



# Essential Oil University

## GC/MS Report

| Item                                           | Lot                  |
|------------------------------------------------|----------------------|
| Sage EO Dalmatian<br><i>Salvia officinalis</i> | 9AB                  |
| Date                                           | Analyst              |
| 12/6/2024                                      | Dr. Robert S. Pappas |

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**The analysis of this batch sample, Sage EO Dalmatian, meets the expected chemical profile for authentic essential oil of *Salvia officinalis*. 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:** Sage EO Dalmatian**Botanical Name:** Salvia officinalis**Lot Number:** 9AB**Production Method:** Steam distilled**Sample Type:** EO - Single**Country of Origin:** Spain**Analysis Date:** 12/6/2024**Manufacture Date:** October 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

+4.60

1.46370

0.92041



| Ret. Time | Component                       | Ret. Idx. | Conc. % |      |
|-----------|---------------------------------|-----------|---------|------|
| 4.210     | 3-Methylbutanal                 | 672       | 0.06%   |      |
| 4.328     | 2-Methylbutanal                 | 677       | 0.02%   |      |
| 8.917     | cis-Salvene                     | 843       | 0.34%   |      |
| 9.293     | trans-Salvene                   | 852       | 0.06%   |      |
| 12.176    | Hashishene                      | 917       | 0.05%   |      |
| 12.301    | Tricyclene                      | 919       | 0.15%   |      |
| 12.448    | alpha-Thujene                   | 921       | 0.08%   |      |
| 12.875    | alpha-Pinene                    | 929       | 3.28%   |      |
| 13.704    | alpha-Fenchene                  | 943       | 0.04%   |      |
| 13.809    | Camphene                        | 945       | 4.84%   |      |
| 14.001    | Thuja-2,4(10)diene              | 949       | 0.01%   |      |
| 15.093    | Sabinene                        | 968       | 0.03%   |      |
| 15.409    | beta-Pinene                     | 973       | 1.36%   |      |
| 16.030    | Myrcene                         | 984       | 1.04%   |      |
| 16.472    | 3-Octanol                       | 992       | 0.02%   |      |
| 17.125    | alpha-Phellandrene              | 1003      | 0.09%   |      |
| 17.797    | alpha-Terpinene                 | 1013      | 0.3%    |      |
| 18.283    | para-Cymene                     | 1020      | 1.11%   |      |
| 18.476    | Unidentified                    | 1023      | 0.01%   |      |
| 18.599    | Limonene                        | 1025      | 2.39%   | IFRA |
| 18.725    | beta-Phellandrene               | 1027      | 0.11%   |      |
| 18.811    | 1,8-Cineole                     | 1028      | 9.57%   |      |
| 18.983    | cis-beta-Ocimene                | 1031      | 0.08%   |      |
| 19.685    | trans-beta-Ocimene              | 1041      | 0.02%   |      |
| 20.491    | gamma-Terpinene                 | 1054      | 0.41%   |      |
| 21.309    | trans-Sabinene hydrate          | 1066      | 0.05%   |      |
| 22.325    | Terpinolene                     | 1081      | 0.24%   |      |
| 22.400    | trans-Linalool oxide (furanoid) | 1082      | 0.01%   |      |
| 22.570    | Fenchone                        | 1085      | 0.01%   |      |
| 22.635    | para-Cymenene                   | 1086      | 0.1%    |      |
| 23.365    | Linalool                        | 1097      | 0.48%   | IFRA |
| 23.884    | alpha-Thujone                   | 1104      | 32.61%  | IFRA |
| 24.577    | beta-Thujone                    | 1114      | 4.99%   | IFRA |
| 24.834    | 6-Camphenone                    | 1118      | 0.06%   |      |
| 25.165    | alpha-Campholenal               | 1123      | 0.03%   |      |
| 25.971    | Isothujol                       | 1134      | 0.06%   |      |
| 26.092    | trans-Sabinol                   | 1136      | 0.12%   |      |
| 26.323    | Unidentified                    | 1139      | 0.02%   |      |
| 26.656    | Camphor                         | 1144      | 17.68%  |      |
| 26.925    | Neothujol                       | 1148      | 0.07%   |      |



| Ret. Time | Component                       | Ret. Idx. | Conc. % |      |
|-----------|---------------------------------|-----------|---------|------|
| 27.154    | Camphene hydrate                | 1151      | 0.05%   |      |
| 27.515    | trans-Pinocamphone              | 1156      | 0.03%   |      |
| 27.729    | Isoborneol                      | 1159      | 0.04%   |      |
| 28.083    | Thujol                          | 1164      | 0.31%   |      |
| 28.191    | delta-Terpineol                 | 1166      | 0.03%   |      |
| 28.325    | Borneol                         | 1168      | 2.31%   |      |
| 28.759    | Unidentified                    | 1174      | 0.03%   |      |
| 28.912    | Terpinen-4-ol                   | 1176      | 0.49%   |      |
| 29.310    | para-Cymen-8-ol                 | 1182      | 0.08%   |      |
| 29.438    | Unidentified                    | 1184      | 0.02%   |      |
| 29.707    | Unidentified                    | 1188      | 0.03%   |      |
| 29.909    | alpha-Terpineol                 | 1191      | 0.18%   |      |
| 30.269    | Unidentified                    | 1196      | 0.09%   |      |
| 30.445    | Unidentified                    | 1198      | 0.02%   |      |
| 31.523    | trans-Carveol                   | 1214      | 0.05%   |      |
| 32.696    | cis-3-Hexenyl isovalerate       | 1231      | 0.02%   | IFRA |
| 33.145    | Hexyl-3-methylbutanoate         | 1237      | 0.01%   |      |
| 33.316    | Hex-(2E)-enyl-3-methylbutanoate | 1240      | 0.03%   |      |
| 33.607    | Carvotanacetone                 | 1244      | 0.02%   |      |
| 33.643    | Geraniol                        | 1245      | 0.02%   | IFRA |
| 34.832    | Unidentified                    | 1262      | 0.03%   |      |
| 34.998    | Unidentified                    | 1264      | 0.03%   |      |
| 35.761    | Carvacrol                       | 1275      | 0.02%   |      |
| 36.044    | Bornyl acetate                  | 1280      | 2.68%   |      |
| 36.204    | Isobornyl acetate               | 1282      | 0.05%   |      |
| 36.299    | trans-Sabinyol acetate          | 1283      | 0.33%   |      |
| 36.444    | Thujyl acetate                  | 1285      | 0.15%   |      |
| 36.835    | Terpin-1-en-4-yl acetate        | 1291      | 0.01%   |      |
| 36.897    | Thymol                          | 1292      | 0.06%   |      |
| 37.206    | Unidentified                    | 1296      | 0.04%   |      |
| 39.237    | trans-Carvyl acetate            | 1327      | 0.03%   | IFRA |
| 39.910    | Unidentified                    | 1337      | 0.02%   |      |
| 40.155    | Unidentified                    | 1341      | 0.01%   |      |
| 40.238    | Unidentified                    | 1342      | 0.08%   |      |
| 40.435    | Eugenol                         | 1345      | 0%      |      |
| 40.934    | Unidentified                    | 1353      | 0.02%   |      |
| 42.135    | alpha-Copaene                   | 1371      | 0.03%   |      |
| 42.224    | Geranyl acetate                 | 1372      | 0.01%   |      |
| 44.004    | cis-beta-Caryophyllene          | 1399      | 0.04%   |      |
| 44.965    | trans-beta-Caryophyllene        | 1414      | 3.05%   |      |



| Ret. Time | Component                                 | Ret. Idx. | Conc. % |  |
|-----------|-------------------------------------------|-----------|---------|--|
| 45.471    | beta-Caryophyllene isomer                 | 1423      | 0.02%   |  |
| 45.731    | Unidentified                              | 1427      | 0.21%   |  |
| 46.136    | Aromadendrene                             | 1433      | 0.07%   |  |
| 46.244    | Unidentified                              | 1435      | 0.03%   |  |
| 46.730    | Unidentified                              | 1443      | 0.33%   |  |
| 47.221    | alpha-Humulene                            | 1450      | 3.28%   |  |
| 47.487    | Alloaromadendrene                         | 1455      | 0.17%   |  |
| 48.414    | gamma-Muurolene                           | 1469      | 0.01%   |  |
| 49.280    | beta-Selinene                             | 1483      | 0.05%   |  |
| 49.412    | Viridiflorene                             | 1485      | 0.24%   |  |
| 49.730    | alpha-Selinene                            | 1490      | 0.02%   |  |
| 51.054    | delta-Cadinene                            | 1512      | 0.03%   |  |
| 52.155    | Unidentified                              | 1530      | 0.02%   |  |
| 54.855    | Caryophyllene oxide                       | 1576      | 0.14%   |  |
| 55.588    | Viridiflorol                              | 1588      | 2.02%   |  |
| 55.842    | Unidentified                              | 1592      | 0.08%   |  |
| 56.480    | Humulene epoxide II                       | 1603      | 0.31%   |  |
| 57.767    | Unidentified                              | 1626      | 0.09%   |  |
| 58.012    | Caryophylla-4(12),8(13)-dien-5-beta-ol    | 1630      | 0.02%   |  |
| 59.054    | 14-Hydroxy-9-epi-(Z)-Caryophyllene isomer | 1649      | 0.04%   |  |
| 59.871    | 14-Hydroxy-9-epi-(E)-Caryophyllene isomer | 1663      | 0.01%   |  |
| 65.531    | Unidentified                              | 1766      | 0.03%   |  |
| 66.919    | Unidentified                              | 1792      | 0.02%   |  |
| 72.705    | Isopimara-9(11),15-diene                  | 1905      | 0.03%   |  |
| 79.370    | Manool                                    | 2043      | 0.21%   |  |

Total Identified Compounds **98.77 %**

