

Draft Descriptor List *Melissa officinalis* L.

Highly discriminating descriptors in this descriptor list are marked with an asterisk [★].

Characterization should preferably be done during the second year after establishment to allow plants to fully express their characteristics. Characters should be recorded on an average of minimum 10 plants per accession.

Locality: Country, GPS

Date [YYYYMMDD]:

Specimen No. (In case of *in situ* characterization):

Accession No. (In case of *ex situ* characterization/evaluation):

In situ *Ex situ*

CHARACTERIZATION

7. Plant descriptors

7.1 Plant

Observations should be made on 10 randomly chosen, fully developed plants at inflorescence emergence.

★	7.1.1 Plant growth habit 3 Prostrate 5 Semi-erect 7 Erect	√	√
★	7.1.2 Plant height [mm] Measured on fully grown plants, from ground level to the tip of the plant.	√	√
★	7.1.3 Variability of populations 3 Low (homogeneous) 5 Intermediate (relatively homogeneous) 7 High (heterogeneous)	√	√

7.2 Stem

Observations should be made on 15 stems per plant.

★	7.2.1 Branching density 3 Sparse 5 Intermediate 7 Dense	√	√
★	7.2.2 Shoot density 3 Sparse 5 Intermediate 7 Dense	√	√

Draft Descriptor List *Melissa officinalis* L.

		<i>In situ</i>	<i>Ex situ</i>
*	7.2.3 Main stem length [mm] Measured from the root collum to the point of flower insertion.	√	√
*	7.2.4 Main stem diameter [mm]	√	√
	7.2.5 Stem colour (as below or using RHS Colour Chart)	√	√
	1 Green		
	2 Dark green		
	3 Purple green		
	4 Purple		
	5 Violet		
	99 Other (remarks)		
*	7.2.6 Stem hairs Observed before flowering.	√	√
	0 Absent		
	1 Present		
*	7.2.7 Stem hairs type	√	√
	1 Pubescent		
	2 Villous		
*	7.2.8 Stem hairs density	√	√
	3 Sparse		
	5 Intermediate		
	7 Dense		
*	7.2.9 Number of internodes	√	√
*	7.2.10 Length of the longest internode [mm]	√	√
7.3 Leaf			
Observations made on 10 leaves per plant if possible.			
	7.3.1 Leaf density	√	√
	3 Sparse		
	5 Intermediate		
	7 Dense		
	7.3.2 Colour of fully grown leaf (as below or using RHS Colour Chart)	√	√
	1 Pale green		
	2 Greyish green		
	3 Green		
	4 Dark green		
	5 Yellowish		
	99 Other (remarks)		
	7.3.3 Crinkling of leaf	√	√
	1 Low or light		
	2 Medium		
	3 High or strong		
*	7.3.4 Length of fully grown leaf [mm] Measured at the middle of the plant.	√	√

		<i>In situ</i>	<i>Ex situ</i>
*	7.3.5 Length of petiole [mm] Measured at the middle of the plant.	√	√
*	7.3.6 Width of fully grown leaf [mm] Measured at the middle of the plant.	√	√
*	7.3.7 Ratio length/width of leaf blade	√	√
*	7.3.8 Leaf shape 1 Ovate 2 Heart-shaped 99 Other (remarks)	√	√
*	7.3.9 Leaf hairs 0 Absent 1 Present	√	√
*	7.3.10 Leaf hairs type 1 Pubescent 2 Villous 99 Other (remarks)	√	√
*	7.3.11 Leaf hairs density 3 Sparse 5 Intermediate 7 Dense	√	√
	7.3.12 Leaf hairs – location on the upper surface of limb 1 Throughout the leaf 2 On the leaf nervure 3 On the leaf margin 99 Other (remarks)	√	√
	7.3.13 Leaf hairs – location on the lower surface of limb 1 Throughout the leaf 2 On the leaf nervure 3 On the leaf margin 99 Other (remarks)	√	√
*	7.3.14 Glands density 3 Sparse 5 Intermediate 7 Dense	√	√
7.4 Bracts			
	7.4.1 Number of glands per cm² (leaf upper surface) 1 3-5 2 6-8 3 ≥9	√	√
*	7.4.2 Bract hairs 0 Absent 1 Present	√	√

Draft Descriptor List *Melissa officinalis* L.

			<i>In situ</i>	<i>Ex situ</i>
*	7.4.3	Bract hairs type 3 Pubescent 5 Villous 99 Other (remarks)	√	√
*	7.4.4	Bract hairs density 3 Sparse 5 Intermediate 7 Dense	√	√
*	7.4.5	Bract gland hairs 0 Absent 1 Present	√	√
*	7.4.6	Bract gland hairs density on outer side 3 Sparse 5 Intermediate 7 Dense	√	√
*	7.4.7	Bract gland hairs density on inner side 3 Sparse 5 Intermediate 7 Dense	√	√
7.5 Inflorescence				
Observations made on 10 inflorescences per plant if possible.				
*	7.5.1	Flowering 0 Absent 1 Present	√	√
*	7.5.2	Length of inflorescence [mm]	√	√
*	7.5.3	Width of inflorescence [mm]	√	√
*	7.5.4	Date of flowering [YYYYMMDD] Recorded when 50% of flowers are completely open.		√
*	7.5.5	Date of full flowering [YYYYMMDD] Recorded when 50% of seeds are ripe.		√
7.6 Flower				
Observations made on 10 flowers per plant if possible.				
*	7.6.1	Male sterility 0 Absent 1 Present	√	√
	7.6.2	Corolla colour (as below or using RHS Colour Chart) 1 White 2 Yellowish-white 3 Purplish 99 Other (remarks)	√	√

Draft Descriptor List *Melissa officinalis* L.

		<i>In situ</i>	<i>Ex situ</i>
	7.6.3 Corolla shape	√	√
	1 Campanulate		
	2 Tubular		
	99 Other (remarks)		
	7.6.4 Corolla length [mm]	√	√
*	7.6.5 Corolla hairs	√	√
	0 Absent		
	1 Present		
*	7.6.6 Corolla hairs type	√	√
	1 Pubescent		
	2 Villous		
*	7.6.7 Corolla hairs density	√	√
	3 Sparse		
	5 Intermediate		
	7 Dense		
	7.6.8 Calyx colour (as below or using RHS Colour Chart)	√	√
	1 Light green		
	2 Green		
	3 Dark green		
	4 Purple		
	5 Violet		
	99 Other (remarks)		
	7.6.9 Calyx shape	√	√
	1 Campanulate		
	2 Tubular		
	99 Other (remarks)		
	7.6.10 Calyx margin	√	√
	1 Serrate		
	2 Dentate		
	99 Other (remarks)		
	7.6.11 Shape of calyx teeth	√	√
	1 Triangular		
	2 Triangular sublate		
	3 Triangular lanceolate		
	4 Linear		
	99 Other (remarks)		
*	7.6.12 Calyx hairs	√	√
	0 Absent		
	1 Present		
*	7.6.13 Calyx hairs type on outer side	√	√
	1 Pubescent		
	2 Villous		

		<i>In situ</i>	<i>Ex situ</i>
*	7.6.14 Calyx hairs density on outer side 3 Sparse 5 Intermediate 7 Dense	√	√
*	7.6.15 Calyx hairs type on inner side 1 Pubescent 2 Villous	√	√
*	7.6.16 Calyx hairs density on inner side 3 Sparse 5 Intermediate 7 Dense	√	√
*	7.6.17 Calyx gland hairs 0 Absent 1 Present	√	√
*	7.6.18 Calyx gland hairs density on outer side 3 Sparse 5 Intermediate 7 Dense	√	√
*	7.6.19 Calyx gland hairs density on inner side 3 Sparse 5 Intermediate 7 Dense	√	√
	7.7 Seed		
	7.7.1 Seed productivity [g/plant] Harvested from each plant or per population.	√	√
*	7.7.2 1000-seed weight [g] Harvested from each plant or per population.	√	√
*	7.7.3 Germination [%] (ISTA: TP, 20/30°C, pre-chill, 21 d) (AOSA: TP, 20/30°C, light, 21 d)	√	√
	7.8 Remarks Any additional information, especially in the category “99 = Other” under various descriptors above, may be specified here.		√
EVALUATION			
8. Plant descriptors			
8.1 Vegetative			
	8.1.1 Number of shoots per plant	√	√
	8.1.2 Fresh biomass per plant [FWg]	√	√

		<i>In situ</i>	<i>Ex situ</i>
	8.1.3 Leaves dry matter content [DWg] In an oven set (artificial drying) at 30-35°C ± 48 h until material breakable.	√	√
	8.1.4 Dry biomass per plant [DWg] In an oven set (artificial drying) at 30-35°C ± 48 h until plant breakable.	√	√
	8.2 Chemical composition		
*	8.2.1 Essential oil content in dry leaves [% DW] [v/w] Main compound in the essential oil [%] (components>10%).	√	√
	8.2.1.1 Neral content [%]		
	8.2.1.2 Geranial content [%]		
	8.2.1.3 Citronellal content [%]		
	8.2.1.4 Geraniol content [%]		
	8.2.1.5 Linalool content [%]		
	8.2.1.6 Phenolic monoterpenes content [%]		
	8.2.1.7 Rosmarinic acid content [%]		
	8.3 Cytological characters		
*	8.3.1 Chromosome number	√	√

BIBLIOGRAPHY

- Hedge IC. 1982a. Labiatae. In: Davis PH, editor. Flora of Turkey and the eastern Aegaeon Islands. Vol. 7, Labiatae. Edinburgh University Press, Edinburgh. pp.400–461.
- Hedge IC. 1982b. Salvia. In: Rechinger KH, editor. Flora Iranica. Vol. 150, Labiatae. Akademische Druck und Verlags-Anstalt, Graz. pp.403–480.
- Mouterde P. 1966. Nouvelle flore du Liban et de la Syrie. Vol. 1. Editions de L'Imprimerie Catholique, Beyrouth.
- Pobedimova EG. 1954. Labiatae. In: Shishkin BK, editor. Flora of the U.S.S.R. Vol. 21, Labiatae. Izdatel'stvo Akademii Nauk SSR, Moskva-Leningrad. pp.178–260.
- RHS [The Royal Horticultural Society]. 2001. RHS Colour Chart. The Royal Horticultural Society, London.
- Tutin TG, Heywood VH, Burges JR, Moore DM, Valentine DH, Walters SM, Webb D.A. 1972. Flora Europaea. "Diapensiaceae to Myoporaceae". Vol. 3. Cambridge University Press.

CONTRIBUTORS

Aegean Agricultural Research Institute, PO Box 9, Menemen, Izmir 35661, Turkey

Ali Osman SARI

Director

Current address:

Head of Field Crops, General Directorate of Agricultural Researches and Politics

Tarım Kampüsü, İstabbul Yolu Üzer No 38

06171 Yenimahalle, Ankara, Turkey

Email1: aosari@tagem.gov.tr

Email2: a_o_sari@hotmail.com

Tuncer TASKIN

Biologist, Plant Genetic Resources Department

Email: tuntaskin@yahoo.co.uk

Mehmet TUTAR

Head of Medicinal and Aromatic Plants

Email: mehmettutar1@gmail.com

Ayfer TAN

Head, Plant Genetic Resources Department

Email1: pgr@aari.gov.tr

Email2: ayfertan-pgr@hotmail.com

Email3: ayfer_tan@yahoo.com