



Essential Oil University

GC/MS Report

Item	Lot
Vetiver EO Hydrodiffused <i>Vetiveria zizanioides</i>	5N
Date	Analyst
2/10/2025	Dr. Robert S. Pappas

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The analysis of this batch sample, Vetiver EO Hydrodiffused, 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:** Vetiver EO Hydrodiffused**Botanical Name:** Vetiveria zizanioides**Lot Number:** 5N**Production Method:** Hydrodiffused**Sample Type:** EO - Single**Country of Origin:** Haiti**Analysis Date:** 2/10/2025**Manufacture Date:** September 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

+37.32

1.52429

1.00213



Ret. Time	Component	Ret. Idx.	Conc. %	
12.249	alpha-Pinene	931	0.03%	
17.828	Limonene	1027	0.02%	IFRA
32.758	Unidentified	1248	0.01%	
39.229	alpha-Cubebene	1345	0.01%	
39.390	Unidentified	1347	0.01%	
40.418	Unidentified	1363	0.01%	
40.676	Unidentified	1367	0.21%	
41.108	alpha-Copaene	1373	0.01%	
41.401	Unidentified	1378	0.02%	
41.514	2-epi-alpha-Funebrene	1380	0.05%	
41.632	Unidentified	1381	0.02%	
41.789	Unidentified	1384	0.06%	
41.879	Unidentified	1385	0.02%	
42.003	beta-Elemene	1387	0.03%	
42.141	Sativene	1389	0.01%	
42.344	Nigritene	1392	0.05%	
42.865	Unidentified	1400	0.02%	
43.049	Unidentified	1403	0.02%	
43.330	Acora-3,7(14)-diene	1408	0.08%	
43.474	Italicene	1410	0.01%	
43.630	beta-Cedrene	1413	0.1%	IFRA
43.826	Unidentified	1416	0.1%	
44.125	Unidentified	1420	0.06%	
44.176	Unidentified	1421	0.05%	
44.272	Unidentified	1423	0.07%	
44.613	(+)-epi-Bicyclosquiphellandrene	1428	0.14%	
44.755	Unidentified	1431	0.01%	
44.946	Unidentified	1434	0.06%	
45.275	Guaia-6,9-diene	1439	0.16%	
45.449	Unidentified	1442	0.02%	
45.743	Unidentified	1446	0.02%	
45.884	Prezizaene	1449	0.35%	
46.178	Khusimene	1453	0.45%	
46.306	Unidentified	1455	0.33%	
46.549	Unidentified	1459	0.01%	
46.694	Unidentified	1462	0.16%	
46.823	11,12,13-tri-nor-cis-Eudesm-5-en-7-one	1464	0.17%	
47.066	(E)-Eremophila-1(10),7(11)-dien-12-yl acetate	1468	0.2%	
47.205	gamma-Murolene	1470	0.06%	
47.400	Unidentified	1473	0.04%	



Ret. Time	Component	Ret. Idx.	Conc. %	
47.446	Unidentified	1474	0.03%	
47.634	alpha-Amorphene	1477	1.42%	
47.715	Unidentified	1478	0.1%	
47.881	alpha-Vetispiene	1481	0.2%	
47.980	Unidentified	1482	0.04%	
48.110	delta-Selinene	1484	0.65%	
48.233	beta-Vetispiene	1486	0.89%	
48.452	Valencene	1490	0.46%	
48.651	Unidentified	1493	0.08%	
48.843	gamma-Cadinene	1496	0.14%	
48.999	Spirovetiva-3,7(11)-dien-12-yl methyl ether	1499	0.1%	
49.099	delta-Cadinene	1500	0.56%	
49.199	Ar-Curcumene	1502	0.31%	
49.384	Unidentified	1505	0.06%	
49.490	Unidentified	1507	0.1%	
49.731	Nootkatene	1511	0.2%	
49.811	Unidentified	1512	0.25%	
50.074	Unidentified	1517	0.79%	
50.200	Unidentified	1519	0.01%	
50.286	Zonarene	1520	0.06%	
50.380	Unidentified	1522	0.01%	
50.527	gamma-Vetivenene	1524	0.19%	
50.647	Unidentified	1526	0.1%	
50.851	Unidentified	1530	0.07%	
50.940	Unidentified	1531	0.01%	
51.115	Selina-4(15),7(11)-diene	1534	0.1%	
51.227	Unidentified	1536	0.21%	
51.363	alpha-Calacorene	1538	0.2%	
51.512	Unidentified	1541	0.02%	
51.781	alpha-Elemol	1545	0.63%	
51.900	Unidentified	1547	0.05%	
52.106	beta-Vetivenene	1551	1.89%	
52.300	Unidentified	1554	0.01%	
52.399	Germacrene B	1556	0.05%	
52.652	cis-Eudesm-6-en-11-ol	1560	2.12%	
52.813	Unidentified	1563	0.08%	
52.964	Unidentified	1565	0.07%	
53.082	13-nor-Eudesm-5-en-11-one analogue	1567	0.14%	
53.175	Unidentified	1569	0.1%	
53.301	Unidentified	1571	0.39%	



Ret. Time	Component	Ret. Idx.	Conc. %
53.391	Unidentified	1572	0.26%
53.668	Unidentified	1577	0.22%
53.773	Unidentified	1579	0.56%
53.932	3,5,11-Eudesmatriene	1582	0.65%
54.201	Unidentified	1586	0.2%
54.440	Unidentified	1590	0.48%
54.652	Esquel-6-en-9-one analogue	1594	0.21%
54.778	Cedrol	1596	0.1%
54.921	Unidentified	1598	0.1%
55.094	Khusimone	1601	0.64%
55.285	Unidentified	1605	0.32%
55.390	Unidentified	1607	0.06%
55.540	Unidentified	1609	0.12%
55.659	3,5,11-Eudesmatriene analogue	1611	0.55%
55.777	Unidentified	1613	0.52%
56.054	Germacren D-4-ol analogue	1618	1.91%
56.151	Intermedeol	1620	2.26%
56.449	Unidentified	1625	1.06%
56.648	Eudesmol analogue	1629	0.65%
56.788	Epicubenol	1631	0.66%
56.887	Unidentified	1633	0.3%
57.044	Unidentified	1636	0.23%
57.183	Unidentified	1638	0.21%
57.303	Unidentified	1641	0.44%
57.496	Unidentified	1644	0.25%
57.532	Unidentified	1645	0.11%
57.626	Cadinol analogue	1646	0.6%
57.931	alpha-Cadinol	1652	3.75%
58.088	Cyclocopacamphan-12-ol epimer A	1655	2.07%
58.267	Cyclocopacamphan-12-ol epimer B	1658	1.54%
58.532	Unidentified	1662	1.29%
58.766	epi-Zizanone	1667	1.22%
58.899	beta-Bisabolol	1669	0.87%
59.182	2-epi-Ziza-6(13)-en-3-alpha-ol	1674	1.41%
59.316	2-epi-Ziza-6(13)-en-3-beta-ol	1676	0.34%
59.460	Unidentified	1679	0.11%
59.559	Unidentified	1681	0.32%
59.720	Unidentified	1684	0.3%
59.798	Khusian-2-ol	1685	1.99%
60.119	epi-Zizanal	1691	0.38%



Ret. Time	Component	Ret. Idx.	Conc. %	
60.270	Unidentified	1693	0.23%	
60.350	Juniper camphor	1695	1.53%	
60.472	2-epi-Ziza-6(13)-en-3-alpha-ol isomer	1697	0.75%	
60.550	Unidentified	1698	0.13%	
60.750	Unidentified	1702	0.23%	
60.838	Unidentified	1704	0.28%	
61.004	13-nor-Eudesma-4,6-dien-11-one	1707	0.86%	
61.164	Nootkatol	1710	0.68%	
61.425	Vetiselinol isomer	1715	0.34%	
61.755	Vetiselinol	1721	4.7%	
62.105	Zizanol analogue	1727	1.34%	
62.305	Oplopanone	1731	0.46%	
62.485	Unidentified	1734	0.04%	
62.689	Zizanol	1738	3.61%	
62.875	epi-Zizanal	1742	0.87%	
63.013	Khusimol	1744	9.5%	
63.207	Valerenal	1748	0.41%	
63.456	Unidentified	1752	0.27%	
63.608	Unidentified	1755	0.44%	
63.962	13-Hydroxy valencene	1762	0.93%	
64.150	Unidentified isomer I	1765	0.39%	
64.276	Unidentified isomer I	1768	0.51%	
64.542	Unidentified	1773	0.08%	
64.663	Isovalencenol isomer	1775	0.24%	
64.848	Unidentified	1778	0.12%	
65.112	trans-Isovalencenol	1783	10.25%	
65.337	cis-Isovalencenol	1788	2.36%	
65.531	Unidentified	1791	0.43%	
65.932	Nootkatone	1799	1.58%	IFRA
66.041	Zizanoic acid	1801	0.52%	
66.286	(Z)-Isovalencenal	1806	0.71%	
66.439	beta-Vetivone	1809	2.95%	
66.607	Unidentified	1812	0.15%	
66.849	Unidentified	1817	0.12%	
67.094	(E)-Isovalencenal	1821	1.12%	
67.212	Unidentified	1824	0.2%	
67.410	Isovalencenol isomer	1828	0.08%	
67.573	Unidentified	1831	0.11%	
67.766	alpha-Vetivone	1835	3.68%	
67.936	Unidentified	1838	0.08%	



Ret. Time	Component	Ret. Idx.	Conc. %	
68.551	Unidentified	1850	0.05%	
68.730	Unidentified	1853	0.1%	
69.164	Unidentified	1862	0.03%	
69.308	Unidentified	1865	0.02%	
69.481	Vetivone analogue	1868	0.01%	
69.790	Unidentified	1874	0.02%	
70.077	Unidentified	1880	0.06%	
70.233	Isovalencenyl formate analogue	1883	0.16%	
70.355	Unidentified	1885	0.03%	
70.566	Isovalencenol analogue	1889	0.05%	
70.786	Isovalencenyl formate	1894	0.19%	
70.958	Unidentified	1897	0.01%	
71.219	Unidentified	1902	0.02%	
71.427	Unidentified	1907	0.14%	
72.139	Unidentified	1921	0.16%	
72.879	Unidentified	1937	0.06%	
74.161	Unidentified	1963	0.02%	
75.899	Unidentified	1999	0.02%	
76.079	Unidentified	2002	0.01%	
76.241	Unidentified	2006	0.01%	
76.630	Unidentified	2014	0.01%	
76.890	Unidentified	2020	0.02%	
77.496	Unidentified	2033	0.01%	
77.643	Unidentified	2036	0.02%	
79.074	Unidentified	2067	0.05%	
92.765	Unidentified	2384	0.02%	
106.869	Unidentified	2759	0.03%	

Total Identified Compounds **83.92 %**

