

Sample Information

Analyzed by : Dr. Robert S. Pappas
 Analyzed : 6/11/2019 2:25:01 AM
 Sample Type : Essential Oil
 Sample Name : Peppermint - Barefut
 Sample ID : 0113
 Injection Volume : 0.10
 Instrument ID : GC-3

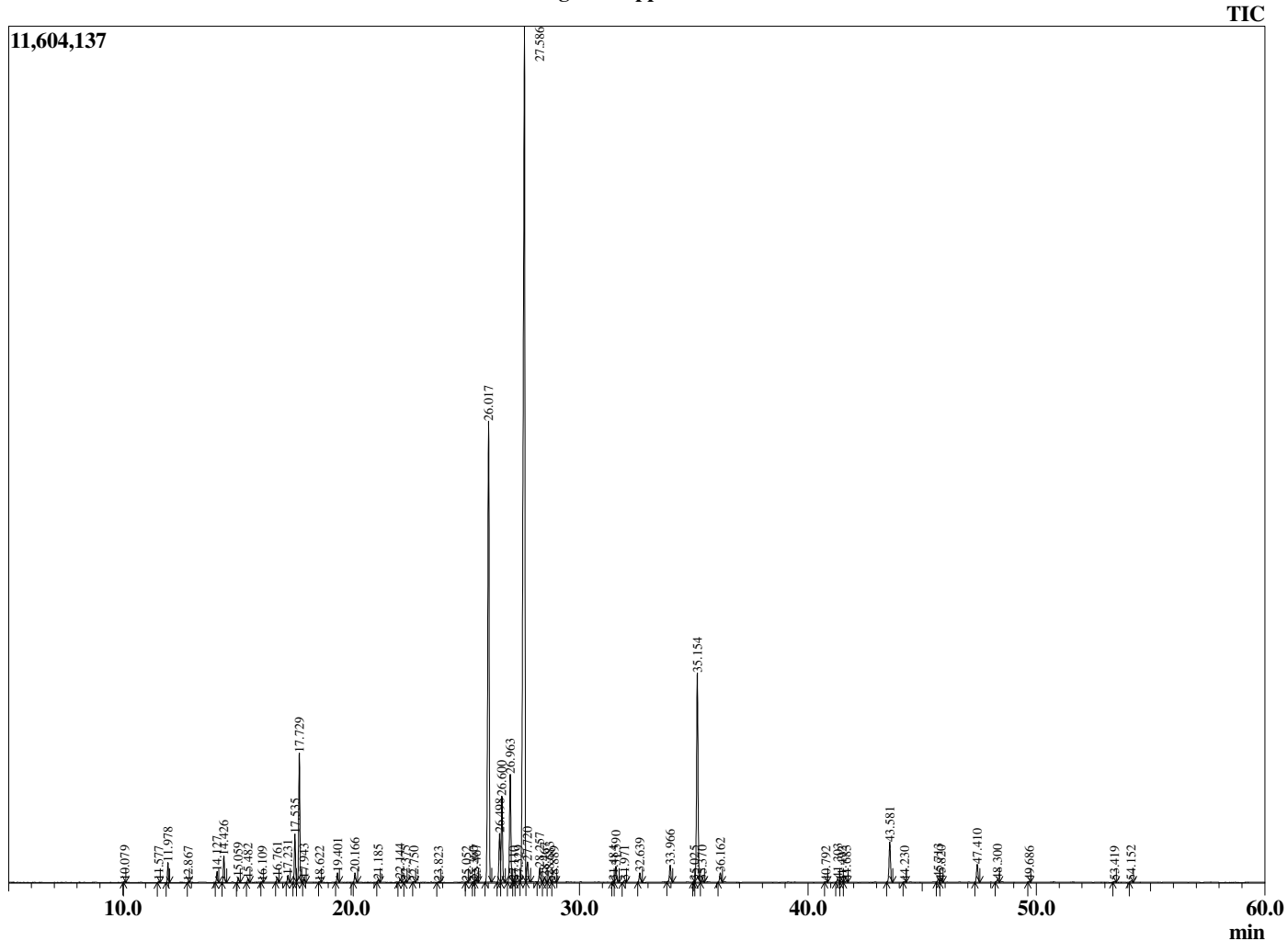


Peak Report TIC

| R.Time | Name | Area% |
|--------|--------------------------------|--------|
| 10.079 | 2,5-Diethyltetrahydrofuran | 0.03 |
| 11.577 | alpha-Thujene | 0.03 |
| 11.978 | alpha-Pinene | 0.57 |
| 12.867 | Camphene | 0.02 |
| 14.127 | Sabinene | 0.34 |
| 14.426 | beta-Pinene | 0.88 |
| 15.059 | Myrcene | 0.16 |
| 15.482 | 3-Octanol | 0.12 |
| 16.109 | alpha-Phellandrene | 0.02 |
| 16.761 | alpha-Terpinene | 0.17 |
| 17.231 | para-Cymene | 0.25 |
| 17.535 | Limonene | 1.65 |
| 17.729 | 1,8-cineole | 4.46 |
| 17.943 | cis-beta-Ocimene | 0.11 |
| 18.622 | trans-beta-Ocimene | 0.03 |
| 19.401 | gamma-Terpinene | 0.32 |
| 20.166 | trans-Sabinene hydrate | 0.34 |
| 21.185 | Terpinolene | 0.10 |
| 22.144 | Linalool | 0.14 |
| 22.375 | 2-Methylbutyl-2-methylbutyrate | 0.06 |
| 22.750 | 2-Methylbutyl isovalerate | 0.03 |
| 23.823 | cis-para-Menth-2-en-1-ol | 0.03 |
| 25.052 | trans-para-Menth-2-en-1-ol | 0.02 |
| 25.360 | Camphor | 0.02 |
| 25.467 | Isopulegol | 0.09 |
| 26.017 | Menthone | 19.46 |
| 26.498 | Menthofuran | 1.95 |
| 26.600 | Isomenthone | 3.27 |
| 26.963 | Neomenthol | 4.27 |
| 27.110 | Unidentified | 0.03 |
| 27.329 | trans-Isopulegone | 0.08 |
| 27.586 | Menthol | 44.53 |
| 27.720 | Terpinen-4-ol | 0.87 |
| 28.257 | Isomenthol | 0.56 |
| 28.467 | Neoisomenthol | 0.19 |
| 28.683 | alpha-Terpineol | 0.22 |
| 28.889 | Unidentified | 0.03 |
| 31.484 | Hex-(3Z)-enyl isovalerate | 0.04 |
| 31.590 | Pulegone | 0.64 |
| 31.971 | Carvone | 0.08 |
| 32.639 | Piperitone | 0.39 |
| 33.966 | Neomenthyl acetate | 0.73 |
| 35.025 | Unidentified | 0.04 |
| 35.154 | Menthyl acetate | 8.83 |
| 35.370 | Dihydroedulan I | 0.05 |
| 36.162 | Isomenthyl acetate | 0.41 |
| 40.792 | alpha-Copaene | 0.03 |
| 41.303 | beta-Bourbonene | 0.14 |
| 41.492 | Unidentified | 0.03 |
| 41.683 | beta-Elemene | 0.07 |
| 43.581 | beta-Caryophyllene | 1.79 |
| 44.230 | beta-Copaene | 0.02 |
| 45.713 | trans-beta-Farnesene | 0.16 |
| 45.820 | alpha-Humulene | 0.07 |
| 47.410 | Germacrene D | 0.80 |
| 48.300 | Bicyclogermacrene | 0.11 |
| 49.686 | delta-Cadinene | 0.04 |
| 53.419 | Caryophyllene oxide | 0.04 |
| 54.152 | Viridiflorol | 0.07 |
| | | 100.00 |

This report is valid for 1 year from the analyzed date.

Chromatogram Peppermint - Barefut



Comments:

The analysis of this Peppermint Oil batch sample meets the expected chemical profile for authentic essential oil of *Mentha piperita*. No contamination or adulteration was detected.