**Table S1.** Physico-chemical parameters recorded in the ports of Cagliari, El Kantaoui, and Heraklion (Chatzinikolaou et al., 2018).

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Sample** | **Silt&Clay%** | **MD** | **σ1** | **Sk1** | **Seawater****salinity** | **T****(°C)** | **Eh****(mV)** | **OC****(mg g-1 dw)** | **CPE****(µg g-1)** | **PAP****ratio** | **∑AH****(ng g-1 dw)** | **UCM****(ng g-1 dw)** |
| ***Port of Cagliari*** |  |  |  |
| 1C1 | 44.9 | Fine sand | Very poorly sorted | Fine skewed | 28.1 | 9.6 | -183.6 | 43.8 | 42.8 | 0.75 | 4,409 | 72,988 |
| 2C1 | 86.3 | Medium silt | Very poorly sorted | Fine skewed | 29.6 | 20.1 | -161.0 | 52.9 | 75.4 | 0.68 | 8,114 | 130,129 |
| 3C1 | 12.1 | Very coarse sand | Very poorly sorted | Very fine skewed | 31.9 | 22.2 | -169.4 | 51.3 | 47.9 | 0.64 | 3,365 | 58,809 |
| 1C2 | 51.6 | Coarse silt | Very poorly sorted | Symmetrical | 34.7 | 10.7 | -45.0 | 50.0 | 44.9 | 0.58 | 6,051 | 73,101 |
| 2C2 | 40.0 | Very fine sand | Very poorly sorted | Symmetrical | 33.9 | 20.2 | -101.1 | 49.7 | 43.0 | 0.72 | 6,193 | 158,721 |
| 3C2 | 19.3 | Fine sand | Very poorly sorted | Symmetrical | 34.9 | 22.7 | -89.4 | 52.4 | 29.1 | 0.48 | 4,970 | 77,111 |
| 1C3 | 56.4 | Coarse silt | Very poorly sorted | Fine skewed | 37.4 | 11.5 | 21.4 | 41.0 | 26.3 | 0.70 | 4,340 | 41,447 |
| 2C3 | 34.6 | Fine sand | Very poorly sorted | Very fine skewed | 35.3 | 19.5 | -84.7 | 26.4 | 18.3 | 0.74 | 2,652 | 49,313 |
| 3C3 | 26.8 | Fine sand | Very poorly sorted | Fine skewed | 35.9 | 22.2 | -60.0 | 36.0 | 24.3 | 0.78 | 2,489 | 51,022 |
| 1C4 | 35.6 | Fine sand | Very poorly sorted | Very fine skewed | 36.0 | 11.7 | 14.7 | 30.3 | 22.6 | 0.73 | 2,340 | 27,890 |
| 2C4 | 65.8 | Coarse silt | Very poorly sorted | Fine skewed | 34.1 | 19.4 | -71.8 | 34.9 | 25.0 | 0.69 | 4,150 | 67,419 |
| 3C4 | 25.5 | Fine sand | Very poorly sorted | Symmetrical | 33.9 | 22.5 | 40.3 | 35.3 | 32.9 | 0.80 | 2,461 | 44,913 |
| 1C5 | 68.4 | Coarse silt | Very poorly sorted | Symmetrical | 29.9 | 12.1 | -10.7 | 52.9 | 17.6 | 0.69 | 2,228 | 13,879 |
| 2C5 | 65.0 | Coarse silt | Very poorly sorted | Fine skewed | 32.9 | 18.8 | -93.4 | 53.8 | 24.8 | 0.69 | 3,339 | 27,721 |
| 3C5 | 21.7 | Fine sand | Very poorly sorted | Fine skewed | 34.3 | 22.4 | 50.6 | 44.6 | 13.6 | 0.79 | 1,779 | 16,667 |
| ***Port of El Kantaoui*** |  |  |  |
| 1E1 | 19.1 | Fine sand | Very poorly sorted | Symmetrical | 36.5 | 11.1 | 150.9 | 14.3 | 13.6 | 0.59 | 1,370 | 19,210 |
| 2E1 | 16.0 | Fine sand | Poorly sorted | Symmetrical | 37.0 | 24.6 | 105.6 | 18.2 | 9.1 | 0.63 | 1,500 | 56,535 |
| 3E1 | 10.6 | Fine sand | Poorly sorted | Very coarse skewed | 36.1 | 26.2 | -155.2 | 38.8 | 27.1 | 0.73 | 2,418 | 76,364 |
| 1E2 | 37.6 | Very fine sand | Very poorly sorted | Fine skewed | 37.2 | 11.9 | -56.3 | 69.8 | 18.9 | 0.68 | 2,673 | 32,735 |
| 2E2 | 51.0 | Very fine sand | Very poorly sorted | Fine skewed | 36.9 | 23.3 | -171.1 | 76.7 | 17.2 | 0.68 | 4,954 | 72,478 |
| 3E2 | 13.4 | Medium sand | Very poorly sorted | Fine skewed | 36.1 | 26.3 | -121.5 | 52.6 | 14.3 | 0.73 | 2,593 | 41,727 |
| 1E3 | 22.7 | Very fine sand | Poorly sorted | Fine skewed | 37.4 | 13 | 332.2 | 17.8 | 6.1 | 0.56 | 893 | 5,114 |
| 2E3 | 31.9 | Very fine sand | Very poorly sorted | Fine skewed | 36.9 | 23.3 | -147.2 | 32.7 | 11.8 | 0.53 | 2,707 | 13,794 |
| 3E3 | 15.4 | Very fine sand | Very poorly sorted | Fine skewed | 36.0 | 26.3 | 171.3 | 30.0 | 7.0 | 0.64 | 2,190 | 13,463 |
| ***Port of Heraklion*** |  |  |  |
| 1H1 | 43.6 | Very fine sand | Very poorly sorted | Symmetrical | 37.9 | 14.7 | 154.9 | 23.0 | 17.7 | 0.63 | 4,255 | 27,894 |
| 2H1 | 50.4 | Very fine sand | Very poorly sorted | Fine skewed | 38.3 | 21.5 | -115.7 | 26.3 | 12.5 | 0.60 | 5,939 | 48,894 |
| 3H1 | 29.9 | Very fine sand | Very poorly sorted | Coarse skewed | 37.3 | 25.8 | -61.7 | 15.1 | 6.6 | 0.75 | 3,488 | 59,693 |
| 1H3 | 34.3 | Very fine sand | Poorly sorted | Very fine skewed | 38.3 | 15.2 | 110.7 | 3.9 | 2.9 | 0.73 | 1,556 | 11,124 |
| 2H3 | 51.4 | Coarse silt | Very poorly sorted | Coarse skewed | 38.5 | 21.2 | 149.4 | 5.0 | 4.2 | 0.70 | 1,872 | 21,480 |
| 3H3 | 13.8 | Fine sand | Poorly sorted | Symmetrical | 37.5 | 25.4 | 216.4 | 4.3 | 2.8 | 0.72 | 1,536 | 25,580 |
| 1H4 | 44.6 | Very fine sand | Poorly sorted | Very fine skewed | 38.3 | 15 | 138.1 | 6.5 | 8.2 | 0.63 | 2,242 | 19,785 |
| 2H4 | 32.7 | Fine sand | Poorly sorted | Very fine skewed | 35.0 | 20.2 | -87.6 | 6.7 | 6.2 | 0.65 | 2,765 | 42,331 |
| 3H4 | 14.1 | Fine sand | Very poorly sorted | Coarse skewed | 37.1 | 25.4 | -102.8 | 9.2 | 6.0 | 0.71 | 2,538 | 55,246 |
| 1H5 | 90.6 | Medium silt | Very poorly sorted | Fine skewed | 38.1 | 16.2 | -181.9 | 27.5 | 10.9 | 0.45 | 22,877 | 78,353 |
| 2H5 | 93.8 | Fine silt | Poorly sorted | Coarse skewed | 38.1 | 20.5 | -143.8 | 31.7 | 9.4 | 0.59 | 28,917 | 141,934 |
| 3H5 | 40.7 | Fine sand | Very poorly sorted | Fine skewed | 37.3 | 25.2 | -202.7 | 24.7 | 3.3 | 0.59 | 10,420 | 77,298 |

Silt&Clay%: percentage of silt and clay; MD: median grain size; σ1: graphic sorting; Sk1: graphic skewness; S: seawater salinity; T: temperature; Eh: redox potential; OC: organic carbon; CPE: total phytopigment concentrations (chlorophyll-*a* + phaeopigments); PAP: ratio of phaeopigments to CPE; ΣAHs: aliphatic hydrocarbons; UCM: unresolved complex mixture