



Essential Oil University

GC/MS Report

Item	Lot
Blue Tansy EO, Morocco <i>Tanacetum annuum</i>	1A
Date	Analyst
1/15/2025	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:** 1A**Production Method:** Steam distilled**Sample Type:** EO - Single**Country of Origin:** Morocco**Analysis Date:** 1/15/2025**Manufacture Date:** July 2024

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

1.49976

0.90446



Ret. Time	Component	Ret. Idx.	Conc. %	
8.350	Ethyl 2-methylbutyrate	842	0.03%	
11.711	Tricyclene	921	0.07%	
11.865	alpha-Thujene	924	0.38%	
12.272	alpha-Pinene	931	2.9%	
12.806	Unidentified	941	0.03%	
13.164	Camphene	947	1.01%	
14.464	Sabinene	971	18.53%	
14.749	beta-Pinene	976	7.58%	
15.060	6-Methyl hept-5-en-2-one	982	0.02%	
15.369	Myrcene	988	5.09%	
16.210	Octanal	1002	0.03%	
16.270	Pseudolimonene	1003	0.07%	
16.428	alpha-Phellandrene	1006	6.25%	
16.569	delta-3-Carene	1008	0.04%	
17.074	alpha-Terpinene	1016	1%	
17.564	para-Cymene	1023	5.64%	
17.855	Limonene	1028	2.44%	IFRA
17.956	beta-Phellandrene	1029	0.29%	
18.021	1,8-Cineole	1030	1.78%	
19.718	gamma-Terpinene	1056	2.16%	
20.495	trans-Sabinene hydrate	1068	0.1%	
21.522	Terpinolene	1084	1.03%	
21.860	6,7-Epoxymyrcene	1089	0.18%	
22.464	Linalool	1098	0.08%	IFRA
22.545	cis-Sabinene hydrate	1099	0.02%	
22.686	2-Methylbutyl-2-methylbutyrate	1101	0.07%	
23.500	Unidentified	1113	0.12%	
24.150	cis-para-Menth-2-en-1-ol	1123	0.06%	
24.572	Limona ketone	1129	0.2%	
25.268	trans-Pinocarveol	1139	0.02%	
25.389	Unidentified	1141	0.08%	
25.734	Camphor	1146	10.32%	
26.054	Unidentified	1150	0.06%	
27.280	Unidentified	1168	0.04%	
27.411	Borneol	1170	2.08%	
27.546	Unidentified	1172	0.06%	
28.021	Terpinen-4-ol	1179	2.36%	
28.260	Unidentified	1182	0.07%	
28.424	para-Cymen-8-ol	1185	0.03%	
29.013	alpha-Terpineol	1193	0.21%	



Ret. Time	Component	Ret. Idx.	Conc. %	
29.552	alpha-Phellandrene epoxide	1201	0.07%	
29.808	Unidentified	1205	0.03%	
29.962	Unidentified	1207	0.03%	
30.607	Unidentified	1217	0.04%	
31.438	Hex-(3Z)-enyl 2-methylbutyrate	1229	0.03%	
31.942	Pulegone	1236	0.03%	
32.084	Unidentified	1238	0.04%	
32.228	Cuminal	1240	0.04%	IFRA
32.669	Carvotanacetone	1247	0.06%	
35.461	Thymol	1288	0.93%	
36.001	Carvacrol	1296	0.03%	
36.451	2-Methyl-4-methylhexylbutyrate	1302	0.04%	
38.020	Unidentified	1326	0.02%	
39.258	alpha-Cubebene	1345	0.02%	
40.942	para-Methyl anisate	1371	0.03%	
41.128	alpha-Copaene	1374	0.62%	
41.287	trans-beta-Damascenone	1376	0.02%	IFRA
41.906	7-epi-Sesquithujene	1386	0.07%	
42.020	beta-Elemene	1387	0.2%	
43.927	beta-Caryophyllene	1417	2.21%	
44.782	Unidentified	1431	0.05%	
45.251	cis-beta-Farnesene	1438	0.8%	
46.018	trans-beta-Farnesene	1451	0.03%	
46.161	alpha-Humulene	1453	0.16%	
46.439	Alloaromodendrene	1458	0.03%	
47.072	4,5-di-epi-Aristolochene	1468	0.04%	
47.384	gamma-Murolene	1473	0.06%	
47.561	gamma-Curcumene	1476	0.1%	
47.760	Germacrene D	1479	1.04%	
47.946	trans-beta-Bergamotene	1482	0.09%	
48.244	beta-Selinene	1486	0.32%	
48.644	Bicyclogermacrene	1493	0.25%	
48.848	alpha-Murolene	1496	0.04%	
49.135	Unidentified	1501	0.02%	
49.593	3,6-Dihydrochamazulene	1508	5.15%	
49.710	Dihydrochamazulene isomer	1510	0.69%	
50.032	delta-Cadinene	1516	0.23%	
50.182	Dihydrochamazulene isomer	1518	0.12%	
50.367	beta-Sesquiphellandrene	1522	0.58%	
50.646	Dihydrochamazulene isomer	1526	0.04%	



Ret. Time	Component	Ret. Idx.	Conc. %	
51.797	alpha-Elemol	1546	0.02%	
53.469	Spathulenol	1574	0.03%	
53.779	Caryophyllene oxide	1579	0.2%	
55.636	5,6-Dihydrochamazulene	1611	0.47%	
56.398	Dihydrochamazulene isomer	1624	0.98%	
56.566	Eremoligenol isomer	1627	0.08%	
57.848	7,12-Dehydro-5,6,7,8-tetrahydrochamazulene	1650	0.86%	
57.937	beta-Eudesmol	1652	0.56%	
58.161	Unidentified	1656	0.04%	
60.668	Unidentified	1701	0.05%	
62.078	Chamazulene	1727	7.48%	
65.515	Unidentified	1791	0.02%	
67.977	Phytone	1839	0.02%	
73.232	meta-Camphorene	1944	0.06%	
75.757	Unidentified	1996	0.11%	
76.118	9-(15,16-Dihydro-15-methylenegeranyl)-alpha-Terpinene	2003	0.69%	
76.218	9-(15,16-Dihydro-15-methylene-geranyl)-para-cymene	2005	0.12%	
93.852	Unidentified isomer I	2411	0.14%	
96.480	Unidentified isomer I	2478	0.63%	
109.164	Unidentified	2825	0.48%	

Total Identified Compounds **97.81 %**

