

# Sample Information

Analyzed by : Dr. Robert S. Pappas  
 Analyzed : 10/3/2018 7:49:46 AM  
 Sample Type : Essential Oil  
 Sample Name : Patchouli Oil, Dark  
 Sample ID : A1106AC  
 Injection Volume : 0.10  
 Instrument ID: : GC-3

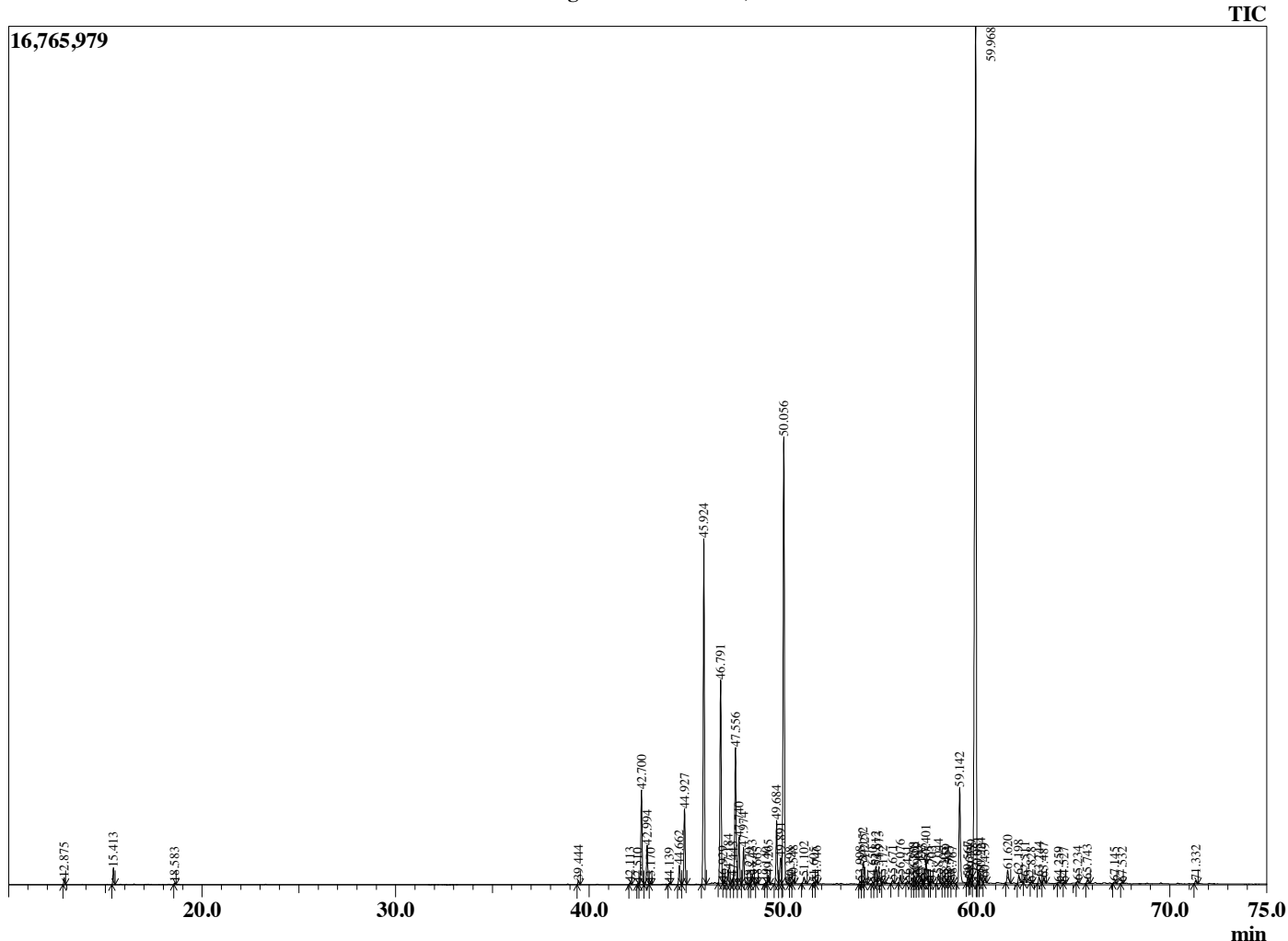
This report is valid for 1 year from the Analyzed Date



## Peak Report TIC

| R.Time | Name                      | Area% |
|--------|---------------------------|-------|
| 12.875 | alpha-Pinene              | 0.15  |
| 15.413 | beta-Pinene               | 0.39  |
| 18.583 | Limonene                  | 0.04  |
| 39.444 | delta-Elementene          | 0.11  |
| 42.113 | alpha-Copaene             | 0.06  |
| 42.510 | Elementene isomer         | 0.02  |
| 42.700 | beta-Patchoulene          | 2.89  |
| 42.994 | beta-Elementene           | 1.19  |
| 43.170 | Patchoulene isomer        | 0.04  |
| 44.139 | alpha-Gurjunene           | 0.03  |
| 44.662 | Cycloisochellene          | 0.59  |
| 44.927 | trans-beta-Caryophyllene  | 2.42  |
| 45.924 | alpha-Guaiene             | 10.73 |
| 46.791 | Seychellene               | 6.60  |
| 46.929 | Unidentified              | 0.05  |
| 47.184 | alpha-Humulene            | 0.44  |
| 47.443 | Aromandere dehydro isomer | 0.18  |
| 47.556 | alpha-Patchoulene         | 4.48  |
| 47.740 | 9-epi-cis-Caryophyllene   | 1.46  |
| 47.974 | 9-epi-trans-Caryophyllene | 1.19  |
| 48.279 | Selina-4,11-diene         | 0.02  |
| 48.433 | beta-Chamigrene           | 0.29  |
| 48.665 | Unidentified              | 0.05  |
| 49.140 | delta-Selinene            | 0.05  |
| 49.265 | beta-Selinene             | 0.28  |
| 49.684 | Aciphylene                | 2.07  |
| 49.891 | alpha-Selinene            | 1.05  |
| 50.056 | alpha-Bulnesene           | 15.24 |
| 50.398 | Unidentified              | 0.02  |
| 50.548 | Nootkatene                | 0.10  |
| 51.102 | (-)-alpha-Panasinsen      | 0.24  |
| 51.605 | Unidentified              | 0.04  |
| 51.746 | Nootkatene isomer         | 0.09  |
| 53.998 | Unidentified              | 0.09  |
| 54.152 | D Norpatchoulenol         | 0.74  |
| 54.227 | Unidentified              | 0.49  |
| 54.650 | Unidentified              | 0.05  |
| 54.812 | Caryophyllene oxide       | 0.64  |
| 54.973 | Spathulenol               | 0.67  |
| 55.172 | Unidentified              | 0.07  |
| 55.671 | Unidentified              | 0.10  |
| 56.076 | Unidentified              | 0.25  |
| 56.431 | Humulene epoxide II       | 0.06  |
| 56.758 | Unidentified              | 0.16  |
| 56.801 | Unidentified              | 0.25  |
| 56.963 | Unidentified              | 0.08  |
| 57.177 | Unidentified              | 0.18  |
| 57.235 | Unidentified              | 0.13  |
| 57.401 | Unidentified              | 0.86  |
| 57.555 | Unidentified              | 0.05  |
| 57.703 | Unidentified              | 0.05  |
| 58.044 | Pogostol                  | 0.34  |
| 58.305 | Unidentified              | 0.05  |
| 58.459 | Eudesm-7(11)-en-4-ol      | 0.16  |
| 58.595 | Palustrol isomer          | 0.08  |
| 58.767 | Unidentified              | 0.07  |
| 59.142 | Unidentified              | 3.62  |
| 59.567 | Unidentified              | 0.16  |
| 59.644 | Unidentified              | 0.03  |
| 59.759 | Unidentified              | 0.10  |
| 59.968 | Patchouli alcohol         | 35.28 |
| 60.081 | Unidentified              | 0.29  |

## Chromatogram Patchouli Oil, Dark



## Comments:

The analysis of this Patchouli Oil, Dark batch sample meets the expected chemical profile for authentic essential oil of Pogostemon cablin. No contamination or adulteration was detected.

| R.Time | Name                            | Area%  |
|--------|---------------------------------|--------|
| 60.224 | 14-hydroxy-9epi-Z-Caryophyllene | 0.35   |
| 60.439 | 14-hydroxy-9epi-E-Caryophyllene | 0.16   |
| 61.620 | cis-Thujopsenol                 | 0.50   |
| 62.198 | Unidentified                    | 0.26   |
| 62.511 | Atlantone isomer                | 0.15   |
| 62.828 | Unidentified                    | 0.02   |
| 63.244 | Unidentified                    | 0.21   |
| 63.487 | Longifolol                      | 0.19   |
| 64.259 | Atlantone isomer                | 0.03   |
| 64.527 | Unidentified                    | 0.02   |
| 65.234 | Unidentified                    | 0.06   |
| 65.743 | Unidentified                    | 0.12   |
| 67.145 | Unidentified                    | 0.08   |
| 67.532 | Nootkatone                      | 0.04   |
| 71.332 | Unidentified                    | 0.11   |
|        |                                 | 100.00 |