



## Sample &amp; Analysis Information

## Sample Information

**Sample Name:** Amyris EO**Botanical Name:** Amyris balsamifera**Lot Number:** 13093**Production Method:** Steam distilled**Sample Type:** EO - Single**Country of Origin:** Haiti, Dominican Republic**Analysis Date:** 12/16/2024**Manufacture Date:** December 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

+23.56

1.50533

0.95561

| Ret. Time | Component               | Ret. Idx. | Conc. % |      |
|-----------|-------------------------|-----------|---------|------|
| 17.590    | Limonene                | 1028      | 0.01%   | IFRA |
| 28.475    | Methyl salicylate       | 1190      | 0.02%   |      |
| 35.913    | Unidentified            | 1299      | 0.01%   |      |
| 39.456    | Unidentified            | 1353      | 0.09%   |      |
| 39.925    | Unidentified            | 1361      | 0.01%   |      |
| 40.034    | Unidentified            | 1362      | 0.07%   |      |
| 40.450    | Unidentified            | 1369      | 0.06%   |      |
| 41.174    | Unidentified            | 1380      | 0.01%   |      |
| 41.481    | Unidentified            | 1384      | 0.13%   |      |
| 41.665    | beta-Elemene            | 1387      | 0.22%   |      |
| 41.872    | cis-beta-Caryophyllene  | 1390      | 0.05%   |      |
| 42.051    | Unidentified            | 1393      | 0.02%   |      |
| 42.548    | Unidentified            | 1401      | 0.13%   |      |
| 42.710    | Unidentified            | 1403      | 0.01%   |      |
| 42.866    | Unidentified            | 1406      | 0.09%   |      |
| 43.102    | alpha-Dihydroionone     | 1410      | 0.03%   |      |
| 43.339    | alpha-Cedrene           | 1413      | 0.04%   | IFRA |
| 43.545    | beta-Caryophyllene      | 1417      | 0.09%   |      |
| 43.678    | Unidentified            | 1419      | 0.03%   |      |
| 43.929    | Unidentified            | 1423      | 0.16%   |      |
| 44.110    | Unidentified            | 1426      | 0.04%   |      |
| 44.186    | gamma-Elemene           | 1427      | 0.09%   |      |
| 44.424    | trans-alpha-Bergamotene | 1431      | 0.05%   |      |
| 44.523    | Unidentified            | 1432      | 0.04%   |      |
| 44.996    | Unidentified            | 1440      | 0.04%   |      |
| 45.342    | Unidentified            | 1446      | 0.12%   |      |
| 45.447    | Amorpha-4,11-diene      | 1447      | 0.65%   |      |
| 45.738    | Unidentified            | 1452      | 0.26%   |      |
| 45.939    | beta-Acoradiene         | 1455      | 2.22%   |      |
| 46.010    | Unidentified            | 1456      | 0.22%   |      |
| 46.180    | Unidentified            | 1459      | 0.01%   |      |
| 46.244    | Unidentified            | 1460      | 0.02%   |      |
| 46.340    | Unidentified            | 1462      | 0.01%   |      |
| 46.547    | Unidentified            | 1465      | 0.1%    |      |
| 46.708    | Unidentified            | 1467      | 0.06%   |      |
| 46.920    | Unidentified            | 1471      | 0.81%   |      |
| 47.120    | Unidentified            | 1474      | 0.57%   |      |
| 47.215    | gamma-Curcumene         | 1476      | 1.04%   |      |
| 47.419    | Ar-Curcumene            | 1479      | 2.32%   |      |
| 47.564    | Selina-4,11-diene       | 1481      | 0.5%    |      |

| Ret. Time | Component                  | Ret. Idx. | Conc. % |  |
|-----------|----------------------------|-----------|---------|--|
| 47.778    | delta-Selinene             | 1485      | 0.19%   |  |
| 47.885    | beta-Selinene              | 1486      | 0.47%   |  |
| 48.110    | Valencene                  | 1490      | 1.52%   |  |
| 48.284    | alpha-Zingiberene          | 1493      | 3.24%   |  |
| 48.523    | Unidentified               | 1497      | 0.04%   |  |
| 48.691    | Unidentified               | 1499      | 0.07%   |  |
| 48.873    | Dihydroagarofuran isomer   | 1502      | 0.83%   |  |
| 49.059    | beta-Bisabolene            | 1505      | 1.88%   |  |
| 49.120    | Dihydroagarofuran isomer   | 1506      | 0.36%   |  |
| 49.270    | Unidentified               | 1509      | 0.17%   |  |
| 49.406    | Unidentified               | 1511      | 0.08%   |  |
| 49.580    | Unidentified               | 1514      | 0.01%   |  |
| 49.719    | 7-epi-alpha-Selinene       | 1517      | 0.95%   |  |
| 50.026    | beta-Sesquiphellandrene    | 1522      | 3.33%   |  |
| 50.302    | Unidentified               | 1526      | 0.03%   |  |
| 50.513    | Unidentified               | 1530      | 0.66%   |  |
| 50.662    | Unidentified               | 1532      | 0.22%   |  |
| 50.772    | Selina-4(15),7(11)-diene   | 1534      | 0.32%   |  |
| 51.058    | Selina-3,7(11)-diene       | 1539      | 2.37%   |  |
| 51.482    | alpha-Elemol               | 1546      | 8.81%   |  |
| 51.595    | Unidentified               | 1548      | 0.16%   |  |
| 51.738    | Unidentified               | 1551      | 0.07%   |  |
| 52.206    | trans-Nerolidol            | 1559      | 0.59%   |  |
| 52.206    | alpha-Elemol               | 1559      | 0.61%   |  |
| 52.752    | Unidentified               | 1568      | 0.05%   |  |
| 53.054    | Unidentified               | 1573      | 0.1%    |  |
| 53.314    | Unidentified               | 1577      | 0.01%   |  |
| 53.426    | Unidentified               | 1579      | 0.02%   |  |
| 53.575    | Unidentified               | 1582      | 0.01%   |  |
| 53.661    | Unidentified               | 1583      | 0.02%   |  |
| 53.736    | Unidentified               | 1584      | 0.04%   |  |
| 53.849    | Unidentified               | 1586      | 0.05%   |  |
| 54.316    | Unidentified               | 1594      | 0.07%   |  |
| 54.463    | Unidentified               | 1597      | 0.06%   |  |
| 54.589    | Unidentified               | 1599      | 0.04%   |  |
| 54.862    | 5-epi-7-epi-alpha-Eudesmol | 1604      | 1.27%   |  |
| 55.132    | Unidentified               | 1608      | 0.17%   |  |
| 55.319    | Unidentified               | 1612      | 0.15%   |  |
| 55.489    | Unidentified               | 1615      | 0.12%   |  |
| 55.764    | 10-epi-gamma-Eudesmol      | 1620      | 4.72%   |  |

| Ret. Time | Component                           | Ret. Idx. | Conc. % |      |
|-----------|-------------------------------------|-----------|---------|------|
| 55.910    | Guaiol                              | 1622      | 1.17%   |      |
| 56.225    | Eremoligenol isomer                 | 1628      | 0.33%   |      |
| 56.347    | gamma-Eudesmol                      | 1630      | 8.83%   |      |
| 56.776    | Unidentified                        | 1638      | 0.44%   |      |
| 57.027    | Unidentified                        | 1642      | 0.35%   |      |
| 57.126    | Unidentified                        | 1644      | 0.84%   |      |
| 57.277    | Unidentified                        | 1647      | 0.29%   |      |
| 57.624    | Valerianol                          | 1653      | 21.13%  |      |
| 57.695    | beta-Eudesmol                       | 1654      | 1.34%   |      |
| 57.703    | alpha-Eudesmol                      | 1654      | 4.01%   |      |
| 57.865    | Dihydroagarofuran isomer            | 1657      | 0.52%   |      |
| 57.990    | 7-epi-alpha-Eudesmol                | 1659      | 4.79%   |      |
| 58.155    | Unidentified                        | 1662      | 0.2%    |      |
| 58.399    | Unidentified                        | 1667      | 0.16%   |      |
| 58.612    | Unidentified                        | 1670      | 0.1%    |      |
| 58.781    | Unidentified                        | 1673      | 0.11%   |      |
| 58.917    | Unidentified                        | 1676      | 0.39%   |      |
| 58.999    | Unidentified                        | 1677      | 0.36%   |      |
| 59.329    | Unidentified                        | 1683      | 0.14%   |      |
| 59.431    | Unidentified                        | 1685      | 0.22%   |      |
| 59.817    | Unidentified                        | 1692      | 0.28%   |      |
| 59.994    | beta-Caryophyllene acetate isomer I | 1695      | 4.26%   |      |
| 60.218    | Unidentified                        | 1699      | 0.09%   |      |
| 60.360    | Unidentified                        | 1702      | 0.05%   |      |
| 60.634    | Unidentified                        | 1707      | 0.42%   |      |
| 60.817    | Unidentified                        | 1710      | 0.09%   |      |
| 60.931    | Farnesol isomer                     | 1712      | 0.09%   | IFRA |
| 61.052    | Unidentified                        | 1714      | 0.05%   |      |
| 61.257    | Unidentified                        | 1718      | 0.1%    |      |
| 61.430    | Unidentified                        | 1722      | 0.03%   |      |
| 61.645    | Unidentified                        | 1726      | 0.07%   |      |
| 61.876    | Unidentified                        | 1730      | 0.08%   |      |
| 62.054    | Unidentified                        | 1733      | 0.34%   |      |
| 62.156    | Caryophyllene acetate isomer II     | 1735      | 0.11%   |      |
| 62.410    | Unidentified                        | 1740      | 0.58%   |      |
| 62.485    | Unidentified                        | 1741      | 0.12%   |      |
| 62.610    | Cresol isomer                       | 1744      | 0.01%   |      |
| 62.877    | Unidentified                        | 1749      | 0.28%   |      |
| 63.043    | Unidentified                        | 1752      | 0.02%   |      |
| 63.463    | Unidentified                        | 1760      | 0.05%   |      |

| Ret. Time | Component    | Ret. Idx. | Conc. % |  |
|-----------|--------------|-----------|---------|--|
| 63.807    | Drimenol     | 1766      | 2.25%   |  |
| 64.047    | Unidentified | 1771      | 0.03%   |  |
| 64.228    | Unidentified | 1774      | 0.02%   |  |
| 64.510    | Unidentified | 1779      | 0.13%   |  |
| 64.660    | Unidentified | 1782      | 0.01%   |  |
| 65.120    | Unidentified | 1791      | 0.01%   |  |
| 65.270    | Unidentified | 1793      | 0.04%   |  |
| 65.543    | Unidentified | 1799      | 0.02%   |  |
| 65.804    | Unidentified | 1804      | 0.01%   |  |
| 66.156    | Unidentified | 1810      | 0.02%   |  |
| 66.260    | Unidentified | 1813      | 0.01%   |  |
| 66.436    | Unidentified | 1816      | 0.02%   |  |
| 66.580    | Unidentified | 1819      | 0.01%   |  |
| 66.984    | Unidentified | 1827      | 0.02%   |  |
| 67.150    | Unidentified | 1830      | 0.01%   |  |
| 67.340    | Unidentified | 1834      | 0.02%   |  |
| 67.656    | Unidentified | 1840      | 0.02%   |  |
| 67.840    | Unidentified | 1844      | 0.01%   |  |
| 68.586    | Unidentified | 1858      | 0.03%   |  |
| 68.864    | Unidentified | 1864      | 0.01%   |  |
| 69.321    | Unidentified | 1873      | 0.1%    |  |
| 71.526    | Unidentified | 1917      | 0.01%   |  |
| 71.793    | Unidentified | 1922      | 0.01%   |  |
| 74.337    | Unidentified | 1975      | 0.01%   |  |

Total Identified Compounds **87.63 %**

TIC

12,060,514

Intensity  $\times 10^6$

