



Certificate of Analysis

Product	BLUE TANSY ESSENTIAL OIL
Lot #	11142A111211
Manufacturing Date	9/2022
Shelf Life	2 years

Properties	Specifications	Results
Appearance	Blue to greenish blue liquid	Conform
Odor	Characteristic	Conform
Solubility	Soluble in alcohol and oils	Conform
Specific Gravity 20 °C	0.870 – 0.935	Conform
Refractive Index 20 °C	1.465 – 1.535	Conform
Chamazulene	4 – 20 %	Conform

This Certificate of Analysis was created by the manufacturer/distiller of the product. This information is believed to be up-to-date and correct; however, it is provided without any warranty. The customer is responsible for examining the product upon arrival and determining the safe use of the product in order to be in compliance with all applicable laws and regulations. The product must be stored in a cool, dry place away from direct light and heat, tightly sealed and away from children, the mentally infirm and pets. Essential oils shipped in amber plastic pharmaceutical grade bottles must be transferred to amber glass upon arrival, those shipped in aluminum bottles may be stored in such bottles for a minimum of 6 months, tightly sealed. All responsibility (including damage or injury) for the use of this and any other product purchased from Camden-Grey Essential Oils, Inc. rests with the purchaser/user. Camden-Grey's liability is limited to the paid value of this product.

Certificate of Analysis

Product BLUE TANSY ESSENTIAL OIL
Lot # AR-18-12289
Shelf Life 2 years

Properties	Specifications	Results
Appearance	Liquid, slightly viscous, clear	Conform
Color	Blue-green to dark blue	Conform
Odor	Powerful, typical	Conform
Specific Gravity 20 °C	0.880 – 0.812	Conform
Refractive Index 20 °C	1.465 – 1.475	Conform
Optical Rotation	-80 to -50 °C	Conform
Flash Point	<+ 100 °C	Conform
Analysis GC		Conform

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GC/SM Analysis

BLUE TANSY – *Tanacetum annuum*

Batch AR-18-12289

Chemical analysis results

Peak	RT [min]	Component	Content [%]
1	7.188		0.03
2	10.022	Alpha pinene	2.11
3	10.148	Alpha thujene	0.42
4	11.626	Camphene	0.72
5	13.370	Beta pinene	4.27
6	13.970	Beta thujene	24.16
7	16.041	Beta myrcene	4.72
8	16.143	Alpha phellandrene	6.66
9	16.911	Isoterpinolene	0.83
10	17.932	D Limonene	1.53
11	18.448	Eucalyptol	1.45
12	20.610	Gamma terpinene	1.48
13	22.019	O cymene	4.30
14	22.821	m-Mentha-1,8-diene	0.46
15	30.472		0.36
16	33.745		0.19
17	34.123	Cyclohexanol, 3-methyl-, cis-	0.16
18	36.692	Camphre	6.82
19	38.736		0.19
20	38.950	Cyclohexanol, 1-methyl-4-acetyl	0.45
21	39.607		0.09
22	41.427		0.16
23	41.796	Caryophyllene	1.94
24	41.887	(-)-Terpinen-4-ol	1.61
25	44.555	Beta sesquiphellandrene	0.39
26	45.882		0.19
27	47.020		0.11
28	47.234	4,7,7-Trimethylbicyclo[4.1.0]heptan-3-ol, (1 α ,3 α ,4 β ,6 α)	0.22
29	47.505	Endo-borneol	2.40
30	47.919		0.10
31	48.091	Germacrene D	0.87
32	48.654		0.29
33	49.426		0.16
34	51.477	Beta Sesquiphellandrene	0.51
35	51.644		0.03
36	58.881	3,6-Dihydrochamazulene	8.73
37	59.035	3,6-Dihydrochamazulene	1.16
38	59.856		0.09
39	62.146		0.31
40	65.919		0.06
41	67.980	1H-Indene, 3-ethyl-1-(1-methylethyl)-	2.86

42	69.876	3,6-Dihydrochamazulene	4.39
43	71.398		0.07
44	71.643	Pentandioic acid, (p-t-butylphenyl) ester	0.62
45	73.651		0.45
46	75.033		0.16
47	75.176	Geranyl-alpha-terpinene	0.95
48	78.773		0.12
49	80.576	Chamazulene	9.53
50	85.101		0.10
			99.98 %