

Sample Information

Analyzed by : Dr. Robert S. Pappas
 Analyzed : 2/28/2019 11:29:14 PM
 Sample Type : Essential Oil
 Sample Name : Rosemary - Barefut
 Sample ID : 0108
 Injection Volume : 0.10
 Instrument ID : GC-3

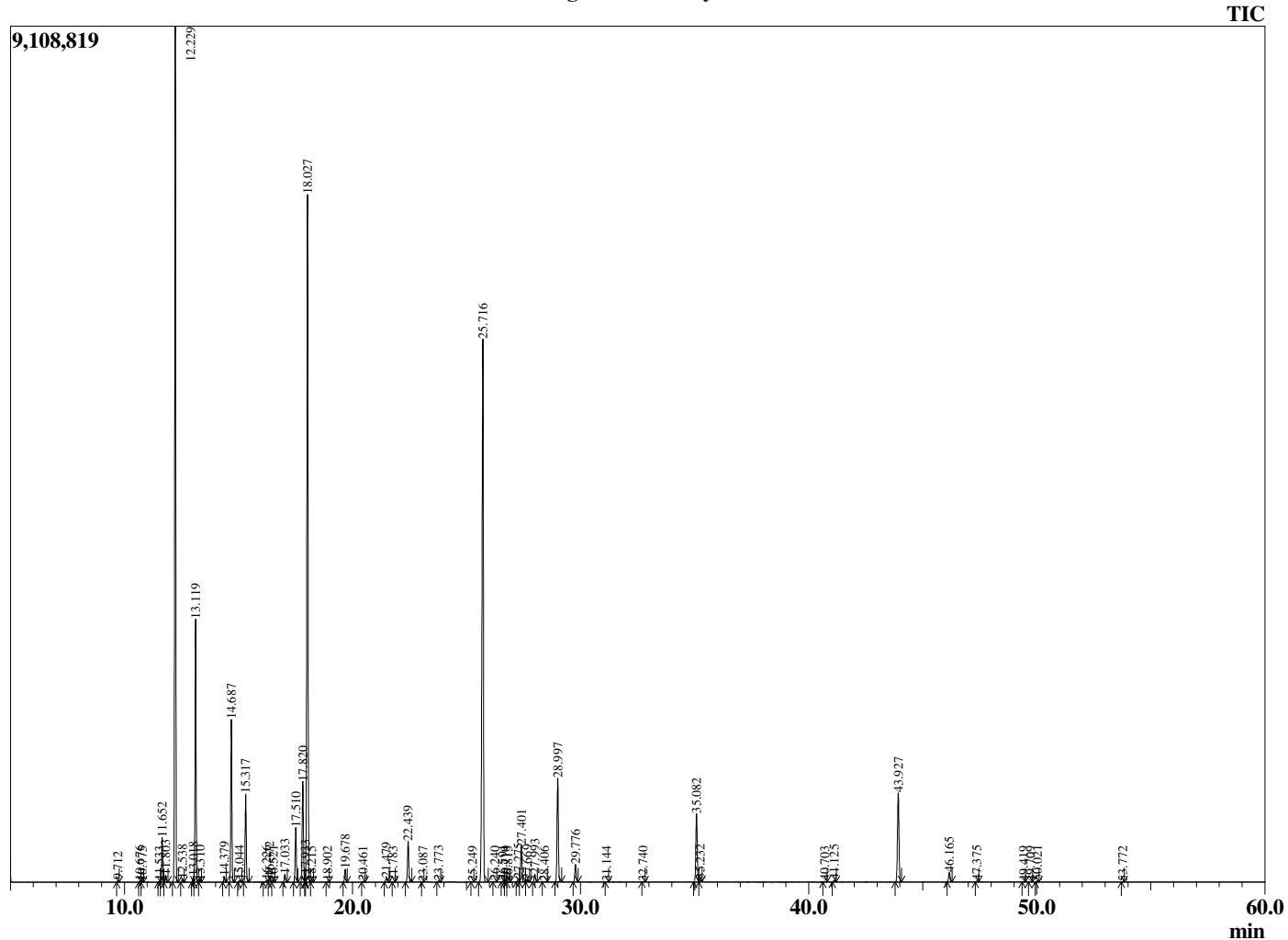


Peak Report TIC

| R.Time | Name | Area% |
|--------|---------------------------|--------|
| 9.712 | Cyclofenchene | 0.04 |
| 10.676 | Bornylene | 0.03 |
| 10.775 | Unidentified | 0.02 |
| 11.533 | Hashishene | 0.02 |
| 11.652 | Tricyclene | 1.15 |
| 11.803 | alpha-Thujene | 0.18 |
| 12.229 | alpha-Pinene | 22.98 |
| 12.538 | beta-Fenchene | 0.08 |
| 13.018 | alpha-Fenchene | 0.14 |
| 13.119 | Camphene | 6.98 |
| 13.310 | Thuja-2,4(10)diene | 0.03 |
| 14.379 | Sabinene | 0.16 |
| 14.687 | beta-Pinene | 4.54 |
| 15.044 | 3-Octanone | 0.06 |
| 15.317 | Myrcene | 2.57 |
| 16.226 | Pseudolimonene | 0.06 |
| 16.372 | alpha-Phellandrene | 0.14 |
| 16.521 | delta-3-Carene | 0.04 |
| 17.033 | alpha-Terpinene | 0.23 |
| 17.510 | para-Cymene | 1.64 |
| 17.820 | Limonene | 3.20 |
| 17.933 | beta-Phellandrene | 0.13 |
| 18.027 | 1,8-Cineole | 21.05 |
| 18.215 | cis-beta-Ocimene | 0.02 |
| 18.902 | trans-beta-Ocimene | 0.02 |
| 19.678 | gamma-Terpinene | 0.39 |
| 20.461 | trans-Sabinene hydrate | 0.02 |
| 21.479 | Terpinolene | 0.14 |
| 21.783 | para-Cymenene | 0.01 |
| 22.439 | Linalool | 1.33 |
| 23.087 | Thujol | 0.01 |
| 23.773 | alpha-Fenchol | 0.04 |
| 25.249 | trans-Pinocarveol | 0.01 |
| 25.716 | Camphor | 19.87 |
| 26.240 | trans-beta-Terpineol | 0.02 |
| 26.591 | Pinocamphone | 0.03 |
| 26.710 | Pinocarvone | 0.02 |
| 26.815 | Isoborneol | 0.02 |
| 27.275 | delta-Terpineol | 0.12 |
| 27.401 | Borneol | 1.28 |
| 27.669 | Isopinocamphone | 0.07 |
| 27.993 | Terpinen-4-ol | 0.26 |
| 28.406 | para-Cymen-8-ol | 0.02 |
| 28.997 | alpha-Terpineol | 3.58 |
| 29.776 | Verbenone | 0.60 |
| 31.144 | Citronellol | 0.02 |
| 32.740 | Geraniol | 0.01 |
| 35.082 | Bornyl acetate | 2.50 |
| 35.232 | Isobornyl acetate | 0.08 |
| 40.703 | alpha-Ylangene | 0.02 |
| 41.125 | alpha-Copaene | 0.07 |
| 43.927 | beta-Caryophyllene | 3.43 |
| 46.165 | alpha-Humulene | 0.38 |
| 47.375 | trans-Cadina-1(6),4-diene | 0.03 |
| 49.419 | beta-Bisabolene | 0.01 |
| 49.709 | gamma-Cadinene | 0.02 |
| 50.021 | delta-Cadinene | 0.05 |
| 53.772 | Caryophyllene oxide | 0.02 |
| | | 100.00 |

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

Chromatogram Rosemary - Barefut



Comments:

The analysis of this Rosemary Oil, Spain batch sample meets the expected chemical profile for authentic essential oil of *Rosmarinus officinalis*. No contamination or adulteration was detected.