

Sample Information

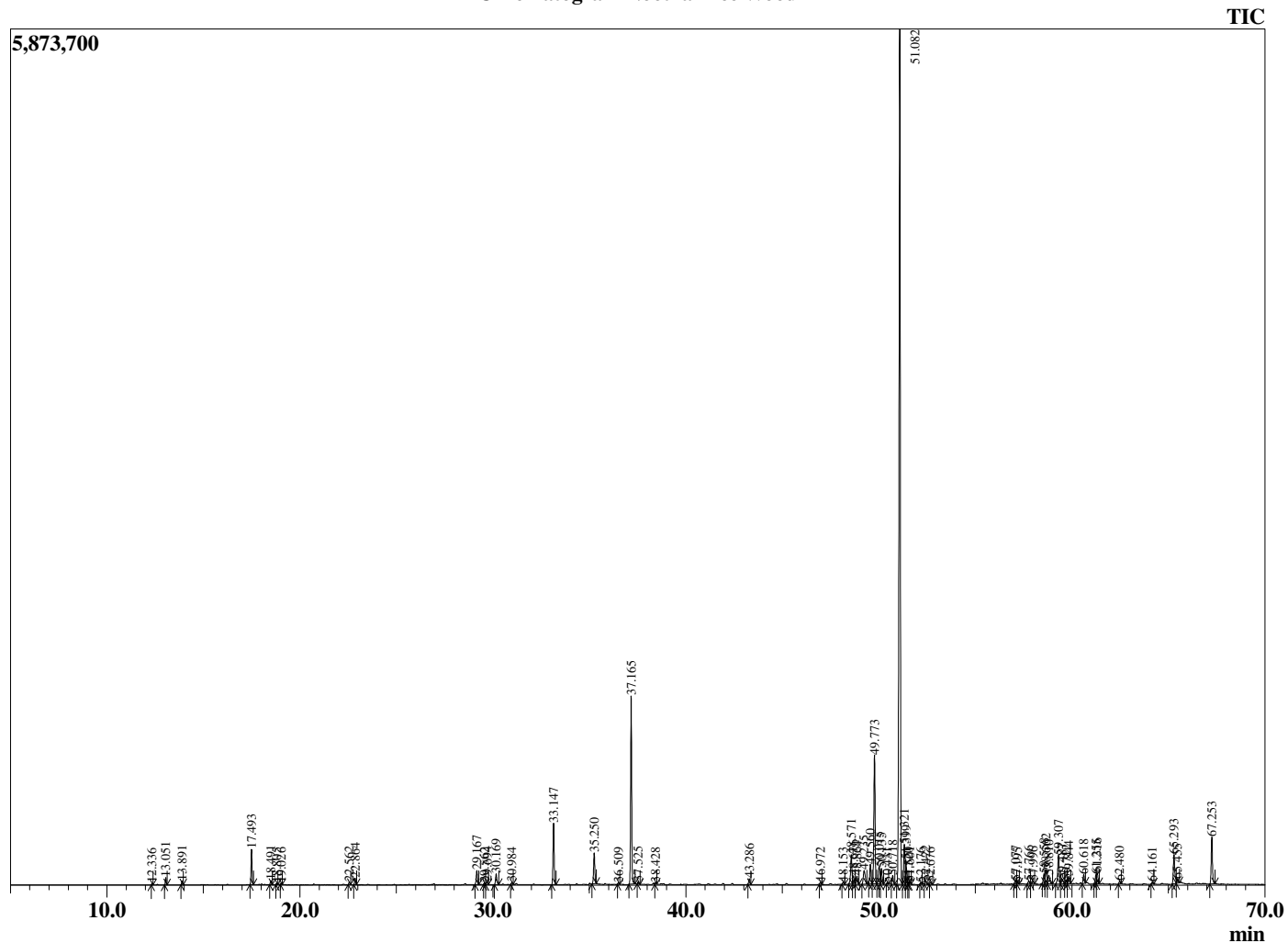
Analyzed by : Dr. Robert S. Pappas
 Analyzed : 11/20/2019 9:49:37 PM
 Sample Type : Essential Oil
 Sample Name : Nootka Tree Wood
 Sample ID : 0102
 Injection Volume : 0.10
 Instrument ID : GC-3



Peak Report TIC

| R.Time | Name | Area% |
|--------|----------------------------|--------|
| 12.336 | Unidentified | 0.05 |
| 13.051 | alpha-Pinene | 0.29 |
| 13.891 | alpha-Fenchene | 0.16 |
| 17.493 | delta-3-Carene | 1.51 |
| 18.491 | para-Cymene | 0.18 |
| 18.805 | Limonene | 0.06 |
| 19.026 | 1,8-cineole | 0.06 |
| 22.562 | Terpinolene | 0.13 |
| 22.864 | para-Cymenene | 0.29 |
| 29.167 | Terpinen-4-ol | 0.74 |
| 29.562 | para-Cyme-8-ol | 0.07 |
| 29.694 | Unidentified | 0.14 |
| 30.169 | alpha-Terpineol | 0.61 |
| 30.984 | Unidentified | 0.10 |
| 33.147 | Carvacrol methyl ether | 3.11 |
| 35.250 | trans-Shisool | 1.64 |
| 36.509 | Shisool isomer | 0.07 |
| 37.165 | Carvacrol | 9.35 |
| 37.525 | Unidentified | 0.09 |
| 38.428 | Unidentified | 0.08 |
| 43.286 | beta-Elemene | 0.30 |
| 46.972 | Humulen-(v1) | 0.09 |
| 48.153 | Unidentified | 0.11 |
| 48.571 | Unidentified | 1.76 |
| 48.676 | Germacrene D | 0.51 |
| 48.864 | (Z)-4,10-Epoxy amorphane | 0.55 |
| 49.235 | beta-Chamigrene | 1.12 |
| 49.560 | beta-Selinene | 1.04 |
| 49.773 | Valencene | 7.39 |
| 50.015 | alpha-Selinene | 1.32 |
| 50.135 | alpha-Muurolene | 0.84 |
| 50.431 | Unidentified | 0.07 |
| 50.718 | beta-Bisabolene | 0.49 |
| 51.082 | Nootkatene | 49.23 |
| 51.321 | delta-Cadinene | 2.37 |
| 51.399 | (-)-alpha-Panasinsen | 1.14 |
| 51.520 | trans-Calamenene | 0.09 |
| 51.601 | Zonarene | 0.13 |
| 52.176 | trans-Cadina-1,4-diene | 0.08 |
| 52.422 | alpha-Cadinene | 0.19 |
| 52.676 | alpha-Calacorene | 0.11 |
| 57.077 | Unidentified | 0.20 |
| 57.195 | Unidentified | 0.09 |
| 57.766 | 1-epi-Cubenol | 0.19 |
| 57.996 | gamma-Eudesmol | 0.17 |
| 58.558 | alpha-Muurolol (=Torreyol) | 0.57 |
| 58.662 | epi-alpha-Cadinol | 0.88 |
| 58.810 | delta-Cadinol | 0.65 |
| 59.307 | alpha-Cadinol | 1.87 |
| 59.487 | Unidentified | 0.41 |
| 59.712 | Unidentified | 0.23 |
| 59.844 | Unidentified | 0.45 |
| 60.618 | Unidentified | 0.50 |
| 61.255 | Unidentified | 0.46 |
| 61.316 | Unidentified | 0.60 |
| 62.480 | Unidentified | 0.14 |
| 64.161 | Unidentified | 0.11 |
| 65.293 | Unidentified | 1.86 |
| 65.455 | Unidentified | 0.26 |
| 67.253 | Nootkatone | 2.71 |
| | | 100.00 |

Chromatogram Nootka Tree Wood



Comments:

The analysis of this Nootka Tree Wood batch sample meets the expected chemical profile for authentic essential oil of

Cupressus nootkatensis. 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.