

CERTIFICATE OF ANALYSIS

Product: **Peppermint Japanese Essential Oil**
 Lot No.: 11115A10819
 Best Before: February, 2022

Store in an air tight container; in a cool dry area; away from direct sunlight.

<u>Properties</u>	<u>Specifications</u>	<u>Results</u>
Appearance:	Clear, colorless to pale yellow liquid.	Complies
Odor:	Characteristic peppermint odor.	Complies
Solubility:	Soluble in 70 % ethanol.	Complies
Specific Gravity:	0.875 to 0.912 @ 20°C	0.901
Optical Rotation:	-42° to -15° @ 20°C	-24.0°
Refractive Index:	1.450 to 1.470 @ 20°C	1.460
L-Menthol:	30 - 50 %	37.20
L-Menthone:	16 - 25 %	18.25
Iso-Menthone:	5 - 12 %	8.0
L-Limonene:	2 - 7 %	3.80
a-pinene:	0.75 - 4.0 %	2.75
b-pinene:	0.75 - 4.0 %	2.10

Disclaimer & Caution

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CERTIFICATE OF ANALYSIS

Product: Peppermint Japanese Essential Oil

Lot No.: 11115 - A42

Best Before: April, 2021

Store in an air tight container; in a cool dry area; away from direct sunlight.

<u>Properties</u>	<u>Specifications</u>	<u>Results</u>
Appearance:	Clear, colorless to pale yellow liquid.	Complies
Odor:	Characteristic peppermint odor.	Complies
Solubility:	Soluble in 70 % ethanol.	Complies
Specific Gravity:	0.892 to 0.910 @ 20°C	0.9003
Optical Rotation:	-35° to -10° @ 20°C	-19.1°
Refractive Index:	1.40 to 1.50 @ 20°C	1.4601
Total Terpene:	5.0 - 9.0 %	Complies
Total Menthone:	33.0 - 35.0 %	Complies
L-Menthol:	40.0 - 45.0 %	42.3
Total Menthol:	56.0 - 60.0 %	56.7

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CERTIFICATE OF ANALYSIS

Product: Peppermint Japanese Essential Oil

Lot No.: 11115 - A41

Best Before: February, 2021

Store in an air tight container; in a cool dry area; away from direct sunlight.

<u>Properties</u>	<u>Specifications</u>	<u>Results</u>
Appearance:	Clear, colorless to pale yellow liquid.	Complies
Odor:	Characteristic peppermint odor.	Complies
Solubility:	Soluble in 70 % ethanol.	Complies
Specific Gravity:	0.892 to 0.910 @ 20°C	0.8978
Optical Rotation:	-35° to -10° @ 20°C	-21.5°
Refractive Index:	1.40 to 1.50 @ 20°C	1.4577
Total Terpene:	5.0 - 9.0 %	Complies
Total Menthone:	33.0 - 35.0 %	Complies
L-Menthol:	40.0 - 45.0 %	42.4
Total Menthol:	56.0 - 60.0 %	57.4

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CERTIFICATE OF ANALYSIS

Product: Peppermint Japanese Essential Oil

Lot No.: 11115 - A40

Best Before: October, 2020

Store in an air tight container; in a cool dry area; away from direct sunlight.

<u>Properties</u>	<u>Specifications</u>	<u>Results</u>
Appearance:	Clear, colorless to pale yellow liquid.	Complies
Odor:	Characteristic peppermint odor.	Complies
Solubility:	Soluble in 70 % ethanol.	Complies
Specific Gravity:	0.892 to 0.910 @ 20°C	0.9003
Optical Rotation:	-35° to -10° @ 20°C	-19.4°
Refractive Index:	1.40 - 1.50 @ 20°C	1.4591
Total Terpene:	5.0 - 9.0 %	Complies
Total Menthone:	33.0 - 35.0 %	Complies
L-Menthol:	40.0 - 45.0 %	42.2
Total Menthol:	56.0 - 60.0 %	Complies

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CERTIFICATE OF ANALYSIS

Product: Peppermint Japanese Essential Oil
Lot No.: 11115 - A39,B39,C39,D39,E39,F39,G39,H39,I39,J39
Best Before: November, 2020
Store in an air tight container; in a cool dry area; away from direct sunlight.

<u>Properties</u>	<u>Specifications</u>	<u>Results</u>
Appearance:	Clear, colorless to pale yellow liquid.	Complies
Odor:	Characteristic peppermint odor.	Complies
Solubility:	Soluble in 70 % ethanol.	Complies
Specific Gravity:	0.892 to 0.910 @ 20°C	0.8986
Optical Rotation:	-35° to -10° @ 20°C	-19.6°
Refractive Index:	1.40 - 1.50 @ 20°C	1.4562
Total Terpene:	5.0 - 9.0 %	Complies
Total Menthone:	33.0 - 35.0 %	34.84
L-Menthol:	40.0 - 45.0 %	42.3
Total Menthol:	56.0 - 60.0 %	Complies

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CERTIFICATE OF ANALYSIS

Product: Peppermint Japanese Essential Oil

Lot No.: 11115-A38

Best Before: March, 2020

Store in an air tight container; in a cool dry area; away from direct sunlight.

<u>Properties</u>	<u>Specifications</u>	<u>Results</u>
Appearance:	Clear, colorless to pale yellow liquid.	Complies
Odor:	Characteristic peppermint odor.	Complies
Solubility:	Soluble in 70 % ethanol.	Complies
Specific Gravity:	0.892 to 0.910 @ 20°C	0.9005
Optical Rotation:	-35° to -10° @ 20°C	-19.7°
Refractive Index:	1.40 - 1.50 @ 20°C	1.4598
Total Terpene	5.0 - 9.0 %	5.2 %
Total Menthone:	33.0 - 35.0 %	33.8 %
L-Menthol:	40.0 - 45.0 %	43.2 %
Total Menthol:	56.0 - 60.0 %	57.4 %

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CERTIFICATE OF ANALYSIS

Product: **Peppermint Japanese Essential Oil**
 Lot No.: 11115-A37, B37, C37, D37, E37, F37
 Best Before: November, 2019

Store in an air tight container; in a cool dry area; away from direct sunlight.

<u>Properties</u>	<u>Specifications</u>	<u>Results</u>
Appearance:	Clear, colorless to pale yellow liquid.	Complies
Odor:	Characteristic peppermint odor.	Complies
Solubility:	Soluble in 70 % ethanol.	Complies
Specific Gravity:	0.892 to 0.910 @ 20°C	0.898
Optical Rotation:	-35° to -10° @ 20°C	-19.63°
Refractive Index:	1.40 - 1.50 @ 20°C	1.4598
Total Terpene	5.0 - 9.0 %	6.53 %
Total Menthone:	33.0 - 35.0 %	33.63 %
L-Menthol:	40.0 - 45.0 %	42.03 %
Total Menthol:	56.0 - 60.0 %	57.36 %

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