



Essential Oil University

GC/MS Report

Item	Lot
Blue Tansy EO, Morocco <i>Tanacetum annuum</i>	0D
Date	Analyst
3/3/2025	Dr. Robert S. Pappas

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The analysis of this batch sample, Blue Tansy EO, Morocco, meets the expected chemical profile for authentic essential oil of *Tanacetum annuum*. No contamination or adulteration was detected. The results provided in this GCMS quality analysis reflect the chemical composition of the oil and lot referenced above on the date of analysis.



Sample Information

Company: Revive**Sample Name:** Blue Tansy EO, Morocco**Botanical Name:** Tanacetum annuum**Lot Number:** 0D**Production Method:** Steam distilled**Sample Type:** EO - Single**Country of Origin:** Morocco**Analysis Date:** 3/3/2025**Manufacture Date:** February 2025

GC/MS

Inst. ID: Shimadzu GCMS-QP2010Ultra**Injection Type:** Split**Split Ratio:** 24.4**Column Type:** ZB-5**Injection Volume:** 0.1 µL**Temperature Program:** 2C/min

Physical Data

ANALYSIS

Optical Rotation @20°C

Refractive Index @20°C

Specific Gravity @20°C

METHOD

USP[781]

USP[831]

USP[841]

RESULTS

Not Measurable

1.49972

0.90337



Ret. Time	Component	Ret. Idx.	Conc. %	
8.197	Ethyl 2-methylbutyrate	842	0.03%	
11.502	Tricyclene	921	0.1%	
11.652	alpha-Thujene	924	0.36%	
12.055	alpha-Pinene	931	2.82%	
12.586	Propyl-2-methylbutyrate	941	0.03%	
12.840	Unidentified	946	0.01%	
12.940	Camphene	947	0.94%	
14.216	Sabinene	971	18.6%	
14.500	beta-Pinene	976	7.37%	
14.817	6-Methyl hept-5-en-2-one	982	0.03%	
15.118	Myrcene	988	4.83%	
15.980	Octanal	1003	0.03%	
16.012	para-Mentha-1(7),8-diene	1003	0.07%	
16.169	alpha-Phellandrene	1006	6.44%	
16.301	delta-3-Carene	1008	0.04%	
16.683	2-Methylbutyl isobutyrate	1014	0.02%	
16.811	alpha-Terpinene	1016	0.98%	
17.300	para-Cymene	1023	5.48%	
17.587	Limonene	1028	2.35%	IFRA
17.687	beta-Phellandrene	1029	0.33%	
17.765	1,8-Cineole	1030	1.65%	
18.288	Butyl-2-methylbutyrate	1038	0.02%	
18.658	trans-beta-Ocimene	1044	0.01%	
19.440	gamma-Terpinene	1056	2.09%	
20.218	trans-Sabinene hydrate	1068	0.12%	
21.225	Terpinolene	1084	1.02%	
21.574	6,7-Epoxy myrcene	1089	0.18%	
22.173	Linalool	1098	0.09%	IFRA
22.260	cis-Sabinene hydrate	1100	0.03%	
22.394	2-Methylbutyl-2-methylbutyrate	1102	0.07%	
23.093	trans-4,8-Dimethylnona-1,3,7-triene	1112	0.01%	
23.205	Unidentified	1113	0.12%	
23.853	cis-para-Menth-2-en-1-ol	1123	0.07%	
24.279	Limona ketone	1129	0.21%	
25.082	trans-para-Menth-2-en-1-ol	1141	0.07%	
25.431	Camphor	1146	10.64%	
25.761	Unidentified	1151	0.07%	
26.978	Unidentified isomer I	1168	0.03%	
27.111	Borneol	1170	2.06%	
27.241	Unidentified isomer I	1172	0.06%	



Ret. Time	Component	Ret. Idx.	Conc. %	
27.712	Terpinen-4-ol	1179	2.31%	
27.953	Unidentified	1183	0.06%	
28.709	alpha-Terpineol	1194	0.19%	
29.245	alpha-Phellandrene epoxide	1201	0.08%	
29.503	Decanal	1205	0.03%	
29.646	trans-Piperitol	1207	0.03%	
30.298	Unidentified	1217	0.04%	
31.123	Hex-(3Z)-enyl-2-methylbutyrate	1229	0.03%	
31.628	Pulegone	1236	0.03%	
31.776	alpha-Phellandrene epoxide analogue	1239	0.05%	
31.918	Cuminaldehyde	1241	0.04%	IFRA
32.361	Carvotanacetone	1247	0.07%	
35.150	Thymol	1288	1.04%	
35.687	Carvacrol	1296	0.04%	
36.127	2-Methyl-4-methylhexylbutyrate	1303	0.04%	
37.695	para-Mentha-1,4-dien-7-ol	1327	0.04%	
40.615	para-Methyl anisate	1371	0.03%	
40.773	alpha-Copaene	1374	0.61%	
41.555	7-epi-Sesquithujene	1386	0.08%	
41.667	beta-Elemene	1387	0.22%	
43.564	trans-beta-Caryophyllene	1417	2.28%	
44.437	Unidentified	1431	0.09%	
44.901	cis-beta-Farnesene	1438	0.82%	
45.673	trans-beta-Farnesene	1451	0.04%	
45.804	alpha-Humulene	1453	0.18%	
46.080	Alloaromadendrene	1457	0.03%	
46.709	4,5-di-epi-Aristolochene	1467	0.04%	
47.028	gamma-Murolene	1473	0.07%	
47.210	gamma-Curcumene	1475	0.11%	
47.395	Germacrene D	1478	1.1%	
47.585	trans-beta-Bergamotene	1481	0.04%	
47.805	Valencene	1485	0.08%	
47.884	beta-Selinene	1486	0.24%	
48.279	Bicyclogermacrene	1493	0.26%	
48.487	alpha-Murolene	1496	0.05%	
49.235	3,6-Dihydrochamazulene	1508	5.34%	
49.353	3,6-Dihydrochamazulene isomer	1510	0.75%	
49.669	delta-Cadinene	1516	0.23%	
49.832	3,6-Dihydrochamazulene isomer	1518	0.15%	
50.013	beta-Sesquiphellandrene	1522	0.59%	



Ret. Time	Component	Ret. Idx.	Conc. %	
50.293	3,6-Dihydrochamazulene isomer	1526	0.04%	
51.440	alpha-Elemol	1546	0.04%	
53.106	Spathulenol	1574	0.03%	
53.414	Caryophyllene oxide	1579	0.23%	
55.268	5,6-Dihydrochamazulene	1611	0.26%	
56.025	7,12-Dehydro-5,6,7,8-tetrahydrochamazulene isomer	1624	1.04%	
56.208	Eremoligenol isomer	1628	0.09%	
57.480	7,12-Dehydro-5,6,7,8-tetrahydrochamazulene	1650	0.89%	
57.574	beta-Eudesmol	1652	0.64%	
59.284	Unidentified	1682	0.04%	
61.688	Chamazulene	1726	7.69%	
62.988	Unidentified	1751	0.03%	
63.652	Unidentified	1763	0.04%	
65.130	Unidentified	1791	0.03%	
67.607	Phytone	1839	0.03%	
72.845	meta-Camphorene	1944	0.07%	
75.361	Unidentified isomer II	1996	0.11%	
75.721	Unidentified isomer II	2003	0.72%	
75.826	Unidentified	2006	0.13%	
90.087	Unidentified	2329	0.04%	
93.421	Unidentified isomer III	2411	0.16%	
96.043	Unidentified isomer III	2478	0.67%	

Total Identified Compounds **98.47 %**

