

Sample Information

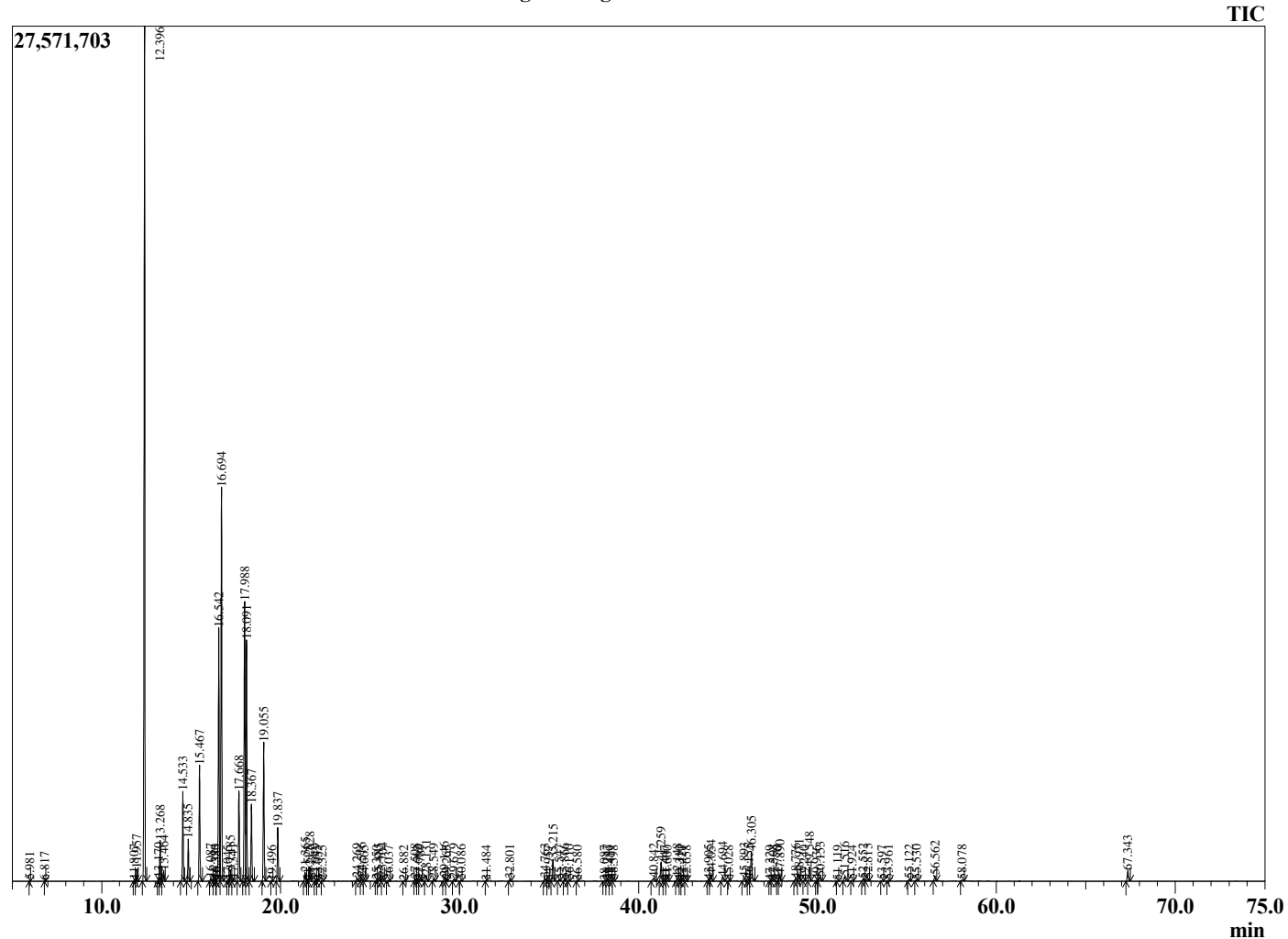
Analyzed by : Dr. Robert S. Pappas
 Analyzed : 5/28/2021 2:11:23 AM
 Sample Type : Essential Oil
 Sample Name : Angelica Root - Edens Garden
 Sample ID : BB09GB
 Injection Volume : 0.10
 Instrument ID : GC-4



Peak Report TIC

| R.Time | Name | Area% |
|--------|----------------------------|-------|
| 5.981 | Toluene | 0.02 |
| 6.817 | Hexanal | 0.01 |
| 11.807 | Tricyclene | 0.03 |
| 11.957 | alpha-Thujene | 0.33 |
| 12.396 | alpha-Pinene | 26.86 |
| 13.170 | alpha-Fenchene | 0.10 |
| 13.268 | Camphene | 1.20 |
| 13.464 | Thuja-2,4(10)-diene | 0.31 |
| 14.533 | Sabinene | 2.72 |
| 14.835 | beta-Pinene | 1.30 |
| 15.467 | Myrcene | 3.79 |
| 16.087 | delta-2-Carene | 0.11 |
| 16.330 | Octanal | 0.07 |
| 16.385 | Pseudolimonene | 0.03 |
| 16.542 | alpha-Phellandrene | 8.69 |
| 16.694 | delta-3-Carene | 13.11 |
| 17.045 | 1,4-Cineole | 0.02 |
| 17.185 | alpha-Terpinene | 0.36 |
| 17.341 | meta-Cymene | 0.07 |
| 17.668 | para-Cymene | 3.09 |
| 17.988 | Limonene | 10.66 |
| 18.091 | beta-Phellandrene | 7.92 |
| 18.367 | (Z)-beta-Ocimene | 2.56 |
| 19.055 | (E)-beta-Ocimene | 4.63 |
| 19.496 | Unidentified | 0.02 |
| 19.837 | gamma-Terpinene | 1.79 |
| 21.365 | Isoterpinolene | 0.33 |
| 21.525 | Unidentified | 0.02 |
| 21.628 | Terpinolene | 0.53 |
| 21.949 | para-Cymenene | 0.08 |
| 22.055 | Rosefuran | 0.02 |
| 22.325 | 6-Camphenone | 0.03 |
| 24.269 | cis-para-Menth-2-en-1-ol | 0.11 |
| 24.516 | allo-Ocimene | 0.12 |
| 24.665 | Unidentified | 0.02 |
| 25.350 | Unidentified | 0.02 |
| 25.485 | trans-para-Menth-2-en-1-ol | 0.12 |
| 25.704 | trans-Verbenol | 0.14 |
| 26.037 | alpha-Phellandrene-8-ol | 0.06 |
| 26.882 | cis-Mentha-1,5-dien-8-ol | 0.02 |
| 27.508 | para-Mentha-1,5-dien-8-ol | 0.09 |
| 27.662 | Unidentified | 0.02 |
| 27.789 | Undeca-1,3,5-triene | 0.06 |
| 28.131 | Terpinen-4-ol | 0.24 |
| 28.549 | Cryptone | 0.09 |
| 29.146 | Myrtenal | 0.16 |
| 29.265 | cis-Piperitol | 0.03 |
| 29.679 | alpha-Phellandrene epoxide | 0.08 |
| 30.086 | trans-Piperitol | 0.04 |
| 31.484 | Thymol methyl ether | 0.01 |
| 32.801 | Carvotanacetone | 0.07 |
| 34.763 | Phellandral | 0.12 |
| 34.957 | Unidentified | 0.03 |
| 35.215 | Bornyl acetate | 0.88 |
| 35.547 | Verbenyl acetate | 0.05 |
| 35.866 | Unidentified | 0.08 |
| 36.110 | Carvacrol | 0.04 |
| 36.580 | Unidentified | 0.02 |
| 38.087 | Unidentified | 0.02 |
| 38.247 | Myrtenyl acetate | 0.04 |
| 38.419 | trans-Carvyl acetate | 0.03 |
| 38.598 | Unidentified | 0.03 |

Chromatogram Angelica Root - Edens Garden



Comments:

The analysis of this Angelica Root batch sample meets the expected chemical profile for authentic essential oil of *Angelica archangelica*. 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.

| R.Time | Name | Area% |
|--------|-------------------------------------|--------|
| 40.842 | Isoledene | 0.19 |
| 41.259 | alpha-Copaene | 0.83 |
| 41.447 | Unidentified | 0.01 |
| 41.600 | Unidentified | 0.03 |
| 42.148 | beta-Elemene | 0.11 |
| 42.310 | Unidentified | 0.02 |
| 42.421 | Unidentified | 0.03 |
| 42.658 | Unidentified | 0.02 |
| 43.905 | alpha-Cedrene | 0.05 |
| 44.054 | trans-beta-Caryophyllene | 0.26 |
| 44.694 | beta-Copaene | 0.20 |
| 45.028 | cis-Thujopsene | 0.02 |
| 45.893 | beta-Barbatene | 0.17 |
| 46.155 | (E)-beta-Farnesene | 0.08 |
| 46.305 | alpha-Humulene | 1.34 |
| 47.329 | 10-beta-H-Cadina-1(6),4-diene | 0.02 |
| 47.508 | trans-Cadina-1(6),4-diene | 0.05 |
| 47.770 | alpha-Amorphene | 0.03 |
| 47.890 | Germacrene D | 0.26 |
| 48.776 | alpha-Zingiberene | 0.13 |
| 48.971 | alpha-Murolene | 0.28 |
| 49.240 | Unidentified | 0.02 |
| 49.548 | beta-Bisabolene | 0.57 |
| 49.936 | Unidentified | 0.02 |
| 50.153 | Bornyl isovalerate + delta-Cadinene | 0.21 |
| 51.119 | gamma-Cuprenene | 0.02 |
| 51.516 | alpha-Copaen-11-ol | 0.22 |
| 51.924 | alpha-Elemol | 0.03 |
| 52.552 | Germacrene B | 0.10 |
| 52.813 | Nootkatene | 0.08 |
| 53.597 | Spathulenol | 0.03 |
| 53.961 | Unidentified | 0.04 |
| 55.122 | Carotol | 0.07 |
| 55.530 | Humulene epoxide II | 0.06 |
| 56.562 | Tridecanolide | 0.23 |
| 58.078 | alpha-Eudesmol | 0.05 |
| 67.343 | Pentadecanolide | 0.47 |
| | | 100.00 |