



Essential Oil University

GC/MS Report

Item	Lot
NOP Vetiver EO <i>Vetiveria zizanioides</i>	4W
Date	Analyst
1/10/2025	Dr. Robert S. Pappas

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The analysis of this batch sample, NOP Vetiver EO, meets the expected chemical profile for authentic essential oil of *Vetiveria zizanioides*. 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:** NOP Vetiver EO**Botanical Name:** Vetiveria zizanioides**Lot Number:** 4W**Production Method:** Steam distilled**Sample Type:** EO - Certified Organics**Country of Origin:** India**Analysis Date:** 1/10/2025**Manufacture Date:** March 2021

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

1.52741

1.01182



Ret. Time	Component	Ret. Idx.	Conc. %	
20.462	Limonene	1058	0.01%	IFRA
28.499	Camphor	1175	0.02%	
42.256	Unidentified	1378	0.04%	
42.395	Unidentified	1380	0.01%	
43.213	Unidentified	1393	0.01%	
43.480	Isoledene	1397	0.09%	
43.490	Unidentified	1397	0.11%	
44.160	Unidentified	1408	0.02%	
44.330	6-epi-Nigritene	1410	0.07%	
44.643	Unidentified	1415	0.18%	
44.760	Unidentified	1417	0.04%	
45.198	Nigritene	1424	0.18%	
46.078	Unidentified	1438	0.1%	
46.317	Italicene	1442	0.02%	
46.455	alpha-Cedrene	1444	0.09%	IFRA
46.602	Unidentified	1447	0.05%	
46.872	Unidentified	1451	0.05%	
47.035	beta-Cedrene + Unidentified	1454	0.16%	
47.374	cis-Muurolo-4(14),5-diene	1459	0.18%	
47.739	Unidentified	1465	0.05%	
48.017	Guaia-6,9-diene	1469	0.37%	
48.208	Acora-2,4(15)-diene	1472	0.02%	
48.714	Prezizaene	1480	0.51%	
49.007	Khusimene	1485	0.78%	
49.065	Unidentified	1486	0.19%	
49.440	Unidentified	1492	0.2%	
49.584	Unidentified	1494	0.17%	
49.801	(E)-Eremophila-1(10),7(11)-dien-12-yl acetate	1498	0.15%	
50.364	alpha-Amorphene	1507	1.97%	
50.540	Unidentified	1510	0.08%	
50.604	alpha-Vetispirene	1511	0.68%	
50.828	Unidentified + delta-Selinene	1515	1.02%	
50.993	beta-Vetispirene	1518	1.88%	
51.183	trans-Murrola-4(14),5-diene	1521	0.46%	
51.725	Spirovetiva-3,7(11)-dien-12-yl methyl ether	1530	0.15%	
51.809	gamma-Amorphene	1531	0.69%	
51.954	Unidentified	1534	0.21%	
52.240	Unidentified	1539	0.08%	
52.435	Unidentified	1542	0.07%	
52.495	Nootkatene	1543	0.65%	



Ret. Time	Component	Ret. Idx.	Conc. %	
52.702	delta-Cadinene	1546	0.08%	
52.828	delta-Amorphene	1548	0.65%	
53.227	gamma-Vetivenene	1555	0.77%	
54.068	alpha-Calacorene	1569	0.61%	
54.490	alpha-Elemol	1576	0.66%	
54.610	Unidentified	1578	0.08%	
54.870	beta-Vetivenene	1583	4.54%	
55.244	Vetivenene analog	1589	0.61%	
55.378	cis-Eudesm-6-en-11-ol	1591	1.46%	
55.816	1-nor-Bourbonanone	1599	0.07%	
56.045	13-nor-Eudesm-5-en-11-one	1603	0.14%	
56.129	Unidentified	1604	0.26%	
56.493	Unidentified	1611	0.21%	
56.613	3,5,11-Eudesmatriene	1613	0.36%	
56.765	Unidentified	1615	0.04%	
56.934	Unidentified	1618	0.23%	
57.144	Unidentified	1622	0.58%	
57.384	Esquel-6-en-9-one	1626	0.32%	
57.660	Unidentified	1631	0.07%	
57.685	Unidentified	1632	0.06%	
57.875	Khusimone	1635	0.6%	
58.069	Unidentified	1638	0.45%	
58.225	Unidentified	1641	0.14%	
58.395	Unidentified	1644	0.46%	
58.436	Unidentified	1645	0.94%	
58.733	Germacren D-4-ol	1650	0.29%	
58.868	Maaliol	1653	2.33%	
59.144	Unidentified	1657	1.11%	
59.285	Unidentified	1660	0.25%	
59.357	gamma-Eudesmol	1661	0.48%	
59.497	Epicubenol	1664	0.77%	
59.580	Unidentified	1665	0.38%	
59.757	Unidentified	1668	0.12%	
60.036	Unidentified	1673	0.63%	
60.275	Unidentified	1677	0.76%	
60.300	epi-alpha-Cadinol	1678	0.51%	
60.603	alpha-Cadinol	1683	5.7%	
60.808	Cyclocopacamphan-12-ol epimer A	1687	1.77%	
60.974	Cyclocopacamphan-12-ol epimer B	1690	1.28%	
61.215	Unidentified	1694	0.49%	



Ret. Time	Component	Ret. Idx.	Conc. %	
61.268	Unidentified	1695	1.27%	
61.485	Unidentified	1699	0.88%	
61.523	Unidentified	1700	1.5%	
61.710	Unidentified	1703	0.39%	
61.805	Unidentified	1705	0.13%	
61.925	2-epi-Ziza-6(13)-en-3-alpha-ol	1707	2.15%	
62.040	2-epi-Ziza-6(13)-en-3-beta-ol	1709	0.28%	
62.170	Unidentified	1712	0.18%	
62.315	Unidentified	1714	0.45%	
62.447	Zizanal	1717	0.86%	
62.576	Khusian-2-ol	1719	1.93%	
62.858	Unidentified	1724	0.79%	
63.056	Selin-7(11)-en-4-ol	1728	1.16%	
63.209	2-epi-Ziza-6(13)-en-3-alpha-ol	1731	1.04%	
63.386	Methyl ziza-6(13)-en-12-oate	1734	0.22%	
63.540	Unidentified	1737	0.47%	
63.688	13-nor-Eudesma-4,6-dien-11-one	1740	0.9%	
63.850	Unidentified	1743	0.48%	
64.114	Isovetiselinol	1748	0.27%	
64.292	Unidentified	1751	0.14%	
64.435	Vetiselinol	1754	3.29%	
64.739	Unidentified	1759	0.39%	
64.958	Oplopanone	1763	0.29%	
65.337	Zizanol	1771	0.91%	
65.486	Unidentified	1773	0.63%	
65.734	Khusimol	1778	14.96%	
65.894	Unidentified	1781	0.56%	
66.135	Unidentified	1785	0.04%	
66.257	Unidentified	1788	0.12%	
66.425	Unidentified	1791	0.14%	
66.602	Unidentified	1794	0.48%	
66.705	Unidentified	1796	0.15%	
66.771	Unidentified	1797	0.21%	
67.071	Unidentified	1803	0.18%	
67.334	Isovalencenol analog	1808	0.28%	
67.744	trans-Isovalencenol	1816	6.61%	
67.958	Unidentified	1820	1.26%	
68.165	Unidentified	1824	0.11%	
68.617	Nootkatone	1833	0.79%	IFRA
68.752	Zizanoic acid	1836	1.59%	



Ret. Time	Component	Ret. Idx.	Conc. %	
68.967	(Z)-Isovalencenal	1840	1.13%	
69.089	beta-Vetivone	1842	2.22%	
69.767	(E)-Isovalencenal	1856	1.54%	
70.201	Unidentified	1864	0.1%	
70.428	alpha-Vetivone	1869	2.44%	
71.190	Unidentified	1884	0.11%	
72.765	Unidentified	1915	0.19%	
72.888	Isovalencenyl formate isomer	1918	0.1%	
73.442	Isovalencenyl formate isomer	1929	0.12%	
74.109	Unidentified	1943	0.18%	
74.814	Unidentified	1957	0.11%	
75.529	Unidentified	1972	0.1%	
109.844	Unidentified	2808	0.08%	

Total Identified Compounds **78.05 %**

