**Table S1.** Physical and chemical properties of soil under the selected vegetation covers.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Type of vegetation cover** |  | **pH** | **CE**  **(mS/cm)** | **Total & active carbonates** | | **OC (%)** | **BD**  **(g/cm3)** | **A**  **(%)** | **Lf (%)** | **Lg (%)** | **S**  **(%)** | **Alt.**  **(m)** |
| % CaT | % CaA |
| **M** | Max. | 8.4 | 0.1 | 7.0 | 0 | 7.0 | 1.5 | 10 | 5 | 45 | 40 | 975 |
| Min. | 7 | 0.1 | 0.2 | 0 | 0.9 | 1.1 | 10 | 14.4 | 35 | 40 | 904 |
| Avg. | 7.7 | 0.1 | 2.7 | 0 | 3.1 | 1.3 | 11.5 | 7.8 | 41.3 | 39.4 | 956 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| **GC** | Max. | 8.1 | 0.1 | 14 | 0.7 | 3.2 | 1.7 | 15 | 5.0 | 0 | 80 | 999 |
| Min. | 7.4 | 0.1 | 0.7 | 0 | 0.9 | 1.0 | 5.0 | 0 | 5 | 90 | 859 |
| Avg. | 8.0 | 0.1 | 2.3 | 0.1 | 3.0 | 1.5 | 13.8 | 11.6 | 11.6 | 62.2 | 941 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| **F** | Max. | 8.1 | 0.1 | 37 | 6.2 | 1.5 | 1.6 | 10 | 15 | 20 | 55 | 837 |
| Min. | 5.6 | 0 | 0 | 0 | 0.3 | 1.5 | 20.8 | 9.6 | 2.8 | 69.5 | 764 |
| Avg. | 7.8 | 0.1 | 22 | 2.0 | 0.8 | 1.5 | 11 | 11.6 | 14.6 | 58.2 | 795 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| **GD** | Max. | 7.6 | 0.7 | 1.1 | 11.3 | 4.8 | 1.6 | 15 | 30 | 7.5 | 47.5 | 992 |
| Min. | 6.5 | 0.1 | 0.5 | 0 | 1.5 | 1.4 | 19 | 22 | 12 | 47 | 727 |
| Avg. | 7.1 | 0.2 | 6.8 | 2.8 | 2.6 | 1.4 | 15.8 | 18.4 | 7.5 | 45 | 845 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| **OL** | Max. | 7.3 | 0.2 | 33.7 | 13 | 5.0 | 1.5 | 30 | 22.5 | 7.5 | 40 | 836 |
| Min. | 6.7 | 0.1 | 2.5 | 6.0 | 0.5 | 1.4 | 37.2 | 17.5 | 12.2 | 67 | 776 |
| Avg. | 7.0 | 0.1 | 22.6 | 6.4 | 2.3 | 1.4 | 32.1 | 19.44 | 12.6 | 36 | 795 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| **TC** | Max. | 6.2 | 0.2 | 11.5 | 2.0 | 3.0 | 1.4 | 20 | 24 | 17.3 | 39 | 988 |
| Min. | 6.0 | 0.1 | 0.6 | 0 | 1.6 | 1.4 | 23.5 | 24 | 17 | 35.5 | 979 |
| Avg. | 6.2 | 0.2 | 6.0 | 1.5 | 2.0 | 1.4 | 21.7 | 24 | 17 | 37 | 983 |
| **VH** |  |  |  |  |  |  |  |  |  |  |  |  |
| Max. | 7.3 | 0.8 | 26.2 | 9.4 | 1.6 | 1.6 | 30 | 15 | 0 | 55 | 874 |
| Min. | 6.9 | 0.3 | 5.0 | 3.3 | 0.8 | 1.6 | 10.3 | 0.8 | 6.4 | 82.4 | 728 |
| Avg. | 7.0 | 0.4 | 16.7 | 5.0 | 1.1 | 1.6 | 21 | 5.3 | 4.6 | 69 | 825 |

A: clay, Lf: fine silt, Lg: coarse silt, S: silt, Alt: Altitude.

M: matorral; GC: Sparse Garrigue; F: Forest; GD: Dense Garrigue; OL: Olive grove; TC: Oak coppice; VH: Herbaceous vegetation.