Table S-I. Values of terpane parameters in investigated oils

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Parameter | Ts/(Ts+Tm)a | C29Ts/C29Hb | C29H/C30Hc | C30M/C30Hd | GIe | OIf |
| No. | Sample Technique | GC-MS | GC-MS-MS | GC-MS | GC-MS-MS | GC-MS | GC-MS-MS | GC-MS | GC-MS-MS | GC-MS | GC-MS-MS | GC-MS | GC-MS-MS |
|  | Libyan oils |  |  |  |  |  |  |  |  |  |  |  |  |
| 1 | Oil 7 Amal | 0.56 | 0.65 | 0.53 | 0.50 | 0.54 | 0.61 | 0.14 | 0.07 | 7.46 | 5.30 | N.D.g | N.D. |
| 2 | Oil 5 En Naga | 0.63 | 0.68 | 0.73 | 0.60 | 0.50 | 0.60 | 0.13 | 0.07 | 8.24 | 5.05 | N.D. | N.D. |
| 3 | Oil 3 Intisar AQLB3C | 0.56 | 0.87 | 0.83 | 1.58 | 0.77 | 0.65 | 0.14 | 0.06 | 6.42 | 4.43 | N.D. | N.D. |
| 4 | Oil 6 Intisar E25 | 0.49 | 0.54 | 0.44 | 0.37 | 0.67 | 0.74 | 0.07 | 0.04 | 10.78 | 3.71 | N.D. | N.D. |
| 5 | Oil 10 Intisar A52 | 0.61 | 0.63 | 0.51 | 0.38 | 0.72 | 0.73 | 0.10 | 0.03 | 10.88 | 2.93 | N.D. | N.D. |
| 6 | Oil 12 Intisar A21 | 0.65 | 0.74 | 0.74 | 0.63 | 0.45 | 0.58 | 0.07 | 0.04 | 9.91 | 3.04 | N.D. | N.D. |
| 7 | Oil 14 Intisar D21 | 0.60 | 0.64 | 0.65 | 0.54 | 0.53 | 0.58 | 0.08 | 0.04 | 9.12 | 3.11 | N.D. | N.D. |
| 8 | Oil 9 Messla | 0.68 | 0.75 | 0.75 | 0.65 | 0.51 | 0.52 | 0.13 | 0.05 | 17.12 | 4.29 | N.D. | N.D. |
| 9 | Oil 13 Nafoora | 0.53 | 0.59 | 0.58 | 1.00 | 0.53 | 0.61 | 0.10 | 0.05 | 9.74 | 5.09 | N.D. | N.D. |
| 10 | Oil 8 Samah 1 | 0.67 | 0.72 | 0.56 | 0.46 | 0.52 | 0.54 | 0.10 | 0.05 | 9.38 | 4.29 | N.D. | N.D. |
| 11 | Oil 11 Samah 2 | 0.65 | 0.71 | 0.64 | 0.54 | 0.52 | 0.47 | 0.07 | 0.05 | 9.91 | 3.43 | N.D. | N.D. |
| 12 | Oil 2 Sarir | 0.58 | 0.65 | 0.64 | 0.59 | 0.56 | 0.62 | 0.14 | 0.07 | 10.06 | 6.03 | N.D. | N.D. |
| 13 | Oil 1 Waha | 0.58 | 0.65 | 0.56 | 0.43 | 0.45 | 0.48 | 0.10 | 0.05 | 6.05 | 4.97 | N.D. | N.D. |
| 14 | Oil 4 Zelten | 0.51 | 0.58 | 0.47 | 0.37 | 0.49 | 0.53 | 0.11 | 0.05 | 6.67 | 3.74 | N.D. | N.D. |
|  | Elemir oils |  |  |  |  |  |  |  |  |  |  |  |  |
| 15 | Elemir-2 | 0.38 | 0.46 | 0.22 | 0.22 | 0.51 | 0.61 | 0.11 | 0.07 | 3.54 | 2.64 | 10.73 | 14.35 |
| 16 | Elemir-6 | 0.37 | 0.44 | 0.23 | 0.19 | 0.51 | 0.60 | 0.11 | 0.07 | 4.48 | 2.73 | 14.47 | 16.85 |
| 17 | Elemir-10 | 0.40 | 0.44 | 0.15 | 0.21 | 0.69 | 0.63 | 0.11 | 0.06 | 4.35 | 2.79 | 11.41 | 15.33 |
| 18 | Elemir-15 | 0.36 | 0.41 | 0.19 | 0.19 | 0.53 | 0.61 | 0.11 | 0.06 | 3.66 | 2.75 | 12.80 | 17.69 |
| 19 | Elemir-18 | 0.35 | 0.40 | 0.20 | 0.19 | 0.52 | 0.62 | 0.10 | 0.06 | 3.28 | 2.41 | 13.00 | 18.38 |
| 20 | Elemir-19 | 0.41 | 0.48 | 0.21 | 0.22 | 0.52 | 0.63 | 0.10 | 0.06 | 2.88 | 2.98 | 9.32 | 13.69 |
| 21 | Elemir-33 | 0.37 | 0.44 | 0.20 | 0.21 | 0.51 | 0.63 | 0.11 | 0.06 | 4.56 | 2.96 | 13.40 | 14.38 |
| 22 | Elemir-40 | 0.39 | 0.40 | 0.17 | 0.18 | 0.69 | 0.62 | 0.10 | 0.06 | 4.87 | 2.80 | 14.06 | 17.86 |
| 23 | Elemir-43 | 0.41 | 0.46 | 0.15 | 0.22 | 0.63 | 0.64 | 0.16 | 0.06 | 3.71 | 2.81 | 9.89 | 13.40 |
| 24 | Elemir-45 | 0.40 | 0.41 | 0.20 | 0.20 | 0.69 | 0.62 | 0.11 | 0.06 | 4.89 | 2.77 | 13.23 | 16.48 |
| 25 | Elemir-48 | 0.36 | 0.43 | 0.20 | 0.20 | 0.51 | 0.61 | 0.12 | 0.06 | 3.08 | 2.44 | 11.75 | 14.76 |
| 26 | Elemir-49 | 0.38 | 0.43 | 0.21 | 0.19 | 0.56 | 0.62 | 0.11 | 0.06 | 3.48 | 2.84 | 11.41 | 15.49 |
| 27 | Elemir-51 | 0.37 | 0.43 | 0.17 | 0.21 | 0.54 | 0.62 | 0.14 | 0.06 | 3.25 | 2.80 | 10.31 | 16.03 |
| 28 | Elemir-52 | 0.35 | 0.41 | 0.21 | 0.20 | 0.53 | 0.61 | 0.11 | 0.06 | 3.21 | 2.81 | 12.13 | 16.16 |
| 29 | Elemir-54 | 0.37 | 0.43 | 0.19 | 0.21 | 0.53 | 0.62 | 0.11 | 0.06 | 3.11 | 2.82 | 11.62 | 16.15 |
| 30 | Elemir-59 | 0.37 | 0.41 | 0.20 | 0.19 | 0.53 | 0.62 | 0.11 | 0.06 | 2.86 | 2.44 | 12.81 | 17.25 |
|  | Rusanda oils |  |  |  |  |  |  |  |  |  |  |  |  |
| 31 | Rusanda-1 | 0.44 | 0.53 | 0.28 | 0.28 | 0.49 | 0.60 | 0.13 | 0.05 | 11.75 | 2.80 | 15.69 | 16.50 |
| 32 | Rusanda-2 | 0.54 | 0.61 | 0.33 | 0.34 | 0.45 | 0.57 | 0.11 | 0.06 | 12.61 | 3.48 | 13.93 | 15.27 |
| 33 | Rusanda-5 | 0.44 | 0.58 | 0.27 | 0.32 | 0.51 | 0.59 | 0.11 | 0.06 | 9.68 | 3.13 | 12.59 | 16.17 |
| 34 | Rusanda-8 | 0.48 | 0.56 | 0.30 | 0.28 | 0.45 | 0.60 | 0.13 | 0.05 | 6.16 | 2.41 | 14.43 | 12.35 |
| 35 | Rusanda-12 | 0.45 | 0.58 | 0.34 | 0.33 | 0.47 | 0.57 | 0.11 | 0.05 | 11.07 | 2.82 | 11.96 | 11.50 |
| 36 | Rusanda-14 | 0.44 | 0.56 | 0.31 | 0.28 | 0.50 | 0.61 | 0.11 | 0.05 | 5.82 | 2.45 | 12.93 | 12.95 |
| 37 | Rusanda-16 | 0.46 | 0.55 | 0.29 | 0.31 | 0.50 | 0.59 | 0.12 | 0.05 | 9.94 | 2.67 | 13.56 | 13.36 |
| 38 | Rusanda-17 | 0.42 | 0.55 | 0.31 | 0.30 | 0.50 | 0.62 | 0.11 | 0.05 | 10.43 | 2.42 | 12.13 | 12.75 |
| 39 | Rusanda istok-1 | 0.39 | 0.47 | 0.17 | 0.24 | 0.69 | 0.66 | 0.12 | 0.07 | 2.18 | 2.07 | 7.34 | 9.81 |

Table S-I continued

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Parameter | Ts/(Ts+Tm)a | C29Ts/C29Hb | C29H/C30Hc | C30M/C30Hd | GIe | OIf |
| No. | Sample Technique | GC-MS | GC-MS-MS | GC-MS | GC-MS-MS | GC-MS | GC-MS-MS | GC-MS | GC-MS-MS | GC-MS | GC-MS-MS | GC-MS | GC-MS-MS |
|  | Zrenjanin oils |  |  |  |  |  |  |  |  |  |  |  |  |
| 40 | Zrenjanin-4 | 0.26 | 0.25 | 0.27 | 0.20 | 0.61 | 0.66 | 0.18 | 0.11 | 4.26 | 4.27 | 20.85 | 28.72 |
| 41 | Zrenjanin-6 | 0.24 | 0.26 | 0.24 | 0.19 | 0.53 | 0.67 | 0.15 | 0.10 | 3.52 | 3.72 | 20.42 | 28.60 |
| 42 | Zrenjanin sever-2 | 0.25 | 0.28 | 0.20 | 0.16 | 0.56 | 0.69 | 0.16 | 0.09 | 3.20 | 3.44 | 15.11 | 20.12 |
| 43 | Zrenjanin sever-3 | 0.25 | 0.27 | 0.18 | 0.16 | 0.59 | 0.70 | 0.14 | 0.09 | 2.81 | 2.97 | 14.41 | 19.75 |
| 44 | Zrenjanin sever-5 | 0.25 | 0.25 | 0.17 | 0.17 | 0.61 | 0.69 | 0.16 | 0.09 | 2.99 | 3.04 | 15.61 | 21.35 |
| 45 | Zrenjanin sever-7 | 0.24 | 0.27 | 0.18 | 0.16 | 0.60 | 0.69 | 0.15 | 0.08 | 2.91 | 3.28 | 15.99 | 21.78 |
|  | Velebit oils |  |  |  |  |  |  |  |  |  |  |  |  |
| 46 | Velebit-1 | 0.51 | 0.63 | 0.20 | 0.46 | 0.55 | 0.49 | 0.11 | 0.06 | 12.92 | 6.78 | 13.95 | 23.12 |
| 47 | Velebit-2 | 0.53 | 0.62 | 0.19 | 0.46 | 0.53 | 0.49 | 0.11 | 0.06 | 13.46 | 5.88 | 14.65 | 22.84 |
| 49 | Velebit-3 | 0.56 | 0.63 | 0.21 | 0.42 | 0.52 | 0.50 | 0.11 | 0.06 | 12.2 | 5.92 | 14.24 | 23.66 |
| 49 | Velebit-4 | 0.49 | 0.62 | 0.18 | 0.47 | 0.58 | 0.49 | 0.11 | 0.06 | 11.64 | 5.90 | 14.33 | 23.44 |
| 50 | Velebit-5 | 0.53 | 0.63 | 0.20 | 0.41 | 0.60 | 0.51 | 0.10 | 0.06 | 10.71 | 6.40 | 15.65 | 22.84 |
| 51 | Velebit-6 | 0.54 | 0.62 | 0.24 | 0.45 | 0.51 | 0.49 | 0.11 | 0.06 | 11.51 | 6.84 | 15.57 | 23.32 |
| 52 | Velebit-7 | 0.54 | 0.64 | 0.24 | 0.52 | 0.56 | 0.49 | 0.12 | 0.06 | 15.11 | 6.79 | 14.26 | 22.86 |
| 53 | Velebit-8 | 0.50 | 0.63 | 0.22 | 0.43 | 0.51 | 0.50 | 0.11 | 0.06 | 12.39 | 5.97 | 13.58 | 24.35 |
| 54 | Velebit-9 | 0.55 | 0.62 | 0.19 | 0.42 | 0.54 | 0.51 | 0.10 | 0.06 | 10.14 | 6.58 | 14.36 | 23.52 |
| 55 | Velebit-10 | 0.50 | 0.60 | 0.19 | 0.40 | 0.51 | 0.51 | 0.10 | 0.06 | 11.49 | 5.72 | 13.68 | 23.59 |
| 56 | Velebit-11 | 0.50 | 0.61 | 0.24 | 0.46 | 0.54 | 0.49 | 0.13 | 0.07 | 14.09 | 6.65 | 15.27 | 22.77 |
| 57 | Velebit-12 | 0.59 | 0.67 | 0.27 | 0.52 | 0.54 | 0.49 | 0.12 | 0.07 | 13.65 | 7.60 | 16.38 | 25.83 |
| 58 | Velebit-13 | 0.58 | 0.66 | 0.24 | 0.46 | 0.60 | 0.51 | 0.11 | 0.06 | 11.70 | 7.06 | 13.77 | 22.52 |
| 59 | Velebit-14 | 0.55 | 0.65 | 0.21 | 0.49 | 0.58 | 0.48 | 0.10 | 0.06 | 9.73 | 6.65 | 15.02 | 22.62 |
| 60 | Velebit-15 | 0.60 | 0.67 | 0.21 | 0.47 | 0.65 | 0.49 | 0.13 | 0.05 | 13.72 | 6.69 | 18.01 | 23.76 |
| 61 | Velebit-16 | 0.56 | 0.64 | 0.21 | 0.48 | 0.56 | 0.48 | 0.11 | 0.06 | 11.54 | 6.82 | 15.28 | 23.85 |
| 62 | Velebit-17 | 0.60 | 0.67 | 0.26 | 0.50 | 0.54 | 0.49 | 0.10 | 0.06 | 12.58 | 6.82 | 13.44 | 23.00 |
| 63 | Velebit-18 | 0.52 | 0.61 | 0.20 | 0.45 | 0.55 | 0.48 | 0.11 | 0.07 | 13.34 | 6.02 | 17.74 | 27.34 |
| 64 | Velebit-19 | 0.54 | 0.59 | 0.19 | 0.42 | 0.54 | 0.48 | 0.12 | 0.06 | 10.70 | 6.02 | 19.02 | 28.30 |
| 65 | Velebit-20 | 0.56 | 0.66 | 0.21 | 0.49 | 0.61 | 0.48 | 0.12 | 0.06 | 11.11 | 6.99 | 14.36 | 22.99 |
| 66 | Velebit-21 | 0.52 | 0.64 | 0.28 | 0.48 | 0.55 | 0.48 | 0.11 | 0.06 | 11.74 | 6.83 | 16.95 | 25.32 |
| 67 | Velebit-22 | 0.55 | 0.66 | 0.28 | 0.53 | 0.52 | 0.49 | 0.10 | 0.06 | 12.01 | 6.75 | 15.27 | 23.72 |
| 68 | Velebit-23 | 0.59 | 0.66 | 0.25 | 0.54 | 0.60 | 0.49 | 0.14 | 0.06 | 13.85 | 7.44 | 14.53 | 23.81 |
| 69 | Velebit-24 | 0.58 | 0.62 | 0.22 | 0.48 | 0.62 | 0.47 | 0.17 | 0.06 | 15.16 | 6.67 | 21.46 | 25.21 |
| 70 | Velebit-25 | 0.54 | 0.67 | 0.35 | 0.50 | 0.65 | 0.50 | 0.19 | 0.05 | 31.68 | 7.45 | 25.00 | 22.92 |

a Ts/(Ts+Tm) = C2718α(H)-22,29,30-trisnorneohopane/(C2718α(H)-22,29,30-trisnorneohopane + C2717α(H)-22,29,30-trisnorhopane; b C29Ts/C29H = C2918α(H)-30-norneohopane/C2917α(H)21β(H)-30-norhopane;

c C29H/C30H = C2917α(H)21β(H)-30-norhopane/C3017α(H)21β(H)-hopane; d C30M/C30H = C3017β(H)21α(H)-moretane/C3017α(H)21β(H)-hopane; e GI, Gammacerane index, GI = G x 100/C30H; f Oleanane index, OI = O x 100/C30H; g N.D. – Not determined due to the absence of oleanane in Lybian oils.