

**Draft Descriptor List *Mentha spicata* 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):

		<i>In situ</i>	<i>Ex situ</i>
<b>CHARACTERIZATION</b>			
<b>7. Plant descriptors</b>			
<b>7.1 Plant</b>			
Observations should be made on 10 randomly chosen, fully developed plants at inflorescence emergence.			
★	<b>7.1.1 Plant height</b> [mm] Measured on fully grown plants, from ground level to the tip of the plant.	√	√
★	<b>7.1.2 Plant diameter</b> [mm] Measured on fully grown plants.	√	√
<b>7.2 Stem</b>			
Observations should be made on 10 stems per plant.			
★	<b>7.2.1 Branching density</b> 3 Sparse 5 Intermediate 7 Dense	√	√
★	<b>7.2.2 Shoot density</b> 3 Sparse 5 Intermediate 7 Dense	√	√
★	<b>7.2.3 Main stem length</b> [mm] Measured from the root collum to the point of flower insertion.	√	√
★	<b>7.2.4 Main stem diameter</b> [mm]	√	√

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		<i>In situ</i>	<i>Ex situ</i>
	<b>7.2.5 Stem colour</b> (as below or using RHS Colour Chart)	√	√
	1 Light green		
	2 Green		
	3 Grey green		
	4 Dark green		
	99 Other (remarks)		
*	<b>7.2.6 Stem hairs</b>	√	√
	Observed before flowering.		
	0 Absent		
	1 Present		
*	<b>7.2.7 Stem hairs type</b>	√	√
	1 Pubescent		
	2 Villous		
*	<b>7.2.8 Stem hairs density</b>	√	√
	3 Sparse		
	5 Intermediate		
	7 Dense		
<b>7.3 Leaf</b>			
Observations made on 10 leaves per plant if possible.			
	<b>7.3.1 Leaf density</b>	√	√
	3 Sparse		
	5 Intermediate		
	7 Dense		
	<b>7.3.2 Colour of fully grown leaf</b>	√	√
	(as below or using RHS Colour Chart)		
	1 Light green		
	2 Green		
	3 Dark green		
	99 Other (remarks)		
*	<b>7.3.3 Leaf attachment</b>	√	√
	1 Sessile		
	2 Sub-sessile		
	3 Petiolate		
*	<b>7.3.4 Length of fully grown leaf [mm]</b>	√	√
	Measured at the middle of the plant.		
*	<b>7.3.5 Length of petiole [mm]</b>	√	√
	Measured at the middle of the plant.		
*	<b>7.3.6 Width of fully grown leaf [mm]</b>	√	√
	Measured at the middle of the plant.		

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			<i>In situ</i>	<i>Ex situ</i>
*	<b>7.3.7</b>	<b>Leaf shape</b> 1 Ovate 2 Ovate-oblong 3 Ovate-lanceolate 4 Lanceolate 5 Oblong-lanceolate 6 Elliptic-oblong 7 Sub-orbicular 99 Other (remarks)	√	√
*	<b>7.3.8</b>	<b>Leaf – shape of apex</b> 1 Acute 2 Apiculate 3 Cuspidate 4 Obtuse 5 Pointed 99 Other (remarks)	√	√
*	<b>7.3.9</b>	<b>Leaf – shape of base</b> 1 Acute 2 Attenuate 3 Cuneate 4 Sub-cordate 5 Obtuse 99 Other (remarks)	√	√
*	<b>7.3.10</b>	<b>Leaf – shape of margin</b> 1 Serrate 2 Dentate 99 Other (remarks)	√	√
*	<b>7.3.11</b>	<b>Leaf – configuration of surface</b> 1 At least one surface of leaf hairy 2 Leaves reticulate-veined 3 Lower surface with branched hairs 4 Leaves crisp 5 All hairs simple 6 Leaves subglabrous 7 Leaves not crisp 99 Other (remarks)	√	√
*	<b>7.3.12</b>	<b>Position of widest part of leaf</b> 1 Leaf widest at the base 2 Leaf widest in the middle 3 Leaf attenuate at the base	√	√
*	<b>7.3.13</b>	<b>Leaf hairs</b> 0 Absent 1 Present	√	√
*	<b>7.3.14</b>	<b>Leaf hairs type</b> 1 Pubescent 2 Villous 99 Other (remarks)	√	√

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		<i>In situ</i>	<i>Ex situ</i>
*	<b>7.3.15 Leaf hairs density</b> 3 Sparse 5 Intermediate 7 Dense	√	√
	<b>7.3.16 Leaf hairs – location on the upper surface of limb</b> 1 Throughout the leaf 2 On the leaf nervure 3 On the leaf margin 99 Other (remarks)	√	√
	<b>7.3.17 Leaf hairs – location on the lower surface of limb</b> 1 Throughout the leaf 2 On the leaf nervure 3 On the leaf margin 99 Other (remarks)	√	√
*	<b>7.3.18 Glands density</b> 3 Sparse 5 Intermediate 7 Dense	√	√
<b>7.4 Bracts</b>			
Observations made on 10 bracts per plant if possible.			
	<b>7.4.1 Bracts colour</b> (as below or using RHS Colour Chart) 1 Light green 2 Green 3 Dark green 99 Other (remarks)	4	√
	<b>7.4.2 Bracts shape</b> 1 Ovate 2 Lanceolate 3 Ovate-lanceolate 99 Other (remarks)	√	√
	<b>7.4.3 Bracts attachment</b> 1 Sessile 2 Sub-sessile 3 Petiolate 99 Other (remarks)	√	√
	<b>7.4.4 Bracts – shape of margin</b> 1 Entire 2 Dentate 99 Other (remarks)		
*	<b>7.4.5 Length of bract</b> [mm]	√	√
*	<b>7.4.6 Length of petiole</b> [mm]	√	√
*	<b>7.4.7 Width of bract</b> [mm]	√	√

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			<i>In situ</i>	<i>Ex situ</i>
*	<b>7.4.8</b>	<b>Bract hairs</b> 0 Absent 1 Present	√	√
*	<b>7.4.9</b>	<b>Bract hairs type</b> 1 Pubescent 2 Villous 99 Other (remarks)	√	√
*	<b>7.4.10</b>	<b>Bract hairs density</b> 3 Sparse 5 Intermediate 7 Dense	√	√
*	<b>7.4.10</b>	<b>Bract hairs density</b> 3 Sparse 5 Intermediate 7 Dense	√	√
<b>7.5 Inflorescence</b>				
Observations made on 10 inflorescences per plant if possible.				
*	<b>7.5.1</b>	<b>Length of inflorescence [mm]</b>	√	√
*	<b>7.5.2</b>	<b>Width of inflorescence [mm]</b>	√	√
*	<b>7.5.3</b>	<b>Terminal inflorescence shape</b> 1 Capitulum 2 Spike-like 3 Pseudo-spike 99 Other (remarks)	√	√
*	<b>7.5.4</b>	<b>Inflorescence position</b> 1 Terminal 2 Verticillate	√	√
	<b>7.5.5</b>	<b>Verticillasters</b> 1 Evenly distributed along the flowering stem 2 Spike-like inflorescence 3 Globose-capitate 4 Spiciform 5 Sub-globose-capitate 99 Other (remarks)	√	√
*	<b>7.5.6</b>	<b>Number of flowers per inflorescence</b> Average of 3 randomly selected inflorescences.	√	√
*	<b>7.5.7</b>	<b>Date of flowering [YYYYMMDD]</b> Recorded when 50% of flowers are completely open.		√
*	<b>7.5.8</b>	<b>Date of full flowering [YYYYMMDD]</b> Recorded when 50% of seeds are ripe.		√

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		<i>In situ</i>	<i>Ex situ</i>
<b>7.6 Flower</b>			
Observations made on 10 flowers per plant if possible.			
*	<b>7.6.1 Male sterility</b> 0 Absent 1 Present	√	√
	<b>7.6.2 Corolla colour</b> (as below or using RHS Colour Chart) 1 White 2 White pinkish 3 Cream 4 Pink 5 Mallow 6 Lilac-pink 7 Lilac 8 Light purple 9 Purple 99 Other (remarks)	√	√
	<b>7.6.3 Corolla shape</b> 1 Campanulate 2 Tubular 99 Other (remarks)	√	√
*	<b>7.6.4 Corolla hairs</b> 0 Absent 1 Present	√	√
*	<b>7.6.5 Corolla hairs type</b> 1 Pubescent 2 Villous	√	√
	<b>7.6.6 Corolla hairs density</b> 3 Sparse 5 Intermediate 7 Dense	√	√
*	<b>7.6.7 Type of stamens</b> 1 Included 2 Exserted 3 Both included and exserted	√	√
*	<b>7.6.8 Type of pistils</b> 1 Included 2 Exserted	√	√
	<b>7.6.9 Calix colour</b> (as below or using RHS Colour Chart) 1 Light green 2 Green 3 Dark green 4 Purple 5 Violet 99 Other (remarks)	√	√

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		<i>In situ</i>	<i>Ex situ</i>
	<b>7.6.10 Calyx shape</b>	√	√
	1 Campanulate		
	2 Tubular		
	99 Other (remarks)		
	<b>7.6.11 Calix margin</b>	√	√
	1 Serrate		
	2 Dentate		
	99 Other (remarks)		
	<b>7.6.12 Shape of calyx teeth</b>	√	√
	1 Triangular		
	2 Triangular sublate		
	3 Triangular lanceolate		
	4 Sublate		
	5 Broadly triangular		
	6 Linear		
	99 Other (remarks)		
*	<b>7.6.13 Calyx hairs</b>	√	√
	0 Absent		
	1 Present		
*	<b>7.6.14 Calyx hairs type</b>	√	√
	1 Pubescent		
	2 Villous		
*	<b>7.6.15 Calyx hairs density</b>	√	√
	3 Sparse		
	5 Intermediate		
	7 Dense		
*	<b>7.6.16 Glands density</b>	√	√
	3 Sparse		
	5 Intermediate		
	7 Dense		
<b>7.7 Fruit</b>			
Observations made on 10 fruits per plant if possible.			
	<b>7.7.1 Tegument</b>	√	√
	1 Smooth		
	2 Reticulate		
	99 Other (remarks)		
	<b>7.7.2 Fruit colour</b>	√	√
	1 Dark brown		
	2 Red-brown		
	3 Black		
	99 Other (remarks)		

		<i>In situ</i>	<i>Ex situ</i>
<b>7.8 Seed</b>			
	<b>7.8.1 100–fruit weight [g]</b> Harvested from each plant or per population.	√	√
*	<b>7.8.2 1000-seed weight [g]</b> Harvested from each plant or per population.	√	√
	<b>7.8.3 Seed colour</b>	√	√
	1 Light brown		
	2 Brown		
	3 Dark brown		
	99 Other (remarks)		
	<b>7.9 Remarks</b> Any additional information, especially in the category “99 = Other” under various descriptors above, may be specified here.		√

## EVALUATION

### 8. Plant descriptors

#### 8.1 Vegetative

	<b>8.1.1 Fresh biomass per plant [FWg]</b>	√	√
	<b>8.1.2 Leaves dry matter content [DWg]</b> In an oven set (artificial drying) at 30-35°C ± 48 h until material breakable.	√	√
	<b>8.1.3 Dry biomass per plant [DWg]</b> In an oven set (artificial drying) at 30-35°C ± 48 h until plant breakable.	√	√

#### 8.2 Chemical composition

*	<b>8.2.1 Essential oil content in dry leaves [% DW] [v/w]</b> Main compound in the essential oil [%] (components>10%).	√	√
	<b>8.2.1.1 Carvone content [%]</b>		
	<b>8.2.1.2 Limonene content [%]</b>		
	<b>8.2.1.3 cis-Dihydrocarvone content [%]</b>		
	<b>8.2.1.4 Menthone content [%]</b>		
	<b>8.2.1.5 Menthol content [%]</b>		
	<b>8.2.1.6 Menthofuran content [%]</b>		
	<b>8.2.1.7 Menthyl-acetate content [%]</b>		
	<b>8.2.1.8 1,8-Cineol content [%]</b>		



		<i>In situ</i>	<i>Ex situ</i>
*	<b>8.2.2 Polyphenol content in dry leaves [% DW] [v/w]</b>	√	√
	8.2.2.1 Rutoside content [%]		
	8.2.2.2 Apigenol content [%]		
	8.2.2.3 Fenilic acid content [%]		
	8.2.2.4 Ursolic acid content [%]		
	8.2.2.5 Oleanolic acid content [%]		
	<b>8.3 Cytological characters</b>		
*	<b>8.3.1 Chromosome number</b>	√	√

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