

Sample Information

Analyzed by : Dr. Robert S. Pappas
 Analyzed : 11/6/2018 1:28:35 AM
 Sample Type : Essential Oil
 Sample Name : Lemon Oil, Italy
 Sample ID : Barefut-0108
 Injection Volume : 0.10
 Instrument ID : GC-3

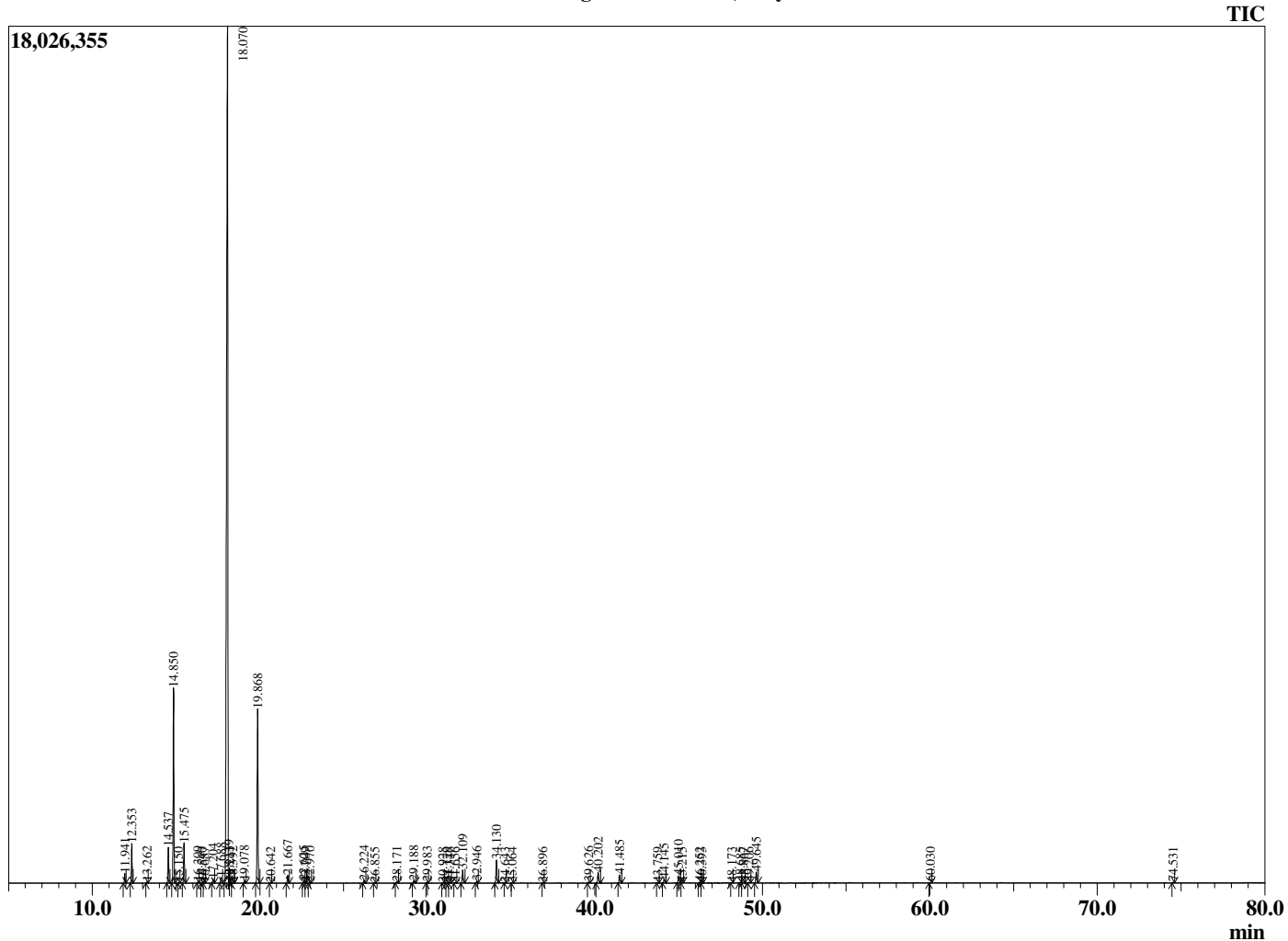


Peak Report TIC

| R.Time | Name | Area% |
|--------|--------------------------|--------|
| 11.941 | alpha-Thujene | 0.42 |
| 12.353 | alpha-Pinene | 1.76 |
| 13.262 | Camphene | 0.05 |
| 14.537 | Sabinene | 1.72 |
| 14.850 | beta-Pinene | 9.41 |
| 15.150 | 6-Methyl hept-5-en-2-one | 0.02 |
| 15.475 | Myrcene | 1.93 |
| 16.309 | Octanal | 0.06 |
| 16.540 | alpha-Phellandrene | 0.05 |
| 16.687 | delta-3-Carene | 0.03 |
| 17.204 | alpha-Terpinene | 0.22 |
| 17.688 | para-Cymene | 0.31 |
| 18.070 | Limonene | 67.65 |
| 18.139 | beta-Phellandrene | 0.03 |
| 18.211 | 1,8-Cineole | 0.02 |
| 18.392 | cis-beta-Ocimene | 0.06 |
| 19.078 | trans-beta-Ocimene | 0.13 |
| 19.868 | gamma-Terpinene | 9.44 |
| 20.642 | trans-Sabinene hydrate | 0.03 |
| 21.667 | Terpinolene | 0.43 |
| 22.625 | Linalool | 0.12 |
| 22.709 | cis-Sabinene hydrate | 0.02 |
| 22.970 | Nonanal | 0.09 |
| 26.224 | Citronellal | 0.14 |
| 26.855 | cis-Chrysanthenol | 0.02 |
| 28.171 | trans-Isocitral | 0.07 |
| 29.188 | alpha-Terpineol | 0.13 |
| 29.983 | Decanal | 0.06 |
| 30.928 | 2,3-Epoxyneral | 0.02 |
| 31.179 | Nerol | 0.05 |
| 31.346 | Citronellol | 0.03 |
| 31.656 | 2,3-Epoxygeranial | 0.03 |
| 32.109 | Neral | 0.78 |
| 32.946 | Geraniol | 0.10 |
| 34.130 | Geranial | 1.37 |
| 34.643 | Perillaldehyde | 0.02 |
| 35.064 | trans-Carvone oxide | 0.03 |
| 36.896 | Undecanal | 0.02 |
| 39.626 | Citronellyl acetate | 0.06 |
| 40.202 | Neryl acetate | 0.68 |
| 41.485 | Geranyl acetate | 0.51 |
| 43.759 | cis-alpha-Bergamotene | 0.03 |
| 44.145 | beta-Caryophyllene | 0.27 |
| 45.010 | trans-alpha-Bergamotene | 0.48 |
| 45.215 | Unidentified | 0.02 |
| 46.252 | trans-beta-Farnesene | 0.05 |
| 46.393 | alpha-Humulene | 0.02 |
| 48.173 | Farnesene isomer | 0.02 |
| 48.685 | Valencene | 0.05 |
| 48.867 | Bicyclogermacrene | 0.06 |
| 49.206 | cis-alpha-Bisabolene | 0.06 |
| 49.645 | beta-Bisabolene | 0.73 |
| 60.030 | alpha-Bisabolol | 0.04 |
| 74.531 | Citropten | 0.03 |
| | | 100.00 |

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

Chromatogram Lemon Oil, Italy



Comments:

The analysis of this Lemon Oil, Italy batch sample meets the expected chemical profile for authentic essential oil of *Citrus limon*. No contamination or adulteration was detected.