



CERTIFICATE of ANALYSIS (COA)

COMMON NAME	Pepper, Black - Organic
LATIN NAME	<i>Piper nigrum</i>
COUNTRY OF ORIGIN	Madagascar
CULTIVATION METHOD	Certified Organic (USDA, NOP)
TYPE	Essential Oil
EXTRACTION METHOD	Steam Distilled
PLANT PART	Dried Fruits
USE	Aromatherapy, Natural Perfumery

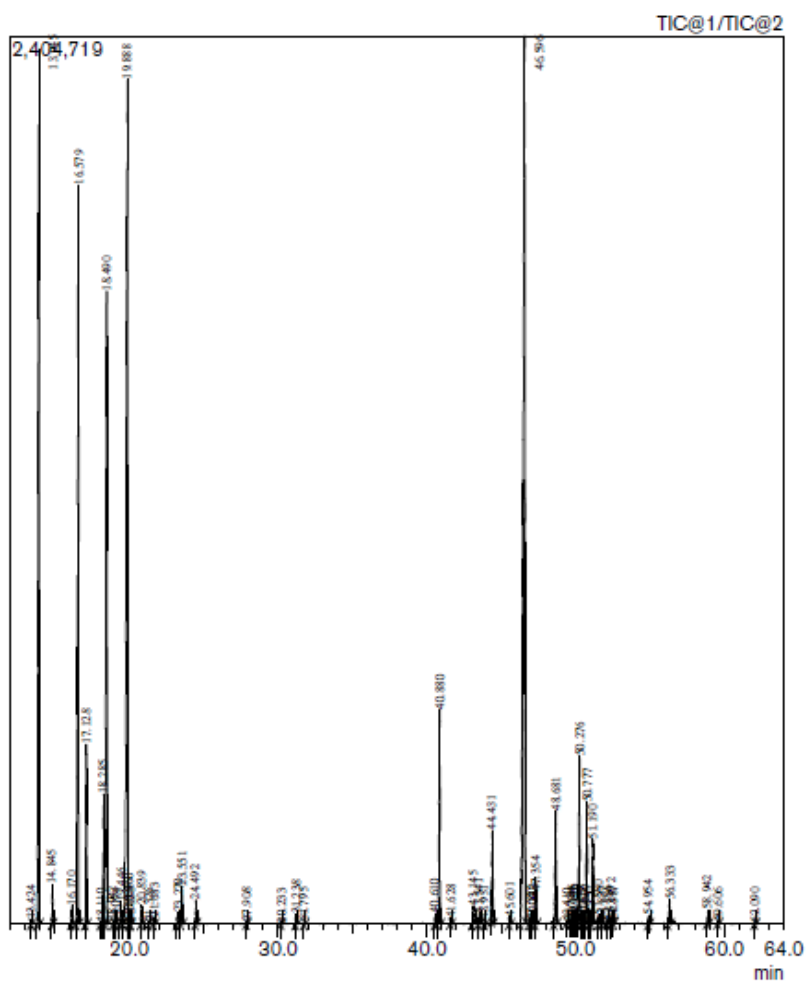
SKU	781
LOT #	3
MANUFACTURING DATE	January 2022
RETEST	January 2025

	SPECIFICATIONS (Range)	
SPECIFIC GRAVITY @20°C	0.864 – 0.884	0.875
REFRACTIVE INDEX @20°C	1.475 – 1.490	1.4813
OPTICAL ROTATION @20°C	-18° to +20°	+1.90°

PHYSICAL APPEARANCE	Transparent liquid	Conforms
COLOR	Colorless to pale yellow/green	Conforms
ODOR	Sharp, stimulating and spicy, the aroma of freshly ground pepper.	Conforms
SOLUBILITY	Soluble in alcohol and fixed oils	
SPECIAL USE INSTRUCTIONS	Dilute before use. Refrigerate to preserve freshness.	

PRIMARY CONSTITUENTS	Beta-caryophyllene (10-25%), Limonene (10-25%), Alpha-pinene (8-26%).
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THIRD PARTY LAB ANALYSIS (GCMS)



COMPOUND NAME	RESULT %	NORM %
ALPHA-THUJENE	0.046	
ALPHA-PINENE	13.454	8.0 – 26.0
CAMPHENE	0.420	
SABINENE	0.218	≤ 4.0
BETA-PINENE	11.818	7.0 – 15.0
MYRCENE ⁶⁵	2.080	1.5 – 4.0
PSEUDOLIMONENE	0.026	
ALPHA-PHELLANDRENE	2.069	
DELTA-3-CARENE	9.571	7.0 – 16.0
ALPHA-TERPINENE	0.031	
META-CYMENE	0.016	
PARA-CYMENE	0.310	
LIMONENE *	17.905	10.0 – 25.0
BETA-PHELLANDRENE	0.118	
1,8-CINEOLE	0.050	
CIS-BETA-OCIMENE	0.021	
TRANS-BETA-OCIMENE	0.217	
THUJENE ISOMER	0.032	
GAMMA-TERPINENE	0.084	
PARA-MENTHA-2,4(8)-DIENE	0.147	
TERPINOLENE	0.479	
LINALOOL *	0.293	
CAMPHOR	0.028	
TERPINEN-4-OL	0.016	
ALPHA-TERPINEOL	0.138	
UNIDENTIFIED	0.023	
BICYCLOELEMENE	0.155	
DELTA-ELEMENE	3.288	0.5 – 5.0
ALPHA-CUBEBENE	0.072	
CYCLOSATIVENE	0.323	
ALPHA-COPAENE	0.160	≤ 0.5
CIS-BETA-ELEMENE	0.051	
TRANS-BETA-ELEMENE	1.351	0.5 – 1.5
ALPHA-GURJUNENE	0.112	
BETA-CARYOPHYLLENE	25.202	10.0 – 25.0
GAMMA-ELEMENE	0.076	
BETA-COPAENE	0.031	
ALPHA-GUAIENE	0.478	
ALPHA-HUMULENE	1.724	0.5 – 2.5
UNIDENTIFIED	0.025	

COMPOUND NAME	RESULT %	NORM %
UNIDENTIFIED	0.019	
TRANS-CADINA-1(6),4-DIENE	0.057	
GAMMA-GURJUNENE	0.043	
ALPHA-AMORPHENE	0.031	
GERMACRENE D	2.604	1.0 – 7.0
CIS-BETA-GUAIENE	0.051	
DELTA-SELINENE	0.054	
BETA-SELINENE	1.864	1.0 – 5.0
UNIDENTIFIED	0.032	
ALPHA-SELINENE	1.322	0.5 – 3.0
TRANS-TRANS-ALPHA-FARNESENE	0.171	
BETA-BISABOLENE	0.046	
GAMMA-CADINENE	0.044	
DELTA-CADINENE	0.143	
-EPI-ALPHA-SELINENE	0.052	
GERMACRENE B	0.127	
CARYOPHYLLENE OXIDE	0.434	
ISO-SPATHULENOL	0.198	
ALLO-AROMADENDRENE EPOXIDE	0.028	
EUDESMA-4(15),7-DIEN-1-BETA-OL	0.020	
Total	100	
<i>* EU Allergen ⁶⁵ = Prop 65</i>		

This Essential Oil is a 100% pure and natural product. It does not contain any artificial ingredients or adulteration of any kind to the best of our knowledge. The analysis and statements herein constitute the most complete information available to Eden Botanicals. This product is guaranteed by Eden Botanicals to be of excellent quality.

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Document created: 05.06.21

Document updated: 02.23.23