ON THE TABLE OF CHARACTERISTICS

Explanations covering several characteristics

(a) Observations should be made on plants with full grown leaves in spring.
(b) Observations should be made on the terminal leaflets of full grown new leaves in spring.



(c) Observations should be when the plants are fully flowering
(d) Observations should be made in the middle third of the flowering stem at full flowering
(e) Observations should be made when approximately 20-40% of the filaments are full grown.
(f) Observations should be made on the inner sepals.



Explanations for individual characteristics

Ad. 6: Only varieties with marbled leaves: Young terminal leaflet: pinkish color

Observations should be made on the young terminal leaflets in end winter / early spring.

1
absent

9
present

Ad: 10: Terminal leaflet: area of marbling

1
absent or very small

2
small

3
medium

4
large

5
very large

Ad: 15: Flowering stem: length

Observations should be made when de flowering stem is fully grown.

Ad: 18: Inflorescence: attitude

1
erect

2
semi-erect

3
horizontal

4
semi-drooping

5
drooping

Ad. 19: Flower: attitude

1
erect

2
semi-erect

3
horizontal

4
semi-drooping

5
drooping

Ad. 32: Nectary: color of distal quarter

Only to be observed for varieties with 'Nectary: anthocyanin coloration of distal quarter' less than strong (less than note 4 to 5).

Ad. 35: Filament: color

Only to be observed for varieties with 'Filament: anthocyanin coloration' less than strong (less than note 4 to 5).

Ad. 37: Style: color

Only to be observed for varieties with 'Style: anthocyanin coloration' less than strong (less than note 4 to 5).

LITERATURE

The Cambridge Illustrated Glossary of Botanical Terms: by Michael Hickey and Clive King

Lenznrosen, Die Wildarten – Schönheiten für jeden Garten: by Matthias Thomsen

Alles over het plantengeslacht Helleborus, by Ed Leijger

Name that flower: by Ian Clarke and Heleen Lee

Botanisch woordenboek: by Henk Eggelte

Helleborus (Helleborus L.) in Slovenia, by Joze Bavcon, Klemen Eler and Andrey Susek