

**Date**: April 29, 2022

## **CERTIFICATE OF ANALYSIS - GC PROFILING**

Sample identification: Frankincense Sacra - 220276677

**Type**: Essential oil

Source: Boswellia sacra

**ANALYSIS** 

Method: 10152018\_10:1split.m - Analysis of the composition of an essential oil, or

other volatile liquid, by GC-FID, identifications validated by GC-MS.

Analysis date: April 28, 2022

Physical aspect: Pale Yellow Liquid

CONCLUSION

No adulterant or contaminant has been detected in this oil.

| Peak | Compund                       | RT     | Area Sum % |
|------|-------------------------------|--------|------------|
| 1    | (3Z)-Hexenol                  | 8.149  | 0.37       |
| 2    | Tricyclene                    | 8.278  | 0.06       |
| 3    | α-Thujene                     | 8.617  | 0.76       |
| 4    | α-Pinene                      | 9.03   | 73.09      |
| 5    | Camphene                      | 9.553  | 1.65       |
| 6    | Thuja-2,4(10)-diene           | 9.877  | 0.35       |
| 7    | m-Cymene                      | 10.788 | 0.02       |
| 8    | Sabinene                      | 10.997 | 3.96       |
| 9    | β-Pinene                      | 11.067 | 1.23       |
| 10   | Camphene analog II            | 11.582 | 0.01       |
| 11   | 6-Methyl-5-heptene-2-one      | 12.032 | 0.09       |
| 12   | β-Myrcene                     | 12.231 | 4.47       |
| 13   | 3-Octanol                     | 12.417 | 0.02       |
| 14   | α-Phellandrene                | 12.814 | 0.5        |
| 15   | δ3-carene                     | 13.162 | 0.39       |
| 16   | o-Methylanisole               | 13.266 | 0.13       |
| 17   | unknown                       | 13.389 | 0.01       |
| 18   | α-Terpinene                   | 13.626 | 0.13       |
| 19   | Carvomenthene                 | 13.883 | 0.02       |
| 20   | p-Cymene                      | 14.163 | 1.08       |
| 21   | Limonene                      | 14.439 | 5.5        |
| 22   | 1,8-Cineole                   | 14.501 | 0.34       |
| 23   | o-Cymene                      | 15.103 | 0.01       |
| 24   | (Z)-β-Ocimene                 | 15.359 | 0.28       |
| 25   | unknown                       | 15.873 | 0.01       |
| 26   | (E)-β-Ocimene                 | 16.053 | 0.15       |
| 27   | γ-Terpinene                   | 16.591 | 0.29       |
| 28   | cis-Sabinene hydrate          | 17.171 | 0.01       |
| 29   | cis-p-Mentha-2,8-dien-1-ol    | 17.501 | 0.02       |
| 30   | unknown                       | 17.667 | 0.01       |
| 31   | unknown                       | 18.197 | 0.02       |
| 32   | α-Terpinolene                 | 18.738 | 0.11       |
| 33   | p-Cymenene                    | 18.792 | 0.05       |
| 34   | α-Pinene oxide                | 18.988 | 0.03       |
| 35   | trans-Sabinene hydrate        | 19.267 | 0.1        |
| 36   | Linalool                      | 19.923 | 0.22       |
| 37   | cis-para-Menth-2-en-1-ol      | 21.218 | 0.03       |
| 38   | α-Campholenal                 | 21.603 | 0.2        |
| 39   | Pinocarveol <trans-></trans-> | 22.383 | 0.29       |
| 40   | unknown                       | 22.617 | 0.1        |
| 41   | trans-para-Mentha-2-en-1-ol   | 22.79  | 0.05       |
| 42   | trans-Verbenol                | 23.062 | 0.15       |
| 43   | α-Phellandrene-8-ol analog    | 23.351 | 0.09       |
| 44   | Pinocamphone                  | 24.152 | 0.04       |
| 45   | α-Phellandrene-8-ol           | 24.944 | 0.14       |

| 46 | Terpinen-4-ol              | 25.645 | 0.51   |
|----|----------------------------|--------|--------|
| 47 | p-Cymen-8-ol               | 26.507 | 0.13   |
| 48 | α-Terpineol                | 26.837 | 0.12   |
| 49 | Myrtenal                   | 27.092 | 0.08   |
| 50 | Myrtenol                   | 27.286 | 0.05   |
| 51 | Verbenone                  | 28.15  | 0.19   |
| 52 | Octyl acetate              | 29.29  | 0.04   |
| 53 | Carvone                    | 31.188 | 0.03   |
| 54 | unknown                    | 33.265 | 0.02   |
| 55 | Bornyl acetate             | 34.737 | 0.18   |
| 56 | α-Cubebene                 | 40.062 | 0.06   |
| 57 | α-Copaene                  | 41.714 | 0.07   |
| 58 | β-Bourbonene               | 42.329 | 0.11   |
| 59 | β-Elemene                  | 43.218 | 0.45   |
| 60 | β-Caryophyllene            | 44.956 | 0.41   |
| 61 | trans-α-Bergamotene        | 47.107 | 0.03   |
| 62 | α-Humulene                 | 47.599 | 0.1    |
| 63 | Alloaromadendrene          | 48.147 | 0.03   |
| 64 | trans-Cadina-1(6),4-diene  | 49.556 | 0.04   |
| 65 | γ-Muurolene                | 49.727 | 0.04   |
| 66 | Germa <mark>crene</mark> D | 49.799 | 0.03   |
| 67 | β-Selinene                 | 50.125 | 0.22   |
| 68 | α-Selinene                 | 50.865 | 0.16   |
| 69 | α-Muurolene                | 51.593 | 0.02   |
| 70 | γ-Cadinene                 | 52.478 | 0.04   |
| 71 | δ-Cadinene                 | 53.366 | 0.09   |
| 72 | Caryophyllene oxide        | 57.225 | 0.08   |
| 73 | τ-Cadinol                  | 61.707 | 0.02   |
| 74 | β-Eudesmol                 | 61.974 | 0.03   |
|    | Total identified           |        | 99.85% |

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