Supplementary Table 1. Microprobe analysis of spinel in the plagioclase peridotites, spinel harzburgites and dunite from southern Palawan Ophiolite. Total iron as FeO\*.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Plagioclase lherzolite | |  |  |  |  |  |  |  |  |  | Plagioclase wehrlite | |  |
|  | Spinel |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sample | PALB-01 | PALB-01 | PALB-01 | PALB-01 | PALB-01 | PALB-01 | PALB-01 | PALB-01 | PALB-01 | PALB-01 |  | PALB-04 | PALB-04 | PALB-04 |
|  | C7-5 | C12-4 | C9-11 | C9-12 | C9-13 | C4-2 | C12-2 | C6-4 | C14-3 | C11-3 |  | C6-7 | C6-6 | C3-1 |
| SiO2 | - | 0.06 | 0.01 | 0.01 | 0.01 | 0.07 | 0.04 | 0.02 | - | 0.01 |  | 0.06 | - | 0.03 |
| TiO2 | 1.41 | 1.41 | 1.55 | 1.66 | 1.33 | 1.36 | 1.40 | 1.28 | 1.42 | 1.29 |  | 1.09 | 1.06 | 1.31 |
| Al2O3 | 15.86 | 16.60 | 15.03 | 15.23 | 16.14 | 17.86 | 17.29 | 16.85 | 16.85 | 16.79 |  | 16.85 | 16.53 | 15.47 |
| Cr2O3 | 36.44 | 36.32 | 38.18 | 38.15 | 37.92 | 36.30 | 36.47 | 37.17 | 36.39 | 34.61 |  | 38.05 | 38.38 | 38.01 |
| FeO | 39.97 | 38.67 | 39.00 | 37.88 | 39.18 | 35.15 | 37.01 | 36.40 | 37.52 | 40.50 |  | 36.47 | 36.37 | 38.47 |
| MnO | 0.42 | 0.41 | 0.43 | 0.50 | 0.41 | 0.34 | 0.39 | 0.40 | 0.43 | 0.45 |  | 0.41 | 0.27 | 0.38 |
| MgO | 5.75 | 6.53 | 6.44 | 6.25 | 5.76 | 7.92 | 6.29 | 7.53 | 6.62 | 5.37 |  | 6.85 | 6.77 | 6.16 |
| CaO | - | - | 0.03 | - | - | - | - | - | - | - |  | - | - | - |
| Na2O | 0.03 | 0.03 | 0.02 | - | 0.05 | - | 0.02 | 0.04 | 0.01 | 0.03 |  | 0.02 | - | 0.05 |
| K2O | - | 0.01 | - | - | - | 0.01 | - | - | - | - |  | - | - | - |
| NiO | 0.12 | 0.13 | 0.17 | 0.18 | 0.12 | 0.07 | 0.18 | 0.11 | 0.15 | 0.10 |  | 0.14 | 0.23 | 0.06 |
| Total | 100.00 | 100.16 | 100.86 | 99.85 | 100.92 | 99.09 | 99.09 | 99.80 | 99.37 | 99.14 |  | 99.94 | 99.60 | 99.96 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Mg# | 0.28 | 0.32 | 0.31 | 0.31 | 0.28 | 0.38 | 0.31 | 0.36 | 0.32 | 0.26 |  | 0.33 | 0.33 | 0.30 |
| Cr# | 0.61 | 0.59 | 0.63 | 0.63 | 0.61 | 0.58 | 0.59 | 0.60 | 0.59 | 0.58 |  | 0.60 | 0.61 | 0.62 |
| \*(-) means below detection limit. | | |  |  |  |  |  |  |  |  |  |  |  |  |

Supplementary Table 1. *(continued)*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Plagioclase wehrlite | |  |  |  |  |  |  | Plagioclase harzburgite | |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sample | PALB-04 | PALB-04 | PALB-04 | PALB-04 | PALB-04 | PALB-04 | PALB-04 |  | PALJ-01 | PALJ-01 | PALJ-01 | PALJ-01 | PALJ-01 | PALJ-01 |
|  | C3-2 | C4-7 | C7-6 | C4-06 | C4-07 | C12-01 | C12-02 |  | C1-9 | C1-10 | C3-3 | C12-2 | C13-1 | C13-2 |
| SiO2 | - | 0.02 | 0.01 | - | 0.02 | 0.02 | 0.01 |  | - | - | 0.01 | 0.01 | - | 0.02 |
| TiO2 | 1.10 | 1.21 | 1.04 | 1.24 | 1.21 | 1.06 | 1.04 |  | 1.53 | 1.43 | 1.29 | 1.72 | 1.46 | 1.63 |
| Al2O3 | 16.04 | 15.80 | 16.09 | 16.15 | 15.80 | 16.33 | 16.31 |  | 15.77 | 16.06 | 17.12 | 16.49 | 15.01 | 15.24 |
| Cr2O3 | 38.39 | 38.12 | 38.47 | 38.17 | 38.12 | 38.65 | 38.67 |  | 37.68 | 38.11 | 37.12 | 36.12 | 37.07 | 37.25 |
| FeO | 37.42 | 38.09 | 36.38 | 36.77 | 38.09 | 34.88 | 35.85 |  | 39.36 | 39.72 | 37.71 | 39.04 | 40.14 | 39.81 |
| MnO | 0.40 | 0.46 | 0.40 | 0.45 | 0.46 | 0.41 | 0.43 |  | 0.52 | 0.45 | 0.42 | 0.42 | 0.49 | 0.49 |
| MgO | 6.47 | 6.26 | 6.60 | 6.66 | 6.26 | 7.65 | 7.59 |  | 5.69 | 5.71 | 7.02 | 6.41 | 5.94 | 5.78 |
| CaO | - | - | - | - | - | - | - |  | - | - | - | - | 0.01 | 0.01 |
| Na2O | 0.04 | 0.04 | 0.04 | 0.03 | 0.04 | 0.03 | 0.01 |  | 0.03 | - | 0.01 | 0.01 | 0.04 | 0.05 |
| K2O | - | - | - | - | - | 0.02 | 0.03 |  | - | 0.02 | 0.01 | 0.01 | 0.02 | 0.01 |
| NiO | 0.16 | 0.14 | 0.10 | 0.16 | 0.14 | 0.14 | 0.15 |  | 0.13 | 0.13 | 0.12 | 0.13 | 0.09 | 0.12 |
| Total | 100.01 | 100.14 | 99.12 | 99.63 | 100.14 | 99.18 | 100.10 |  | 100.70 | 101.63 | 100.83 | 100.36 | 100.28 | 100.38 |
|  |  |  |  |  |  |  |  |  |  | 0.27 |  |  |  |  |
| Mg# | 0.32 | 0.31 | 0.32 | 0.32 | 0.31 | 0.37 | 0.37 |  | 0.28 | 0.61 | 0.34 | 0.31 | 0.29 | 0.28 |
| Cr# | 0.62 | 0.62 | 0.62 | 32.46 | 30.52 | 0.61 | 0.61 |  | 0.62 |  | 0.59 | 0.59 | 0.62 | 0.62 |

\*(-) means below detection limit.

Supplementary Table 1. *(continued)*

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Plagioclase harzburgite | |  |  | Plagioclase lherzolite | |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sample | PALJ-01 | PALJ-01 | PALJ-01 | PALJ-01 | PALF-03 | PALF-03 | PALF-03 | PALF-03 | PALF-03 | PALF-03 | PALF-03 | PALF-03 |
|  | C1-1 | C13-4 | C3-4 | C9-10 | C11-01 | C10-03 | C7-07 | C1-03 | C5-01 | C9-02 | C11-02 | C11-05 |
| SiO2 | - | - | 0.01 | 0.06 | 0.01 | 0.24 | 0.23 | 0.08 | 0.01 | 0.02 | 0.04 | 0.09 |
| TiO2 | 1.60 | 1.51 | 1.43 | 1.47 | 1.48 | 1.70 | 1.36 | 1.55 | 1.60 | 1.41 | 1.51 | 1.45 |
| Al2O3 | 16.29 | 15.19 | 16.09 | 17.09 | 17.63 | 16.66 | 17.79 | 17.45 | 17.60 | 18.50 | 17.69 | 17.21 |
| Cr2O3 | 37.63 | 36.73 | 37.59 | 35.15 | 41.22 | 40.70 | 42.92 | 40.72 | 42.10 | 42.15 | 40.61 | 40.36 |
| FeO | 38.60 | 40.98 | 39.63 | 41.84 | 31.21 | 33.04 | 27.87 | 31.82 | 30.00 | 28.20 | 32.34 | 32.99 |
| MnO | 0.48 | 0.49 | 0.45 | 0.52 | 0.45 | 0.49 | 0.39 | 0.42 | 0.44 | 0.39 | 0.43 | 0.47 |
| MgO | 6.09 | 5.44 | 5.82 | 5.44 | 7.90 | 7.28 | 9.76 | 7.89 | 8.66 | 10.15 | 7.84 | 7.27 |
| CaO | - | - | - | 0.06 | - | - | - | - | - | - | - | - |
| Na2O | 0.01 | - | 0.02 | 0.03 | 0.04 | 0.03 | 0.05 | 0.03 | 0.04 | 0.01 | 0.01 | 0.02 |
| K2O | - | 0.01 | 0.01 | - | - | 0.01 | - | - | 0.01 | 0.01 | 0.01 | - |
| NiO | 0.13 | 0.14 | 0.08 | 0.12 | - | - | 0.15 | - | - | - | - | - |
| Total | 100.83 | 100.47 | 101.14 | 101.78 | 99.92 | 100.13 | 100.52 | 99.95 | 100.44 | 100.82 | 100.47 | 99.86 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| Mg# | 0.29 | 0.27 | 0.28 | 0.26 | 0.38 | 0.35 | 0.46 | 0.38 | 0.41 | 0.47 | 0.37 | 0.35 |
| Cr# | 0.61 | 0.62 | 0.61 | 0.58 | 0.61 | 0.62 | 0.62 | 0.61 | 0.62 | 0.60 | 0.61 | 0.61 |

\*(-) means below detection limit.

Supplementary Table 1. *(continued)*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  | |  | |  |  | |  | |  | |  | |  | |  | |  | |
|  | Plagioclase wehrlite | |  |  |  |  | | Spinel harzburgite | | | | | | |  | |  | |  | |  | |  | |
|  |  |  |  |  |  |  | |  | | |  | |  | |  | |  | |  | |  | |  | |
| Sample | PALF-02 | PALF-02 | PALF-02 | PALF-02 | PALF-02 |  | | PALEG-01 | | |  | | PALB-05 | | PALB-05 | | PALB-05 | | PALB-05 | | PALB-05 | | PALB-05 | |
|  | C1-09 | C1-10 | C3-7 | C3-5 | C4-8 |  | | C8-1 | | |  | | C1-02 | | C2-07 | | C2-08 | | C1-06 | | C7-04 | | C8-02 | |
| SiO2 | 0.03 | 0.04 | 0.15 | 3.11 | 2.98 |  | | - | | |  | | 0.01 | | 0.01 | | - | | - | | - | | 0.02 | |
| TiO2 | 1.50 | 1.43 | 0.60 | 0.58 | 0.57 |  | | - | | |  | | 0.19 | | 0.20 | | 0.23 | | 0.22 | | 0.28 | | 0.31 | |
| Al2O3 | 16.94 | 16.82 | 15.69 | 14.19 | 14.59 |  | | 10.79 | | |  | | 24.87 | | 23.07 | | 23.58 | | 23.14 | | 28.25 | | 26.46 | |
| Cr2O3 | 39.18 | 40.07 | 39.00 | 31.43 | 30.91 |  | | 55.86 | | |  | | 33.09 | | 34.50 | | 34.47 | | 35.08 | | 31.03 | | 31.99 | |
| FeO | 34.01 | 33.12 | 38.87 | 41.47 | 44.32 |  | | 24.72 | | |  | | 30.93 | | 31.87 | | 31.97 | | 32.56 | | 30.32 | | 31.15 | |
| MnO | 0.39 | 0.42 | 0.44 | 0.42 | 0.58 |  | | 0.43 | | |  | | 0.34 | | 0.31 | | 0.32 | | 0.32 | | 0.30 | | 0.33 | |
| MgO | 8.77 | 8.87 | 6.89 | 9.16 | 6.93 |  | | 8.46 | | |  | | 9.63 | | 9.23 | | 9.17 | | 9.03 | | 10.24 | | 9.03 | |
| CaO | - | - | - | - | 0.04 |  | | - | | |  | | - | | - | | - | | - | | - | | - | |
| Na2O | - | - | 0.03 | 0.07 | 0.05 |  | | 0.02 | | |  | | 0.03 | | - | | - | | 0.01 | | 0.01 | | 0.03 | |
| K2O | 0.01 | - | - | 0.03 | - |  | | 0.01 | | |  | | - | | - | | 0.01 | | 0.01 | | - | | - | |
| NiO | - | - | - | - | 0.01 |  | | - | | |  | | 0.16 | | 0.18 | | 0.17 | | 0.22 | | 0.21 | | 0.19 | |
| Total | 100.84 | 100.78 | 101.67 | 100.47 | 100.98 |  | | 100.29 | | |  | | 99.24 | | 99.37 | | 99.92 | | 100.59 | | 100.64 | | 99.51 | |
|  |  |  |  |  |  |  | |  | | |  | |  | |  | |  | |  | |  | |  | |
| Mg# | 0.41 | 0.42 | 0.33 | 0.45 | 0.35 |  | | 0.42 | | |  | | 0.45 | | 0.43 | | 0.43 | | 0.42 | | 0.46 | | 0.42 | |
| Cr# | 0.61 | 0.62 | 0.63 | 0.60 | 0.59 |  | | 0.78 | | |  | | 0.47 | | 0.50 | | 0.50 | | 0.50 | | 0.42 | | 0.45 | |
|  |  |  |  |  |  | |  | |  |  | |  | |  | |  | |  | |  | |  | |

\*(-) means below detection limit.

Supplementary Table 1. *(continued)*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Spinel harzburgite | |  |  | Spinel harzburgite | |  |  |  |  |  |  | Spinel harzburgite | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sample | PALB-05 | PALB-05 |  | PALB-08 | PALB-08 | PALB-08 | PALB-08 | PALB-08 | PALB-08 | PALB-08 |  | PALB-09 | PALB-09 |
|  | C15-03 | C2-01 |  | C1-4 | C1-6 | C6-5 | C7-2 | C8-1 | C1-7 | C9-3 |  | C1-6 | C1-8 |
| SiO2 | 0.03 | - |  | 0.05 | - | 0.04 | - | - | 0.01 | 0.01 |  | - | - |
| TiO2 | 0.20 | 0.17 |  | 0.07 | 0.02 | 0.06 | 0.02 | 0.07 | 0.07 | 0.07 |  | 0.03 | - |
| Al2O3 | 18.60 | 21.55 |  | 22.34 | 22.06 | 22.87 | 24.23 | 23.01 | 23.80 | 24.09 |  | 23.06 | 22.66 |
| Cr2O3 | 39.78 | 37.96 |  | 39.07 | 39.45 | 39.76 | 38.05 | 39.39 | 38.06 | 37.43 |  | 41.00 | 40.84 |
| FeO | 33.57 | 32.03 |  | 27.71 | 27.81 | 27.18 | 27.24 | 26.97 | 26.92 | 27.70 |  | 25.74 | 26.21 |
| MnO | 0.38 | 0.33 |  | 0.35 | 0.36 | 0.32 | 0.30 | 0.31 | 0.28 | 0.33 |  | 0.34 | 0.31 |
| MgO | 8.29 | 9.02 |  | 9.84 | 9.72 | 10.07 | 10.49 | 10.09 | 10.05 | 9.91 |  | 10.10 | 10.39 |
| CaO | - | - |  | - | - | - | - | - | - | - |  | - | 0.01 |
| Na2O | 0.02 | - |  | 0.04 | - | 0.01 | 0.03 | 0.02 | - | 0.02 |  | 0.03 | 0.05 |
| K2O | - | 0.02 |  | 0.02 | 0.02 | - | - | 0.02 | - | - |  | 0.01 | - |
| NiO | 0.20 | 0.15 |  | 0.13 | 0.11 | 0.13 | 0.12 | 0.13 | 0.09 | 0.17 |  | 0.11 | 0.13 |
| Total | 101.05 | 101.24 |  | 99.62 | 99.54 | 100.43 | 100.49 | 100.01 | 99.29 | 99.72 |  | 100.41 | 100.61 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Mg# | 0.39 | 0.42 |  | 0.46 | 0.46 | 0.47 | 0.48 | 0.47 | 0.47 | 0.46 |  | 0.47 | 0.48 |
| Cr# | 0.59 | 0.54 |  | 0.54 | 0.55 | 0.54 | 0.51 | 0.53 | 0.52 | 0.51 |  | 0.54 | 0.55 |

\*(-) means below detection limit.

Supplementary Table 1. *(continued)*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Spinel harzburgite | |  |  |  |  |  |  |  | Spinel harzburgite | |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sample | PALB-09 | PALB-09 | PALB-09 | PALB-09 | PALB-09 | PALB-09 | PALB-09 | PALB-09 |  | PALB-10 | PALB-10 | PALB-10 | PALB-10 |
|  | C1-9 | C1-10 | C3-1 | C5-5 | C5-6 | C5-7 | C6-1 | C6-2 |  | C2-5 | C2-6 | C13-1 | C13-2 |
| SiO2 | - | 0.04 | - | 0.03 | - | - | 0.01 | 0.06 |  | - | 0.04 | - | - |
| TiO2 | 0.04 | 0.06 | - | 0.03 | 0.05 | 0.02 | 0.05 | 0.03 |  | 0.03 | 0.04 | 0.07 | - |
| Al2O3 | 22.27 | 23.12 | 22.13 | 21.82 | 22.78 | 23.09 | 18.74 | 19.64 |  | 15.95 | 18.70 | 17.32 | 16.24 |
| Cr2O3 | 40.64 | 40.82 | 41.77 | 41.43 | 40.96 | 40.41 | 45.88 | 44.59 |  | 47.00 | 43.66 | 43.62 | 44.76 |
| FeO | 25.87 | 25.54 | 24.56 | 24.66 | 25.36 | 26.57 | 24.71 | 25.09 |  | 28.26 | 27.73 | 31.93 | 31.07 |
| MnO | 0.36 | 0.35 | 0.32 | 0.33 | 0.34 | 0.36 | 0.35 | 0.32 |  | 0.34 | 0.33 | 0.58 | 0.53 |
| MgO | 10.17 | 10.48 | 10.28 | 11.69 | 10.65 | 10.05 | 10.32 | 10.69 |  | 9.77 | 10.19 | 6.46 | 7.25 |
| CaO | - | - | - | - | - | - | - | - |  | - | - | - | - |
| Na2O | 0.02 | - | - | 0.01 | 0.01 | - | - | 0.01 |  | - | - | 0.01 | - |
| K2O | - | 0.01 | - | 0.01 | - | - | - | 0.02 |  | - | 0.03 | - | - |
| NiO | 0.10 | 0.16 | 0.12 | 0.18 | 0.11 | 0.10 | 0.12 | 0.18 |  | 0.16 | 0.12 | 0.13 | 0.10 |
| Total | 99.47 | 100.58 | 99.19 | 100.19 | 100.26 | 100.60 | 100.18 | 100.61 |  | 101.51 | 100.83 | 100.11 | 99.95 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Mg# | 0.48 | 0.48 | 0.48 | 0.54 | 0.49 | 0.47 | 0.49 | 0.50 |  | 0.46 | 0.48 | 0.32 | 0.36 |
| Cr# | 0.55 | 0.54 | 0.56 | 0.56 | 0.55 | 0.54 | 0.62 | 0.60 |  | 0.66 | 0.61 | 0.63 | 0.65 |

\*(-) means below detection limit.

Supplementary Table 1. *(continued)*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Spinel harzburgite | |  |  |  |  | Spinel harzburgite | |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sample | PALB-10 | PALB-10 | PALB-10 | PALB-10 | PALB-10 |  | PALG-01 | PALG-01 | PALG-01 | PALG-01 | PALG-01 | PALG-01 | PALG-01 | PALG-01 |
|  | C13-3 | C13-4 | C13-5 | C14-2 | C14-9 |  | C1-1 | C1-2 | C2-1 | C2-2 | C2-5 | C3-1 | C3-2 | C3-3 |
| SiO2 | 0.10 | 0.03 | 0.03 | - | - | - | 0.03 | 0.01 | - | 0.03 | 0.04 | 0.02 | - | 0.03 |
| TiO2 | 0.05 | 0.06 | 0.02 | 0.07 | 0.03 |  | - | 0.02 | 0.04 | - | - | - | - | - |
| Al2O3 | 18.70 | 16.97 | 18.88 | 16.47 | 19.82 |  | 12.90 | 13.43 | 12.96 | 13.06 | 14.97 | 13.59 | 13.68 | 13.63 |
| Cr2O3 | 40.98 | 43.53 | 40.33 | 46.24 | 41.00 |  | 54.34 | 54.10 | 54.85 | 54.17 | 51.02 | 53.07 | 53.44 | 53.58 |
| FeO | 32.90 | 33.02 | 32.78 | 26.30 | 28.86 |  | 23.03 | 22.74 | 22.68 | 23.49 | 25.37 | 23.28 | 23.18 | 23.50 |
| MnO | 0.51 | 0.56 | 0.47 | 0.37 | 0.34 |  | 0.38 | 0.36 | 0.39 | 0.36 | 0.39 | 0.37 | 0.33 | 0.41 |
| MgO | 6.93 | 6.56 | 6.60 | 9.66 | 9.69 |  | 9.64 | 9.70 | 9.59 | 9.73 | 9.02 | 9.96 | 9.82 | 9.60 |
| CaO | - | - | - | - | - |  | - | - | - | - | - | - | - | - |
| Na2O | 0.03 | - | 0.01 | 0.01 | 0.02 |  | 0.03 | 0.04 | 0.04 | 0.05 | 0.04 | 0.02 | - | 0.03 |
| K2O | - | 0.01 | - | 0.02 | - |  | - | 0.03 | 0.01 | - | - | - | 0.02 | - |
| NiO | 0.16 | 0.15 | 0.06 | 0.17 | 0.12 |  | 0.10 | 0.05 | 0.11 | 0.07 | 0.08 | 0.09 | 0.11 | 0.03 |
| Total | 100.35 | 100.90 | 99.17 | 99.30 | 99.88 |  | 100.45 | 100.49 | 100.65 | 100.96 | 100.92 | 100.40 | 100.58 | 100.81 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Mg# | 0.34 | 0.32 | 0.32 | 0.47 | 0.46 |  | 0.47 | 0.47 | 0.47 | 0.47 | 0.44 | 0.48 | 0.48 | 0.46 |
| Cr# | 0.60 | 0.63 | 0.59 | 0.65 | 0.58 |  | 0.74 | 0.73 | 0.74 | 0.74 | 0.70 | 0.72 | 0.72 | 0.73 |

\*(-) means below detection limit.

Supplementary Table 1. *(continued)*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Spinel harzburgite | |  | Spinel harzburgite | |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sample | PALG-01 | PALG-01 |  | PALF-07 | PALF-07 | PALF-07 | PALF-07 | PALF-07 | PALF-07 | PALF-07 | PALF-07 | PALF-07 | PALF-07 |
|  | C4-1 | C4-2 |  | C1-04 | C1-06 | C1-09 | C1-10 | C1-14 | C7-1 | C7-2 | C6-2 | C8-1 | C8-2 |
| SiO2 | 0.02 | - |  | 0.03 | 0.05 | 0.05 | 0.06 | 0.04 | 0.07 | 0.04 | 0.05 | 0.09 | 0.06 |
| TiO2 | - | 0.01 |  | 0.02 | 0.04 | - | - | - | 0.01 | - | 0.04 | 0.02 | 0.04 |
| Al2O3 | 13.70 | 14.49 |  | 22.50 | 21.86 | 21.18 | 21.03 | 22.26 | 21.97 | 24.27 | 20.19 | 20.33 | 20.22 |
| Cr2O3 | 53.74 | 52.67 |  | 39.70 | 40.56 | 39.81 | 40.92 | 39.27 | 37.55 | 40.61 | 44.58 | 45.13 | 44.76 |
| FeO | 22.18 | 22.47 |  | 25.96 | 24.71 | 26.87 | 26.91 | 26.19 | 28.93 | 22.05 | 23.18 | 22.86 | 24.15 |
| MnO | 0.36 | 0.33 |  | 0.30 | 0.29 | 0.34 | 0.26 | 0.32 | 0.31 | 0.26 | 0.42 | 0.30 | 0.41 |
| MgO | 10.02 | 9.83 |  | 10.53 | 12.23 | 11.65 | 11.01 | 11.16 | 11.09 | 11.81 | 10.80 | 10.89 | 10.53 |
| CaO | - | - |  | - | - | - | - | - | - | - | - | - | - |
| Na2O | 0.06 | 0.07 |  | 0.10 | 0.11 | 0.07 | 0.08 | 0.07 | 0.05 | 0.07 | 0.06 | 0.07 | 0.08 |
| K2O | 0.03 | 0.01 |  | 0.02 | 0.04 | - | 0.01 | - | 0.02 | 0.02 | 0.04 | 0.03 | 0.04 |
| NiO | 0.06 | 0.11 |  | 0.19 | 0.19 | 0.16 | 0.16 | 0.09 | - | 0.03 | 0.06 | 0.04 | 0.03 |
| Total | 100.16 | 99.99 |  | 99.34 | 100.07 | 100.12 | 100.44 | 99.40 | 100.00 | 99.17 | 99.41 | 99.75 | 100.32 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Mg# | 0.49 | 0.48 |  | 0.49 | 0.56 | 0.54 | 0.51 | 0.52 | 0.51 | 0.55 | 0.51 | 0.51 | 0.49 |
| Cr# | 0.72 | 0.71 |  | 0.54 | 0.55 | 0.56 | 0.57 | 0.54 | 0.53 | 0.53 | 0.60 | 0.60 | 0.60 |

\*(-) means below detection limit.

Supplementary Table 1. *(continued)*

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Dunite |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| Sample | PALG-04 | PALG-04 | PALG-04 | PALG-04 | PALG-04 | PALG-04 | PALG-04 | PALG-04 |
|  | C4-5 | C7-1 | C10-1 | C2-2 | C3-1 | C3-2 | C4-4 | C4-5 |
| SiO2 | 0.01 | - | - | - | 0.02 | - | 0.01 | - |
| TiO2 | 0.01 | - | 0.01 | - | - | 0.01 | - | 0.01 |
| Al2O3 | 19.55 | 20.91 | 20.87 | 21.22 | 18.49 | 19.03 | 19.65 | 19.83 |
| Cr2O3 | 47.43 | 46.77 | 46.19 | 45.43 | 49.29 | 48.82 | 47.30 | 47.40 |
| FeO | 22.72 | 21.16 | 22.26 | 23.26 | 22.42 | 21.88 | 23.05 | 23.00 |
| MnO | 0.33 | 0.32 | 0.33 | 0.34 | 0.36 | 0.33 | 0.35 | 0.39 |
| MgO | 10.61 | 11.35 | 10.93 | 10.64 | 11.00 | 11.23 | 10.70 | 10.73 |
| CaO | - | - | - | - | - | - | - | - |
| Na2O | 0.02 | 0.01 | 0.02 | 0.02 | 0.02 | 0.01 | 0.02 | 0.01 |
| K2O | - | 0.01 | 0.02 | - | 0.01 | 0.01 | - | - |
| NiO | 0.05 | 0.10 | 0.09 | 0.08 | 0.03 | 0.08 | 0.05 | 0.09 |
| Total | 100.73 | 100.63 | 100.73 | 100.99 | 101.63 | 101.39 | 101.13 | 101.47 |
|  |  |  |  |  |  |  |  |  |
| Mg# | 0.50 | 0.53 | 0.51 | 0.49 | 0.51 | 0.52 | 0.50 | 0.50 |
| Cr# | 0.62 | 0.60 | 0.60 | 0.59 | 0.64 | 0.63 | 0.62 | 0.62 |

\*(-) means below detection limit.

Supplementary Table 2. Microprobe analysis of olivine in the plagioclase peridotites, spinel harzburgites and dunite from southern Palawan Ophiolite. Total iron as FeO\*.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Plagioclase lherzolite | |  |  |  |  |  |  |  |  |  | Plagioclase wehrlite | |  |
|  | Olivine |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sample | PALB-01 | PALB-01 | PALB-01 | PALB-01 | PALB-01 | PALB-01 | PALB-01 | PALB-01 | PALB-01 | PALB-01 |  | PALB-04 | PALB-04 | PALB-04 |
|  | C8-3 | C9-4 | C9-5 | C10-1 | C11-6 | C11-7 | C1-2 | C2-5 | C1-9 | C3-2 |  | C5-1 | C5-2 | C5-3 |
| SiO2 | 39.43 | 38.85 | 39.08 | 39.55 | 39.50 | 39.17 | 39.86 | 39.66 | 39.83 | 39.20 |  | 39.28 | 39.55 | 39.26 |
| TiO2 | 0.03 | 0.02 | - | 0.01 | 0.01 | - | 0.02 | 0.05 | - | 0.04 |  | - | 0.02 | - |
| Al2O3 | 0.01 | 0.01 | - | - | - | - | - | 0.02 | - | 0.02 |  | - | - | 0.01 |
| Cr2O3 | - | - | - | - | - | 0.02 | - | 0.04 | - | 0.08 |  | - | 0.01 | - |
| FeO | 14.54 | 15.23 | 14.69 | 14.63 | 15.14 | 14.97 | 14.68 | 15.43 | 14.29 | 14.50 |  | 13.46 | 13.31 | 13.85 |
| MnO | 0.22 | 0.27 | 0.17 | 0.24 | 0.21 | 0.25 | 0.20 | 0.22 | 0.24 | 0.16 |  | 0.22 | 0.18 | 0.21 |
| MgO | 45.07 | 44.73 | 44.82 | 44.85 | 44.61 | 44.70 | 44.85 | 45.29 | 44.80 | 44.94 |  | 46.08 | 46.13 | 46.02 |
| CaO | - | 0.01 | 0.02 | 0.01 | 0.01 | 0.01 | 0.02 | - | 0.02 | 0.02 |  | 0.03 | 0.05 | 0.05 |
| Na2O | - | - | 0.02 | 0.02 | - | 0.01 | - | - | - | 0.02 |  | 0.03 | - | - |
| K2O | - | - | - | - | - | 0.01 | 0.01 | - | 0.01 | - |  | - | - | 0.02 |
| NiO | 0.20 | 0.29 | 0.21 | 0.22 | 0.22 | 0.22 | 0.26 | 0.25 | 0.22 | 0.25 |  | 0.23 | 0.25 | 0.28 |
| Total | 99.50 | 99.40 | 99.02 | 99.52 | 99.70 | 99.35 | 99.89 | 100.96 | 99.40 | 99.23 |  | 99.32 | 99.49 | 99.70 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Fo | 84.67 | 83.96 | 84.46 | 84.53 | 84.00 | 84.18 | 84.48 | 83.95 | 84.82 | 84.67 |  | 85.91 | 86.06 | 85.55 |
| Mg# | 0.85 | 0.84 | 0.84 | 0.85 | 0.84 | 0.84 | 0.84 | 0.84 | 0.85 | 0.85 |  | 0.86 | 0.86 | 0.86 |
| \*(-) means below detection limit | | |  |  |  |  |  |  |  |  |  |  |  |  |

Supplementary Table 2. *(continued)*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Plagioclase wehrlite | |  |  |  |  |  |  | Plagioclase harzburgite | |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sample | PALB-04 | PALB-04 | PALB-04 | PALB-04 | PALB-04 | PALB-04 | PALB-04 |  | PALJ-01 | PALJ-01 | PALJ-01 | PALJ-01 | PALJ-01 | PALJ-01 |
|  | C5-6 | C6-4 | C6-5 | C6-8 | C7-4 | C7-5 | C14-2 |  | C2-8 | C2-9 | C3-3 | C3-2 | C4-1 | C4-2 |
| SiO2 | 39.79 | 39.88 | 39.46 | 39.52 | 39.13 | 39.33 | 39.56 |  | 39.50 | 40.56 | 39.94 | 40.02 | 39.86 | 40.13 |
| TiO2 | 0.03 | - | 0.02 | 0.02 | - | 0.01 | 0.02 |  | - | - | - | 0.02 | - | - |
| Al2O3 | - | 0.01 | 0.04 | 0.01 | - | - | 0.01 |  | - | 0.02 | - | 0.03 | 0.06 | 0.01 |
| Cr2O3 | 0.02 | - | - | - | - | 0.02 | 0.05 |  | - | - | - | - | 0.01 | - |
| FeO | 13.24 | 13.63 | 13.70 | 13.75 | 13.36 | 13.69 | 13.31 |  | 14.13 | 14.38 | 13.98 | 14.13 | 14.56 | 14.23 |
| MnO | 0.22 | 0.20 | 0.19 | 0.17 | 0.21 | 0.19 | 0.17 |  | 0.19 | 0.16 | 0.20 | 0.24 | 0.19 | 0.20 |
| MgO | 46.02 | 46.27 | 45.66 | 46.12 | 46.24 | 45.75 | 46.73 |  | 45.20 | 45.07 | 45.31 | 45.20 | 44.69 | 44.79 |
| CaO | 0.03 | 0.02 | 0.04 | 0.03 | 0.02 | 0.04 | 0.02 |  | 0.01 | 0.01 | 0.02 | 0.01 | 0.01 | - |
| Na2O | 0.03 | - | - | 0.01 | 0.02 | 0.02 | - |  | 0.01 | 0.01 | 0.02 | 0.01 | 0.01 | - |
| K2O | 0.01 | - | - | - | - | - | 0.01 |  | - | 0.01 | - | 0.02 | 0.01 | 0.01 |
| NiO | 0.29 | 0.24 | 0.26 | 0.28 | 0.27 | 0.31 | 0.26 |  | 0.17 | 0.22 | 0.18 | 0.19 | 0.16 | 0.16 |
| Total | 99.67 | 100.26 | 99.36 | 99.91 | 99.25 | 99.34 | 100.13 |  | 99.21 | 100.45 | 99.63 | 99.86 | 99.56 | 99.55 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Fo | 86.10 | 85.82 | 85.58 | 85.66 | 86.05 | 85.62 | 86.22 |  | 85.07 | 84.81 | 85.24 | 85.08 | 84.54 | 84.87 |
| Mg# | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 |  | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 |

\*(-) means below detection limit.

Supplementary Table 2. *(continued)*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Plagioclase harzburgite | |  |  | Plagioclase lherzolite | |  |  |  |  | Plagioclase wehrlite | |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sample | PALJ-01 | PALJ-01 | PALJ-01 | PALJ-01 | PALF-03 | PALF-03 | PALF-03 | PALF-03 | PALF-03 | PALF-03 | PALF-02 | PALF-02 | PALF-02 |
|  | C9-2 | C6- 3 | C7- 4 | C7-1 | C1-05 | C3-03 | C4-03 | C6-01 | C6-05 | C7-06 | C2-03 | C2-04 | C5-06 |
| SiO2 | 39.67 | 40.46 | 40.67 | 39.93 | 39.62 | 39.59 | 39.78 | 39.36 | 39.53 | 39.53 | 40.92 | 40.90 | 40.58 |
| TiO2 | - | 0.03 | 0.02 | - | 0.01 | - | - | - | - | - | - | - | 0.03 |
| Al2O3 | - | 0.02 | - | - | 0.03 | 0.02 | - | - | - | 0.02 | 0.01 | 0.01 | 0.02 |
| Cr2O3 | - | - | - | - | - | - | - | - | - | 0.03 | - | - | 0.05 |
| FeO | 14.17 | 14.22 | 14.05 | 14.20 | 12.57 | 12.93 | 13.11 | 13.09 | 13.14 | 13.13 | 11.98 | 12.16 | 11.77 |
| MnO | 0.21 | 0.02 | - | 0.16 | 0.24 | 0.20 | 0.24 | 0.23 | 0.24 | 0.25 | 0.27 | 0.24 | 0.19 |
| MgO | 44.83 | 44.94 | 45.60 | 44.85 | 47.48 | 47.71 | 47.49 | 47.77 | 47.91 | 47.60 | 47.01 | 46.26 | 46.42 |
| CaO | 0.02 | 0.25 | 0.23 | 0.02 | 0.02 | 0.03 | 0.01 | 0.01 | - | 0.01 | - | 0.04 | 0.01 |
| Na2O | 0.02 | 0.01 | 0.02 | 0.02 | 0.02 | 0.02 | 0.01 | 0.01 | 0.01 | - | - | - | 0.02 |
| K2O | - | - | - | - | - | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | - | - | - |
| NiO | 0.22 | 0.19 | 0.19 | 0.19 | 0.01 | - | - | - | - | - | 0.02 | 0.04 | 0.03 |
| Total | 99.12 | 100.13 | 100.78 | 99.36 | 99.99 | 100.51 | 100.65 | 100.49 | 100.84 | 100.58 | 100.21 | 99.64 | 99.12 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Fo | 84.93 | 84.92 | 85.26 | 84.91 | 87.06 | 86.80 | 86.58 | 86.68 | 86.66 | 86.59 | 87.49 | 87.15 | 87.54 |
| Mg# | 0.85 | 0.85 | 0.85 | 0.85 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.88 |

\*(-) means below detection limit.

Supplementary Table 2. *(continued)*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Plagioclase wehrlite | |  |  |  |  |  | Spinel harzburgite | |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sample | PALF-02 | PALF-02 | PALF-02 | PALF-02 | PALF-02 | PALF-02 |  | PALEG-01 | PALEG-01 | PALEG-01 | PALEG-01 | PALEG-01 | PALEG-01 |
|  | C5-05 | C7-04 | C3-06 | C10-03 | C10-04 | C8-02 |  | C1-2 | C1-4 | C2-4 | C4-3 | C4-4 | C4-7 |
| SiO2 | 39.96 | 40.34 | 41.39 | 40.16 | 40.14 | 39.97 |  | 40.56 | 40.62 | 40.52 | 40.29 | 40.50 | 40.67 |
| TiO2 | - | - | - | 0.01 | - | - |  | - | - | - | 0.01 | - | - |
| Al2O3 | 0.01 | - | 0.01 | - | - | 0.02 |  | - | - | - | - | - | - |
| Cr2O3 | - | 0.02 | 0.01 | - | 0.01 | - |  | - | - | - | - | - | 0.03 |
| FeO | 12.55 | 11.86 | 10.89 | 11.98 | 13.04 | 12.33 |  | 9.67 | 9.82 | 9.91 | 9.31 | 9.98 | 9.53 |
| MnO | 0.24 | 0.24 | 0.25 | 0.22 | 0.20 | 0.18 |  | 0.13 | 0.10 | 0.12 | 0.11 | 0.11 | 0.12 |
| MgO | 46.45 | 46.56 | 46.66 | 46.44 | 46.31 | 46.39 |  | 49.43 | 49.88 | 49.67 | 49.26 | 49.30 | 49.59 |
| CaO | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 | - |  | - | - | 0.01 | - | 0.01 | 0.01 |
| Na2O | - | - | - | - | 0.02 | - |  | - | - | 0.01 | - | - | - |
| K2O | - | - | 0.01 | 0.01 | 0.01 | - |  | - | - | 0.01 | - | 0.01 | 0.01 |
| NiO | 0.26 | - | 0.02 | 0.24 | 0.29 | 0.23 |  | 0.47 | 0.40 | 0.42 | 0.42 | 0.41 | 0.42 |
| Total | 99.49 | 99.04 | 99.24 | 99.06 | 100.02 | 99.12 |  | 100.27 | 100.82 | 100.66 | 99.40 | 100.31 | 100.38 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Fo | 86.83 | 87.49 | 88.42 | 87.36 | 86.36 | 87.02 |  | 90.10 | 90.05 | 89.93 | 90.41 | 89.80 | 90.26 |
| Mg# | 0.87 | 0.87 | 0.88 | 0.87 | 0.86 | 0.87 |  | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |

\*(-) means below detection limit.

Supplementary Table 2. *(continued)*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Spinel harzburgite | |  |  | |  | |  | Spinel harzburgite | | | | |  | |  | |  | |  | |  | |  | |
|  |  |  |  | |  | |  |  | | |  | |  | |  | |  | |  | |  | |  | |
| Sample | PALEG-01 | PALEG-01 | | PALEG-01 | | PALEG-01 | | |  | PALB-05 | | PALB-05 | | PALB-05 | | PALB-05 | | PALB-05 | | PALB-05 | | PALB-05 | | PALB-05 | |
|  | C4-9 | C5-3 | | C5-4 | | C6-4 | | |  | C6-03 | | C6-04 | | C7-06 | | C7-07 | | C9-02 | | C4-04 | | C5-01 | | C8-03 | |
| SiO2 | 40.56 | 40.71 | | 40.48 | | 40.75 | | |  | 39.89 | | 40.15 | | 39.97 | | 40.30 | | 39.72 | | 40.09 | | 40.02 | | 40.03 | |
| TiO2 | - | 0.01 | | - | | - | | |  | - | | - | | - | | - | | - | | - | | 0.03 | | - | |
| Al2O3 | - | - | | - | | - | | |  | - | | - | | 0.01 | | - | | - | | - | | - | | - | |
| Cr2O3 | - | - | | - | | - | | |  | 0.01 | | - | | 0.01 | | - | | - | | 0.01 | | - | | - | |
| FeO | 9.52 | 9.51 | | 9.66 | | 9.62 | | |  | 13.99 | | 14.56 | | 13.58 | | 13.65 | | 14.39 | | 13.83 | | 14.11 | | 13.96 | |
| MnO | 0.16 | 0.12 | | 0.11 | | 0.12 | | |  | 0.16 | | 0.21 | | 0.18 | | 0.18 | | 0.22 | | 0.22 | | 0.22 | | 0.18 | |
| MgO | 49.70 | 49.88 | | 49.18 | | 49.74 | | |  | 46.21 | | 45.93 | | 45.95 | | 45.94 | | 45.33 | | 46.10 | | 46.05 | | 45.75 | |
| CaO | - | - | | - | | 0.01 | | |  | 0.01 | | 0.01 | | 0.02 | | 0.01 | | 0.02 | | - | | 0.02 | | 0.01 | |
| Na2O | 0.01 | - | | - | | - | | |  | - | | 0.01 | | 0.01 | | - | | - | | - | | - | | - | |
| K2O | 0.01 | - | | 0.01 | | - | | |  | 0.02 | | 0.01 | | - | | - | | - | | - | | - | | 0.01 | |
| NiO | 0.46 | 0.39 | | 0.41 | | 0.43 | | |  | 0.31 | | 0.31 | | 0.30 | | 0.31 | | 0.31 | | 0.33 | | 0.34 | | 0.32 | |
| Total | 100.41 | 100.63 | | 99.86 | | 100.66 | | |  | 100.59 | | 101.19 | | 100.03 | | 100.40 | | 99.98 | | 100.59 | | 100.79 | | 100.26 | |
|  |  |  | |  | |  | | |  |  | |  | |  | |  | |  | |  | |  | |  | |
| Fo | 90.29 | 90.34 | | 90.07 | | 90.21 | | |  | 85.48 | | 84.89 | | 85.78 | | 85.71 | | 84.88 | | 85.59 | | 85.33 | | 85.38 | |
| Mg# | 0.90 | 0.90 | | 0.90 | | 0.90 | | |  | 0.85 | | 0.85 | | 0.86 | | 0.86 | | 0.85 | | 0.86 | | 0.85 | | 0.85 | |

\*(-) means below detection limit.

Supplementary Table 2. *(continued)*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Spinel harzburgite | |  | Spinel harzburgite | |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sample | PALB-05 | PALB-05 |  | PALB-09 | PALB-09 | PALB-09 | PALB-09 | PALB-09 | PALB-09 | PALB-09 | PALB-09 | PALB-09 | PALB-09 |
|  | C8-04 | C8-07 |  | C1-5 | C3-5 | C4-2 | C12-4 | C7-9 | C7-10 | C8-6 | C12-5 | C9-3 | C10-1 |
| SiO2 | 40.15 | 40.14 |  | 41.34 | 41.17 | 41.40 | 41.45 | 41.49 | 41.83 | 41.72 | 41.38 | 41.47 | 41.36 |
| TiO2 | - | 0.02 |  | - | 0.02 | - | - | - | - | - | - | - | 0.01 |
| Al2O3 | 0.01 | - |  | 0.01 | - | 0.01 | 0.01 | - | - | 0.03 | 0.01 | 0.03 | - |
| Cr2O3 | - | - |  | 0.03 | - | - | - | - | - | 0.04 | - | 0.01 | - |
| FeO | 13.54 | 14.20 |  | 9.85 | 9.77 | 9.85 | 8.65 | 9.17 | 9.37 | 9.50 | 8.44 | 9.32 | 9.54 |
| MnO | 0.19 | 0.21 |  | 0.11 | 0.13 | 0.08 | 0.16 | 0.11 | 0.12 | 0.12 | 0.13 | 0.08 | 0.15 |
| MgO | 46.08 | 46.05 |  | 48.91 | 49.01 | 49.03 | 49.32 | 49.02 | 49.18 | 48.77 | 50.32 | 48.94 | 49.14 |
| CaO | 0.01 | - |  | 0.01 | 0.01 | 0.02 | - | - | 0.01 | 0.01 | - | - | - |
| Na2O | - | 0.01 |  | 0.01 | - | - | - | 0.01 | 0.02 | - | - | - | - |
| K2O | - | - |  | - | - | - | - | - | - | 0.01 | - | - | - |
| NiO | 0.28 | 0.30 |  | 0.35 | 0.40 | 0.36 | 0.35 | 0.31 | 0.41 | 0.37 | 0.37 | 0.43 | 0.34 |
| Total | 100.26 | 100.94 |  | 100.61 | 100.51 | 100.74 | 99.93 | 100.11 | 100.94 | 100.56 | 100.66 | 100.28 | 100.54 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Fo | 85.85 | 85.24 |  | 89.85 | 89.94 | 89.87 | 91.04 | 90.50 | 90.34 | 90.14 | 91.39 | 90.35 | 90.18 |
| Mg# | 0.86 | 0.85 |  | 0.90 | 0.90 | 0.90 | 0.91 | 0.90 | 0.90 | 0.90 | 0.91 | 0.90 | 0.90 |

\*(-) means below detection limit.

Supplementary Table 2. *(continued)*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Spinel harzburgite | |  |  |  |  |  |  |  |  |  | Spinel harzburgite | |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sample | PALB-10 | PALB-10 | PALB-10 | PALB-10 | PALB-10 | PALB-10 | PALB-10 | PALB-10 | PALB-10 | PALB-10 |  | PALG-01 | PALG-01 | PALG-01 |
|  | C1-4 | C1-5 | C1-6 | C2-7 | C2-8 | C3-9 | C3-10 | C5-2 | C8-1 | C10-1 |  | C1-3 | C1-4 | C1-8 |
| SiO2 | 40.53 | 40.88 | 41.36 | 40.88 | 41.10 | 40.89 | 40.37 | 40.79 | 40.74 | 40.67 |  | 40.53 | 40.35 | 41.31 |
| TiO2 | 0.01 | 0.01 | 0.03 | 0.02 | - | - | - | - | - | - |  | - | 0.01 | 0.02 |
| Al2O3 | - | - | 0.01 | 0.01 | - | 0.02 | - | - | - | 0.01 |  | - | - | - |
| Cr2O3 | - | - | - | - | - | 0.01 | - | - | - | - |  | - | 0.05 | 0.03 |
| FeO | 9.39 | 9.12 | 9.45 | 9.29 | 9.42 | 9.25 | 9.44 | 9.26 | 9.45 | 9.28 |  | 9.33 | 8.98 | 9.08 |
| MnO | 0.12 | 0.15 | 0.12 | 0.09 | 0.09 | 0.10 | 0.11 | 0.10 | 0.14 | 0.15 |  | 0.12 | 0.12 | 0.15 |
| MgO | 49.32 | 49.46 | 49.61 | 49.51 | 49.65 | 49.33 | 49.07 | 49.00 | 49.18 | 48.95 |  | 49.63 | 49.46 | 49.65 |
| CaO | - | - | - | - | - | 0.01 | - | 0.01 | - | - |  | - | 0.01 | - |
| Na2O | - | - | - | - | - | - | - | - | 0.01 | - |  | 0.01 | 0.01 | - |
| K2O | 0.01 | - | 0.01 | - | 0.01 | 0.02 | - | - | 0.01 | - |  | - | 0.01 | - |
| NiO | 0.41 | 0.46 | 0.40 | 0.38 | 0.40 | 0.40 | 0.39 | 0.37 | 0.41 | 0.37 |  | 0.37 | 0.37 | 0.38 |
| Total | 99.79 | 100.09 | 100.98 | 100.17 | 100.68 | 100.03 | 99.38 | 99.53 | 99.94 | 99.43 |  | 100.00 | 99.37 | 100.61 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Fo | 90.35 | 90.62 | 90.35 | 90.48 | 90.37 | 90.48 | 90.26 | 90.41 | 90.26 | 90.39 |  | 90.46 | 90.75 | 90.69 |
| Mg# | 0.90 | 0.91 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |  | 0.90 | 0.91 | 0.91 |

\*(-) means below detection limit.

Supplementary Table 2. *(continued)*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Spinel harzburgite | |  |  |  |  |  |  | Spinel harzburgite | |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sample | PALG-01 | PALG-01 | PALG-01 | PALG-01 | PALG-01 | PALG-01 | PALG-01 |  | PALF-07 | PALF-07 | PALF-07 | PALF-07 | PALF-07 | PALF-07 |
|  | C1-11 | C1-12 | C2-3 | C2-4 | C2-6 | C2-7 | C2-8 |  | C1-04 | C9-03 | C6-04 | C2-01 | C6-03 | C3-02 |
| SiO2 | 41.16 | 40.98 | 40.83 | 40.70 | 40.99 | 41.21 | 40.87 |  | 40.81 | 40.70 | 40.93 | 40.37 | 40.22 | 40.54 |
| TiO2 | 0.01 | - | 0.01 | 0.01 | - | - | - |  | - | - | - | - | - | - |
| Al2O3 | - | - | 0.02 | - | - | 0.01 | - |  | - | - | - | 0.01 | - | - |
| Cr2O3 | 0.02 | - | 0.03 | - | - | 0.01 | - |  | - | - | - | - | 0.01 | 0.01 |
| FeO | 9.32 | 9.24 | 9.11 | 8.88 | 9.05 | 9.33 | 9.11 |  | 8.55 | 8.23 | 8.12 | 8.23 | 8.32 | 8.43 |
| MnO | 0.15 | 0.12 | 0.12 | 0.09 | 0.11 | 0.11 | 0.15 |  | 0.15 | 0.12 | 0.15 | 0.13 | 0.10 | 0.10 |
| MgO | 49.59 | 49.89 | 49.37 | 49.70 | 49.29 | 49.62 | 49.12 |  | 51.10 | 51.14 | 50.89 | 51.43 | 51.87 | 51.72 |
| CaO | - | - | 0.02 | - | 0.01 | 0.02 | 0.01 |  | - | 0.01 | 0.01 | 0.02 | - | - |
| Na2O | 0.01 | 0.04 | 0.01 | 0.03 | - | 0.01 | - |  | - | - | - | 0.01 | - | 0.01 |
| K2O | - | 0.02 | 0.01 | 0.01 | 0.01 | - | 0.02 |  | 0.02 | 0.01 | 0.01 | - | - | - |
| NiO | 0.39 | 0.33 | 0.38 | 0.40 | 0.39 | 0.36 | 0.44 |  | 0.02 | 0.03 | 0.02 | 0.02 | 0.02 | 0.02 |
| Total | 100.65 | 100.60 | 99.91 | 99.81 | 99.85 | 100.66 | 99.72 |  | 100.66 | 100.25 | 100.14 | 100.20 | 100.53 | 100.85 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Fo | 90.46 | 90.58 | 90.62 | 90.89 | 90.66 | 90.45 | 90.58 |  | 91.41 | 91.72 | 91.78 | 91.76 | 91.74 | 91.62 |
| Mg# | 0.90 | 0.91 | 0.91 | 0.91 | 0.91 | 0.90 | 0.91 |  | 0.91 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |

\*(-) means below detection limit.

Supplementary Table 2. *(continued)*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Spinel harzburgite | |  |  | Dunite |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sample | PALF-07 | PALF-07 | PALF-07 |  | PALG-04 | PALG-04 | PALG-04 | PALG-04 | PALG-04 | PALG-04 | PALG-04 | PALG-04 | PALG-04 | PALG-04 |
|  | C3-01 | C1-05 | C1-06 |  | C1-5 | C2-4 | C2-5 | C4-8 | C4-9 | C7-6 | C8-2 | C8-3 | C8-4 | C9-3 |
| SiO2 | 40.21 | 40.04 | 40.56 |  | 40.54 | 40.66 | 40.81 | 40.17 | 40.52 | 40.47 | 40.69 | 40.59 | 40.48 | 40.59 |
| TiO2 | 0.01 | - | 0.02 |  | - | - | - | - | - | 0.01 | - | - | - | - |
| Al2O3 | - | - | 0.01 |  | - | - | - | - | - | - | - | - | - | - |
| Cr2O3 | - | - | - |  | - | - | - | 0.01 | - | 0.02 | 0.02 | - | - | - |
| FeO | 8.44 | 8.14 | 8.33 |  | 10.03 | 9.86 | 9.58 | 10.18 | 9.84 | 10.00 | 9.53 | 9.57 | 10.11 | 10.03 |
| MnO | 0.13 | 0.15 | 0.12 |  | 0.15 | 0.10 | 0.11 | 0.12 | 0.14 | 0.15 | 0.13 | 0.09 | 0.11 | 0.14 |
| MgO | 50.93 | 51.43 | 51.87 |  | 49.80 | 49.71 | 49.74 | 49.75 | 49.68 | 49.08 | 49.82 | 49.55 | 49.74 | 49.65 |
| CaO | - | - | 0.02 |  | 0.01 | 0.02 | 0.03 | 0.01 | - | 0.01 | 0.01 | - | - | - |
| Na2O | 0.01 | - | - |  | - | - | 0.01 | 0.02 | 0.02 | 0.02 | - | - | 0.01 | 0.03 |
| K2O | - | - | - |  | - | 0.02 | 0.01 | - | 0.01 | 0.01 | - | - | - | - |
| NiO | 0.02 | 0.01 | 0.01 |  | 0.45 | 0.48 | 0.39 | 0.45 | 0.44 | 0.39 | 0.39 | 0.43 | 0.40 | 0.45 |
| Total | 99.74 | 99.78 | 100.92 |  | 100.99 | 100.84 | 100.67 | 100.71 | 100.64 | 100.15 | 100.60 | 100.23 | 100.85 | 100.89 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Fo | 91.49 | 91.84 | 91.73 |  | 89.84 | 89.98 | 90.25 | 89.70 | 89.99 | 89.74 | 90.30 | 90.22 | 89.76 | 89.82 |
| Mg# | 0.91 | 0.92 | 0.92 |  | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |

\*(-) means below detection limit.

Supplementary Table 3. Microprobe analysis of orthopyroxene in the plagioclase peridotites, spinel harzburgites and dunite from southern Palawan Ophiolite. Total iron as FeO\*.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Plagioclase lherzolite | |  |  |  |  |  |  |  |  |  | Plagioclase harzburgite | |  |
|  | Orthopyroxene | |  |  |  |  |  |  |  |  |  |  | |  |
| Sample | PALB-01 | PALB-01 | PALB-01 | PALB-01 | PALB-01 | PALB-01 | PALB-01 | PALB-01 | PALB-01 | PALB-01 |  | PALJ-01 | PALJ-01 | PALJ-01 |
|  | C8-1 | C6-3 | C5-4 | C8-2 | C9-2 | C5-3 | C10-04 | C10-01 | C7-03 | C7-04 |  | C3-1 | C3-2 | C4-3 |
| SiO2 | 54.73 | 54.71 | 54.70 | 55.08 | 55.02 | 56.11 | 55.76 | 54.66 | 55.48 | 55.43 |  | 55.57 | 55.36 | 55.50 |
| TiO2 | 0.21 | 0.20 | 0.21 | 0.11 | 0.20 | 0.24 | 0.18 | 0.13 | 0.21 | 0.19 |  | 0.13 | 0.11 | 0.17 |
| Al2O3 | 1.50 | 1.71 | 1.49 | 1.25 | 1.54 | 1.61 | 1.37 | 1.24 | 1.58 | 1.48 |  | 1.47 | 1.58 | 1.57 |
| Cr2O3 | 0.40 | 0.49 | 0.33 | 0.39 | 0.35 | 0.57 | 0.38 | 0.28 | 0.43 | 0.44 |  | 0.21 | 0.19 | 0.22 |
| FeO | 9.71 | 9.59 | 9.48 | 9.81 | 9.73 | 9.18 | 9.94 | 12.05 | 10.09 | 10.36 |  | 10.55 | 10.60 | 10.07 |
| MnO | 0.25 | 0.22 | 0.27 | 0.21 | 0.27 | 0.17 | 0.25 | 0.30 | 0.25 | 0.27 |  | 0.26 | 0.26 | 0.22 |
| MgO | 31.33 | 30.92 | 31.84 | 31.64 | 31.25 | 31.01 | 31.80 | 29.76 | 31.07 | 31.38 |  | 31.70 | 31.10 | 31.53 |
| CaO | 0.84 | 1.43 | 0.76 | 0.60 | 0.72 | 0.91 | 0.72 | 0.66 | 1.48 | 1.00 |  | 0.75 | 1.18 | 1.13 |
| Na2O | - | 0.03 | - | - | 0.05 | - | 0.01 | 0.04 | 0.03 | 0.01 |  | 0.01 | 0.01 | 0.01 |
| K2O | - | - | 0.01 | - | - | - | - | 0.01 | 0.02 | 0.02 |  | - | 0.01 | 0.03 |
| NiO | 0.07 | 0.11 | 0.08 | 0.02 | 0.08 | 0.04 | 0.08 | 0.09 | 0.12 | 0.09 |  | 0.04 | 0.05 | 0.08 |
| Total | 99.02 | 99.39 | 99.18 | 99.10 | 99.19 | 99.85 | 100.51 | 99.21 | 100.75 | 100.68 |  | 100.69 | 100.44 | 100.53 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Mg# | 0.86 | 0.85 | 0.85 | 0.86 | 0.85 | 0.86 | 0.85 | 0.81 | 0.85 | 0.84 |  | 0.84 | 0.84 | 0.85 |
| \*(-) means below detection limit | | |  |  |  |  |  |  |  |  |  |  |  |  |

Supplementary Table 3. *(continued)*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Plagioclase harzburgite | |  |  |  |  |  | Plagioclase lherzolite | |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sample | PALJ-01 | PALJ-01 | PALJ-01 | PALJ-01 | PALJ-01 | PALJ-01 | PALJ-01 | PALF-03 | PALF-03 | PALF-03 | PALF-03 | PALF-03 | PALF-03 |
|  | C4-4 | C4-7 | C4-8 | C5-6 | C5-7 | C6-3 | C6-4 | C1-02 | C1-01 | C1-02 | C4-01 | C4-02 | C6-03 |
| SiO2 | 54.84 | 55.48 | 55.30 | 54.78 | 55.02 | 54.95 | 55.26 | 54.89 | 54.63 | 54.97 | 52.58 | 55.30 | 54.88 |
| TiO2 | 0.14 | 0.10 | 0.13 | 0.09 | 0.15 | 0.10 | 0.15 | 0.08 | 0.12 | 0.17 | 0.19 | 0.09 | 0.13 |
| Al2O3 | 1.49 | 1.51 | 1.38 | 1.58 | 1.55 | 1.57 | 1.48 | 1.74 | 1.70 | 1.78 | 2.75 | 1.63 | 1.68 |
| Cr2O3 | 0.16 | 0.19 | 0.22 | 0.25 | 0.23 | 0.20 | 0.21 | 0.56 | 0.27 | 0.54 | 1.12 | 0.19 | 0.22 |
| FeO | 9.89 | 10.62 | 10.34 | 10.13 | 10.17 | 10.45 | 10.34 | 8.32 | 7.54 | 8.07 | 5.97 | 9.03 | 8.69 |
| MnO | 0.27 | 0.24 | 0.22 | 0.22 | 0.24 | 0.25 | 0.21 | 0.23 | 0.22 | 0.27 | 0.19 | 0.27 | 0.22 |
| MgO | 31.03 | 31.60 | 31.52 | 30.61 | 30.54 | 31.20 | 30.77 | 32.25 | 30.62 | 32.33 | 23.91 | 33.04 | 33.08 |
| CaO | 1.75 | 0.87 | 0.74 | 1.71 | 2.08 | 0.89 | 1.48 | 2.03 | 4.65 | 2.13 | 13.36 | 1.20 | 1.10 |
| Na2O | 0.04 | 0.01 | - | 0.04 | 0.03 | 0.01 | 0.02 | 0.04 | 0.08 | 0.05 | 0.30 | - | 0.03 |
| K2O | 0.02 | - | 0.01 | 0.02 | - | - | - | - | - | 0.01 | 0.02 | 0.01 | 0.01 |
| NiO | 0.04 | 0.06 | 0.01 | 0.03 | 0.03 | 0.04 | 0.05 | - | - | 0.02 | 0.01 | - | - |
| Total | 99.66 | 100.66 | 99.88 | 99.45 | 100.04 | 99.67 | 99.97 | 100.13 | 99.83 | 100.35 | 100.38 | 100.76 | 100.03 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Mg# | 0.85 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.87 | 0.88 | 0.88 | 0.88 | 0.87 | 0.87 |
| \*(-) means below detection limit | | |  |  |  |  |  |  |  |  |  |  |  |

Supplementary Table 3. *(continued)*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Plagioclase lherzolite | |  |  | Plagioclase wehrlite | |  |  |  |  |  | Spinel harzburgite | |
|  |  |  |  |  |  |  |  |  |  |  |  |  | |
| Sample | PALF-03 | PALF-03 | PALF-03 | PALF-03 | PALF-02 | PALF-02 | PALF-02 | PALF-02 | PALF-02 | PALF-02 | PALF-02 | PALEG-01 | |
|  | C6-04 | C7-01 | C7-02 | C11-04 | C2-04 | C2-01 | C2-02 | C10-01 | C10-02 | C9-02 | C9-03 | C1-1 | |
| SiO2 | 55.05 | 55.19 | 54.54 | 54.79 | 56.00 | 55.83 | 56.32 | 56.33 | 56.88 | 55.64 | 55.31 | 56.33 | |
| TiO2 | 0.10 | 0.08 | 0.11 | 0.09 | 0.09 | 0.13 | 0.13 | 0.10 | 0.09 | 0.10 | 0.07 | 0.01 | |
| Al2O3 | 1.67 | 1.59 | 1.56 | 1.69 | 1.63 | 1.72 | 1.62 | 1.44 | 1.39 | 1.65 | 1.55 | 0.89 | |
| Cr2O3 | 0.53 | 0.19 | 0.19 | 0.20 | 0.22 | 0.20 | 0.12 | 0.14 | 0.09 | 0.16 | 0.38 | 0.57 | |
| FeO | 8.56 | 8.66 | 8.66 | 8.42 | 8.38 | 7.36 | 8.18 | 7.48 | 7.20 | 8.34 | 8.44 | 6.56 | |
| MnO | 0.24 | 0.24 | 0.26 | 0.21 | 0.19 | 0.23 | 0.22 | 0.23 | 0.25 | 0.23 | 0.24 | 0.16 | |
| MgO | 32.97 | 32.94 | 32.91 | 32.76 | 32.54 | 30.21 | 32.25 | 32.60 | 33.34 | 31.71 | 31.95 | 33.81 | |
| CaO | 1.55 | 1.19 | 1.42 | 1.48 | 1.01 | 4.23 | 1.15 | 0.68 | 0.44 | 1.72 | 1.14 | 1.42 | |
| Na2O | 0.03 | 0.01 | 0.04 | 0.03 | 0.05 | 0.07 | 0.02 | 0.02 | 0.02 | 0.03 | 0.01 | - | |
| K2O | 0.01 | - | - | - | - | - | - | 0.01 | - | - | 0.01 | - | |
| NiO | - | - | - | - | 0.05 | 0.04 | 0.04 | 0.02 | - | 0.02 | 0.02 | 0.09 | |
| Total | 100.69 | 100.09 | 99.69 | 99.69 | 100.15 | 100.01 | 100.04 | 99.05 | 99.69 | 99.60 | 99.11 | 99.83 | |
|  |  |  |  |  |  |  |  |  |  |  |  |  | |
| Mg# | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.88 | 0.88 | 0.89 | 0.89 | 0.87 | 0.87 | 0.90 | |
| \*(-) means below detection limit | | |  |  |  |  |  |  |  |  |  |  |

Supplementary Table 3. *(continued)*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Spinel harzburgite | |  | |  | | |  | Spinel harzburgite | | | |  | |  | |  | |  | |
|  |  |  | |  | | |  |  | |  | |  | |  | |  | |  | |
| Sample | PALEG-01 | PALEG-01 | | PALEG-01 | | |  | PALB-05 | | PALB-05 | | PALB-05 | | PALB-05 | | PALB-05 | | PALB-05 | |
|  | C8-3 | C10-1 | | C10-2 | | |  | C5-05 | | C5-06 | | C14-01 | | C4-02 | | C5-04 | | C6-01 | |
| SiO2 | 56.57 | 56.94 | | 57.51 | | |  | 55.62 | | 56.20 | | 55.50 | | 56.08 | | 55.88 | | 55.87 | |
| TiO2 | 0.03 | - | | - | | |  | 0.02 | | 0.03 | | 0.05 | | - | | 0.07 | | 0.02 | |
| Al2O3 | 0.85 | 0.91 | | 0.91 | | |  | 1.72 | | 1.59 | | 1.71 | | 1.62 | | 1.68 | | 1.79 | |
| Cr2O3 | 0.48 | 0.44 | | 0.51 | | |  | 0.50 | | 0.27 | | 0.49 | | 0.42 | | 0.24 | | 0.48 | |
| FeO | 6.45 | 6.02 | | 6.07 | | |  | 9.16 | | 9.20 | | 8.60 | | 9.87 | | 9.96 | | 8.73 | |
| MnO | 0.15 | 0.11 | | 0.12 | | |  | 0.25 | | 0.20 | | 0.20 | | 0.21 | | 0.23 | | 0.20 | |
| MgO | 34.21 | 33.61 | | 33.16 | | |  | 31.92 | | 32.42 | | 31.15 | | 32.03 | | 32.30 | | 31.76 | |
| CaO | 0.59 | 1.71 | | 1.76 | | |  | 0.69 | | 0.49 | | 2.24 | | 1.01 | | 0.58 | | 1.11 | |
| Na2O | 0.01 | 0.01 | | 0.01 | | |  | - | | 0.01 | | 0.03 | | 0.01 | | 0.01 | | 0.02 | |
| K2O | - | 0.01 | | - | | |  | - | | - | | - | | - | | - | | - | |
| NiO | 0.05 | 0.10 | | 0.08 | | |  | 0.08 | | 0.09 | | 0.11 | | 0.11 | | 0.08 | | 0.08 | |
| Total | 100.29 | 99.85 | | 100.11 | | |  | 99.97 | | 100.50 | | 100.07 | | 101.36 | | 101.02 | | 100.06 | |
|  |  |  | |  | | |  |  | |  | |  | |  | |  | |  | |
| Mg# | 0.90 | 0.91 | | 0.91 | | |  | 0.86 | | 0.86 | | 0.87 | | 0.85 | | 0.85 | | 0.87 | |
| \*(-) means below detection limit | | |  | |  |  | | |  | |  | |  | |  | |  | |

Supplementary Table 3. *(continued)*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Spinel harzburgite | |  | Spinel harzburgite | |  |  |  |  |  |  |  |  |
|  |  |  |  |  | |  |  |  |  |  |  |  |  |
| Sample | PALB-05 | PALB-05 |  | PALB-09 | PALB-09 | PALB-09 | PALB-09 | PALB-09 | PALB-09 | PALB-09 | PALB-09 | PALB-09 | PALB-09 |
|  | C6-02 | C15-05 |  | C7-1 | C7-2 | C7-6 | C7-7 | C8-1 | C8-2 | C8-3 | C8-4 | C1-1 | C1-2 |
| SiO2 | 55.82 | 56.10 |  | 56.35 | 56.73 | 56.83 | 57.00 | 56.85 | 57.15 | 56.53 | 56.99 | 56.86 | 56.20 |
| TiO2 | 0.04 | - |  | 0.02 | - | - | 0.03 | - | 0.02 | - | - | - | 0.01 |
| Al2O3 | 1.85 | 1.23 |  | 1.47 | 1.66 | 1.67 | 1.55 | 1.49 | 1.57 | 1.52 | 1.68 | 1.55 | 1.53 |
| Cr2O3 | 0.41 | 0.32 |  | 0.42 | 0.57 | 0.48 | 0.42 | 0.34 | 0.44 | 0.38 | 0.55 | 0.52 | 0.47 |
| FeO | 8.90 | 9.22 |  | 6.35 | 6.56 | 6.75 | 6.57 | 6.41 | 6.71 | 6.55 | 6.50 | 5.97 | 6.23 |
| MnO | 0.20 | 0.19 |  | 0.16 | 0.12 | 0.17 | 0.18 | 0.17 | 0.16 | 0.13 | 0.14 | 0.17 | 0.16 |
| MgO | 32.05 | 32.45 |  | 33.97 | 33.55 | 33.53 | 34.13 | 33.96 | 33.79 | 33.56 | 32.97 | 33.34 | 33.72 |
| CaO | 0.94 | 0.69 |  | 0.65 | 0.83 | 0.70 | 0.73 | 0.66 | 0.53 | 1.21 | 1.85 | 1.73 | 0.73 |
| Na2O | 0.02 | 0.01 |  | 0.02 | 0.01 | - | 0.01 | 0.01 | 0.01 | - | 0.03 | 0.01 | 0.01 |
| K2O | 0.01 | - |  | - | - | - | - | - | - | - | 0.01 | 0.01 | 0.01 |
| NiO | 0.11 | 0.09 |  | 0.11 | 0.07 | 0.09 | 0.08 | 0.09 | 0.11 | 0.07 | 0.12 | 0.10 | 0.09 |
| Total | 100.35 | 100.30 |  | 99.51 | 100.08 | 100.22 | 100.70 | 99.97 | 100.49 | 99.95 | 100.83 | 100.27 | 99.17 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Mg# | 0.87 | 0.86 |  | 0.91 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.91 | 0.91 |
| \*(-) means below detection limit | | |  |  |  |  |  |  |  |  |  |  |  |

Supplementary Table 3. *(continued)*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Spinel harzburgite | |  | |  | |  | |  | |  | |  | |  | |  | |  | | Spinel harzburgite | | | |
|  |  |  |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |
| Sample | PALB-10 | PALB-10 | | PALB-10 | | PALB-10 | | PALB-10 | | PALB-10 | | PALB-10 | | PALB-10 | | PALB-10 | | PALB-10 | |  | | PALG-01 | | PALG-01 | |
|  | C1-1 | C1-2 | | C1-7 | | C1-8 | | C2-1 | | C2-2 | | C3-2 | | C3-3 | | C4-1 | | C6-1 | |  | | C14-2 | | C14-3 | |
| SiO2 | 56.86 | 56.95 | | 56.92 | | 56.91 | | 56.67 | | 56.56 | | 56.96 | | 56.89 | | 56.71 | | 56.73 | |  | | 57.31 | | 56.01 | |
| TiO2 | 0.01 | 0.01 | | - | | 0.04 | | - | | - | | 0.02 | | - | | - | | 0.02 | |  | | - | | - | |
| Al2O3 | 1.46 | 1.50 | | 1.46 | | 1.08 | | 1.36 | | 1.46 | | 1.25 | | 1.38 | | 1.33 | | 1.43 | |  | | 0.83 | | 0.83 | |
| Cr2O3 | 0.54 | 0.62 | | 0.41 | | 0.25 | | 0.50 | | 0.48 | | 0.32 | | 0.48 | | 0.42 | | 0.49 | |  | | 0.34 | | 0.40 | |
| FeO | 6.31 | 6.39 | | 6.65 | | 6.45 | | 6.44 | | 6.77 | | 6.33 | | 6.20 | | 5.90 | | 6.16 | |  | | 6.50 | | 7.34 | |
| MnO | 0.16 | 0.16 | | 0.13 | | 0.16 | | 0.11 | | 0.14 | | 0.18 | | 0.14 | | 0.11 | | 0.15 | |  | | 0.10 | | 0.14 | |
| MgO | 33.41 | 33.33 | | 34.03 | | 33.98 | | 34.12 | | 33.92 | | 34.06 | | 33.81 | | 33.60 | | 33.56 | |  | | 34.56 | | 33.87 | |
| CaO | 1.17 | 1.20 | | 0.71 | | 0.48 | | 0.94 | | 1.35 | | 0.49 | | 0.49 | | 0.98 | | 1.00 | |  | | 0.60 | | 0.79 | |
| Na2O | 0.02 | - | | - | | - | | - | | - | | - | | - | | - | | - | |  | | 0.02 | | 0.04 | |
| K2O | - | 0.01 | | 0.01 | | - | | - | | - | | 0.02 | | - | | - | | - | |  | | 0.03 | | 0.05 | |
| NiO | 0.12 | 0.08 | | 0.08 | | 0.10 | | 0.08 | | 0.11 | | 0.10 | | 0.08 | | 0.08 | | 0.09 | |  | | 0.11 | | 0.14 | |
| Total | 100.05 | 100.23 | | 100.41 | | 99.45 | | 100.21 | | 100.79 | | 99.72 | | 99.46 | | 99.13 | | 99.62 | |  | | 100.39 | | 99.61 | |
|  |  |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |
| Mg# | 0.90 | 0.90 | | 0.90 | | 0.90 | | 0.90 | | 0.90 | | 0.91 | | 0.91 | | 0.91 | | 0.91 | |  | | 0.90 | | 0.89 | |
| \*(-) means below detection limit | | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |

Supplementary Table 3. *(continued)*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Spinel harzburgite | |  | |  | |  | |  | |  | |  | |  | | Spinel harzburgite | | | |  | |
|  |  |  |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |
| Sample | PALG-01 | PALG-01 | | PALG-01 | | PALG-01 | | PALG-01 | | PALG-01 | | PALG-01 | | PALG-01 | |  | | PALF-07 | | PALF-07 | | PALF-07 | |
|  | C14-4 | C14-5 | | C12-3 | | C12-4 | | C13-1 | | C11-1 | | C11-2 | | C11-3 | |  | | C3-1 | | C3-2 | | C5-1 | |
| SiO2 | 55.91 | 56.90 | | 56.36 | | 55.15 | | 57.05 | | 54.93 | | 56.55 | | 57.36 | |  | | 57.61 | | 56.44 | | 57.02 | |
| TiO2 | - | 0.02 | | - | | - | | - | | - | | 0.02 | | - | |  | | 0.02 | | - | | - | |
| Al2O3 | 0.81 | 0.80 | | 0.84 | | 0.89 | | 0.96 | | 0.68 | | 0.94 | | 0.88 | |  | | 1.50 | | 1.84 | | 1.76 | |
| Cr2O3 | 0.30 | 0.34 | | 0.34 | | 0.41 | | 0.48 | | 0.23 | | 0.42 | | 0.37 | |  | | 0.29 | | 0.62 | | 0.54 | |
| FeO | 7.28 | 6.25 | | 7.38 | | 8.03 | | 6.24 | | 8.62 | | 6.71 | | 6.51 | |  | | 5.20 | | 5.35 | | 5.17 | |
| MnO | 0.16 | 0.12 | | 0.18 | | 0.17 | | 0.13 | | 0.19 | | 0.18 | | 0.18 | |  | | 0.13 | | 0.10 | | 0.11 | |
| MgO | 33.79 | 34.86 | | 34.00 | | 33.91 | | 34.70 | | 33.97 | | 34.13 | | 34.27 | |  | | 35.10 | | 33.87 | | 34.28 | |
| CaO | 0.93 | 0.53 | | 0.74 | | 0.60 | | 0.44 | | 0.36 | | 0.67 | | 0.96 | |  | | 0.74 | | 1.30 | | 1.40 | |
| Na2O | 0.04 | - | | 0.04 | | 0.04 | | 0.02 | | 0.03 | | 0.02 | | 0.03 | |  | | 0.05 | | 0.07 | | 0.05 | |
| K2O | 0.07 | 0.01 | | 0.05 | | 0.04 | | 0.04 | | 0.07 | | - | | 0.01 | |  | | 0.04 | | 0.04 | | 0.03 | |
| NiO | 0.12 | 0.07 | | 0.14 | | 0.12 | | 0.13 | | 0.13 | | 0.11 | | 0.16 | |  | | 0.03 | | 0.07 | | 0.02 | |
| Total | 99.40 | 99.90 | | 100.07 | | 99.35 | | 100.19 | | 99.19 | | 99.75 | | 100.74 | |  | | 100.70 | | 99.68 | | 100.37 | |
|  |  |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |
| Mg# | 0.89 | 0.91 | | 0.89 | | 0.88 | | 0.91 | | 0.88 | | 0.90 | | 0.90 | |  | | 0.92 | | 0.92 | | 0.92 | |
| \*(-) means below detection limit | | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |

Supplementary Table 3. *(continued)*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Spinel harzburgite | | |  | |  | |
|  |  | |  |  | |  | |
| Sample | PALF-07 | PALF-07 | | | PALF-07 | | PALF-07 | |
|  | C5-4 | C5-8 | | | C2-3 | | C2-4 | |
| SiO2 | 57.70 | 57.31 | | | 57.35 | | 57.52 | |
| TiO2 | - | - | | | - | | 0.03 | |
| Al2O3 | 1.71 | 1.79 | | | 1.65 | | 1.38 | |
| Cr2O3 | 0.41 | 0.59 | | | 0.21 | | 0.19 | |
| FeO | 4.96 | 5.20 | | | 5.38 | | 5.46 | |
| MnO | 0.16 | 0.16 | | | 0.15 | | 0.17 | |
| MgO | 34.67 | 34.25 | | | 34.51 | | 34.99 | |
| CaO | 0.73 | 1.25 | | | 0.82 | | 0.56 | |
| Na2O | 0.05 | 0.05 | | | 0.04 | | 0.06 | |
| K2O | 0.03 | 0.03 | | | 0.02 | | 0.03 | |
| NiO | 0.03 | 0.02 | | | 0.05 | | 0.04 | |
| Total | 100.45 | 100.65 | | | 100.18 | | 100.44 | |
|  |  |  | | |  | |  | |
| Mg# | 0.93 | 0.92 | | | 0.92 | | 0.92 | |
| \*(-) means below detection limit | | | |  | |  | |

Supplementary Table 4. Microprobe analysis of clinopyroxene in the plagioclase peridotites and spinel harzburgites from southern Palawan Ophiolite. Total iron as FeO\*.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Plagioclase lherzolite | |  |  |  |  |  |  |  |  |  | Plagioclase wehrlite | |  |
|  | Clinopyroxene | |  |  |  |  |  |  |  |  |  |  | |  |
| Sample | PALB-01 | PALB-01 | PALB-01 | PALB-01 | PALB-01 | PALB-01 | PALB-01 | PALB-01 | PALB-01 | PALB-01 |  | PALB-04 | PALB-04 | PALB-04 |
|  | C11-1 | C11-2 | C11-5 | C1-3 | C1-4 | C1-01 | C1-02 | C1-03 | C1-04 | C1-05 |  | C1-8 | C13-1 | C3-02 |
| SiO2 | 52.71 | 53.92 | 53.71 | 53.22 | 52.99 | 52.48 | 52.55 | 52.69 | 52.32 | 51.99 |  | 52.78 | 52.49 | 52.02 |
| TiO2 | 0.41 | 0.41 | 0.42 | 0.48 | 0.42 | 0.44 | 0.43 | 0.40 | 0.40 | 0.47 |  | 0.35 | 0.26 | 0.39 |
| Al2O3 | 2.65 | 2.03 | 2.48 | 2.69 | 2.50 | 2.28 | 2.44 | 2.65 | 1.97 | 2.47 |  | 2.20 | 2.70 | 2.67 |
| Cr2O3 | 1.04 | 0.71 | 1.08 | 1.01 | 1.01 | 0.82 | 0.98 | 1.12 | 0.79 | 0.87 |  | 0.72 | 1.21 | 1.07 |
| FeO | 3.74 | 3.53 | 4.32 | 4.44 | 3.70 | 3.94 | 3.95 | 5.15 | 3.69 | 4.60 |  | 3.56 | 3.62 | 3.65 |
| MnO | 0.12 | 0.09 | 0.16 | 0.08 | 0.14 | 0.12 | 0.09 | 0.15 | 0.09 | 0.11 |  | 0.11 | 0.15 | 0.10 |
| MgO | 15.88 | 16.29 | 17.19 | 17.16 | 16.09 | 16.24 | 16.18 | 17.32 | 16.32 | 16.00 |  | 16.25 | 15.99 | 16.14 |
| CaO | 22.16 | 22.55 | 19.86 | 19.87 | 21.99 | 22.49 | 22.16 | 20.20 | 23.10 | 22.45 |  | 21.65 | 21.17 | 22.07 |
| Na2O | 0.47 | 0.37 | 0.43 | 0.39 | 0.47 | 0.43 | 0.43 | 0.43 | 0.39 | 0.42 |  | 0.40 | 0.54 | 0.51 |
| K2O | - | - | - | - | - | - | 0.01 | - | 0.01 | 0.02 |  | 0.01 | - | 0.01 |
| NiO | 0.06 | 0.03 | 0.09 | 0.02 | 0.05 | 0.09 | 0.09 | 0.06 | 0.03 | 0.06 |  | 0.04 | 0.10 | 0.09 |
| Total | 99.24 | 99.92 | 99.73 | 99.36 | 99.34 | 99.33 | 99.30 | 100.16 | 99.12 | 99.45 |  | 98.05 | 98.22 | 98.71 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Mg# | 0.88 | 0.89 | 0.88 | 0.87 | 0.89 | 0.88 | 0.88 | 0.86 | 0.89 | 0.86 |  | 0.89 | 0.89 | 0.89 |
| \*(-) means below detection limit | | |  |  |  |  |  |  |  |  |  |  |  |  |

Supplementary Table 4. *(continued)*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Plagioclase wehrlite | |  |  |  |  |  |  | Plagioclase harzburgite | |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  | |  |  |  |  |
| Sample | PALB-04 | PALB-04 | PALB-04 | PALB-04 | PALB-04 | PALB-04 | PALB-04 |  | PALJ-01 | PALJ-01 | PALJ-01 | PALJ-01 | PALJ-01 | PALJ-01 |
|  | C3-03 | C3-04 | C6-01 | C6-02 | C7-01 | C9-05 | C9-04 |  | C1-2 | C1-3 | C1-4 | C1-5 | C2-2 | C2-3 |
| SiO2 | 52.35 | 52.24 | 52.64 | 51.76 | 51.90 | 51.60 | 51.94 |  | 52.20 | 52.60 | 52.47 | 52.27 | 52.39 | 52.56 |
| TiO2 | 0.33 | 0.43 | 0.23 | 0.34 | 0.36 | 0.47 | 0.38 |  | 0.20 | 0.23 | 0.18 | 0.20 | 0.26 | 0.21 |
| Al2O3 | 2.24 | 2.80 | 1.60 | 2.67 | 2.31 | 2.78 | 2.51 |  | 2.54 | 2.46 | 2.60 | 2.63 | 2.25 | 2.20 |
| Cr2O3 | 0.90 | 1.02 | 0.79 | 1.14 | 0.92 | 1.11 | 1.05 |  | 0.94 | 0.50 | 0.54 | 0.92 | 0.43 | 0.37 |
| FeO | 3.44 | 3.66 | 3.42 | 3.68 | 3.67 | 3.89 | 3.71 |  | 4.28 | 4.59 | 4.42 | 4.15 | 4.00 | 4.11 |
| MnO | 0.09 | 0.17 | 0.10 | 0.10 | 0.15 | 0.08 | 0.10 |  | 0.15 | 0.11 | 0.14 | 0.15 | 0.12 | 0.13 |
| MgO | 16.25 | 15.54 | 16.52 | 15.71 | 16.26 | 15.97 | 15.99 |  | 16.40 | 16.37 | 16.55 | 16.28 | 16.40 | 16.38 |
| CaO | 22.47 | 22.19 | 22.31 | 22.24 | 22.11 | 22.32 | 22.22 |  | 22.01 | 22.35 | 21.84 | 22.41 | 22.98 | 22.94 |
| Na2O | 0.42 | 0.61 | 0.47 | 0.44 | 0.43 | 0.39 | 0.51 |  | 0.46 | 0.45 | 0.42 | 0.45 | 0.42 | 0.37 |
| K2O | 0.01 | - | - | - | - | 0.01 | 0.01 |  | - | - | 0.02 | - | 0.01 | - |
| NiO | 0.04 | 0.04 | 0.10 | 0.07 | 0.04 | 0.05 | 0.05 |  | 0.06 | 0.04 | 0.07 | 0.01 | 0.01 | 0.03 |
| Total | 98.55 | 98.70 | 98.16 | 98.15 | 98.15 | 98.68 | 98.48 |  | 99.24 | 99.70 | 99.24 | 99.46 | 99.26 | 99.28 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Mg# | 0.89 | 0.88 | 0.90 | 0.88 | 0.89 | 0.88 | 0.88 |  | 0.87 | 0.86 | 0.87 | 0.87 | 0.88 | 0.88 |
| \*(-) means below detection limit | | |  |  |  |  |  |  |  |  |  |  |  |  |

Supplementary Table 4. *(continued)*

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Plagioclase harzburgite | |  |  | Plagioclase lherzolite | |  |  |  | Plagioclase wehrlite | |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sample | PALJ-01 | PALJ-01 | PALJ-01 | PALJ-01 | PALF-03 | PALF-03 | PALF-03 | PALF-03 | PALF-03 | PALF-02 | PALF-02 | PALF-02 |
|  | C2-4 | C2-6 | C2-7 | C9-2 | C2-01 | C1-04 | C2-02 | C2-04 | C5-04 | C2-02 | C2-03 | C3-01 |
| SiO2 | 52.23 | 52.19 | 52.44 | 52.20 | 51.58 | 52.53 | 50.63 | 49.39 | 51.41 | 53.21 | 53.10 | 53.38 |
| TiO2 | 0.28 | 0.23 | 0.34 | 0.24 | 0.23 | 0.20 | 0.26 | 0.19 | 0.22 | 0.24 | 0.32 | 0.17 |
| Al2O3 | 2.69 | 2.77 | 2.39 | 2.62 | 2.63 | 2.38 | 3.33 | 3.84 | 2.18 | 2.49 | 2.62 | 2.69 |
| Cr2O3 | 1.06 | 0.52 | 0.44 | 0.53 | 1.18 | 0.91 | 1.08 | 1.09 | 0.84 | 0.49 | 0.43 | 0.50 |
| FeO | 4.18 | 4.56 | 3.92 | 4.19 | 3.45 | 3.45 | 4.00 | 4.71 | 3.28 | 3.09 | 2.98 | 3.20 |
| MnO | 0.20 | 0.16 | 0.18 | 0.14 | 0.14 | 0.16 | 0.13 | 0.19 | 0.11 | 0.11 | 0.15 | 0.15 |
| MgO | 16.21 | 16.39 | 16.14 | 16.36 | 17.32 | 17.64 | 18.08 | 17.30 | 17.80 | 16.81 | 16.71 | 16.68 |
| CaO | 22.49 | 21.95 | 22.91 | 22.27 | 22.97 | 22.92 | 21.02 | 21.90 | 22.99 | 23.05 | 23.01 | 22.41 |
| Na2O | 0.46 | 0.47 | 0.48 | 0.44 | 0.50 | 0.47 | 0.50 | 0.47 | 0.38 | 0.46 | 0.43 | 0.43 |
| K2O | - | - | - | 0.01 | - | - | 0.01 | 0.01 | - | - | - | - |
| NiO | 0.04 | 0.03 | 0.06 | 0.06 | 0.01 | 0.04 | - | 0.01 | 0.02 | 0.07 | 0.03 | 0.09 |
| Total | 99.84 | 99.27 | 99.30 | 99.06 | 100.00 | 100.69 | 99.03 | 99.08 | 99.23 | 100.01 | 99.79 | 99.69 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| Mg# | 0.87 | 0.86 | 0.88 | 0.87 | 0.90 | 0.90 | 0.89 | 0.87 | 0.91 | 0.91 | 0.91 | 0.90 |
| \*(-) means below detection limit | | |  |  |  |  |  |  |  |  |  |  |

Supplementary Table 4. *(continued)*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Plagioclase wehrlite | |  |  |  |  |  | Spinel harzburgite | |  |  |  |  |  |  |
|  |  |  |  |  |  |  | Clinopyroxene | |  |  |  |  |  |  |
| Sample | PALF-02 | PALF-02 | PALF-02 | PALF-02 | PALF-02 |  | PALB-05 | PALB-05 | PALB-05 | PALB-05 | PALB-05 | PALB-05 | PALB-05 | PALB-05 |
|  | C3-02 | C4-06 | C4-07 | C6-01 | C6-02 |  | C15-08 | C15-09 | C15-10 | C15-11 | C13-01 | C13-02 | C12-01 | C10-06 |
| SiO2 | 53.12 | 53.03 | 52.75 | 52.91 | 53.38 |  | 53.87 | 53.61 | 53.00 | 52.84 | 52.50 | 53.15 | 52.70 | 53.15 |
| TiO2 | 0.23 | 0.32 | 0.22 | 0.14 | 0.26 |  | 0.04 | 0.02 | 0.05 | 0.06 | 0.21 | 0.18 | 0.21 | 0.16 |
| Al2O3 | 2.81 | 2.63 | 2.83 | 2.85 | 2.46 |  | 1.66 | 1.55 | 1.44 | 1.16 | 2.55 | 2.35 | 2.36 | 1.94 |
| Cr2O3 | 0.51 | 0.38 | 0.40 | 0.43 | 0.43 |  | 0.66 | 0.49 | 0.60 | 0.48 | 0.72 | 0.64 | 0.54 | 0.46 |
| FeO | 3.76 | 3.11 | 3.30 | 3.12 | 2.80 |  | 3.53 | 3.26 | 3.09 | 3.10 | 3.46 | 3.52 | 3.32 | 3.29 |
| MnO | 0.14 | 0.16 | 0.15 | 0.14 | 0.13 |  | 0.10 | 0.12 | 0.09 | 0.12 | 0.11 | 0.11 | 0.11 | 0.09 |
| MgO | 17.96 | 16.73 | 16.96 | 16.47 | 16.60 |  | 16.43 | 16.87 | 17.38 | 17.90 | 16.30 | 16.30 | 16.50 | 16.52 |
| CaO | 20.62 | 22.51 | 22.14 | 22.94 | 23.12 |  | 22.78 | 22.83 | 23.16 | 23.25 | 22.91 | 22.80 | 23.07 | 23.26 |
| Na2O | 0.40 | 0.45 | 0.48 | 0.45 | 0.43 |  | 0.35 | 0.33 | 0.36 | 0.33 | 0.38 | 0.36 | 0.36 | 0.31 |
| K2O | - | 0.01 | 0.01 | - | 0.02 |  | - | 0.01 | - | - | - | - | - | - |
| NiO | 0.02 | 0.04 | 0.04 | 0.02 | 0.05 |  | 0.08 | 0.06 | 0.08 | 0.04 | 0.05 | 0.08 | 0.04 | 0.06 |
| Total | 99.56 | 99.36 | 99.27 | 99.45 | 99.67 |  | 99.49 | 99.15 | 99.25 | 99.28 | 99.20 | 99.48 | 99.21 | 99.24 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Mg# | 0.89 | 0.91 | 0.90 | 0.90 | 0.91 |  | 0.89 | 0.90 | 0.91 | 0.91 | 0.89 | 0.89 | 0.90 | 0.90 |
| \*(-) means below detection limit | | |  |  |  |  |  |  |  |  |  |  |  |  |

Supplementary Table 4. *(continued)*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Spinel harzburgite | |  |  |  |  |  |  | Spinel harzburgite | | |  |  |  |
|  |  | |  |  |  |  |  |  |  | |  |  |  |  |
| Sample | PALB-09 | PALB-09 | PALB-09 | PALB-09 | PALB-09 | PALB-09 | PALB-09 |  | PALB-10 | PALB-10 | | PALB-10 | PALB-10 | PALB-10 |
|  | C1-4 | C1-7 | C7-3 | C7-4 | C7-5 | C7-8 | C8-5 |  | C3-5 | C3-8 | | C14 5 | C14-6 | C2-11 |
| SiO2 | 54.59 | 53.53 | 54.11 | 54.33 | 54.58 | 54.63 | 54.47 |  | 54.23 | 54.11 | | 54.59 | 54.32 | 54.55 |
| TiO2 | 0.03 | 0.02 | 0.03 | 0.04 | - | - | - |  | 0.03 | 0.03 | | 0.01 | 0.01 | 0.01 |
| Al2O3 | 1.48 | 1.47 | 1.92 | 1.69 | 1.72 | 1.54 | 1.38 |  | 1.01 | 1.08 | | 0.97 | 1.00 | 1.28 |
| Cr2O3 | 0.46 | 0.63 | 0.85 | 0.73 | 0.72 | 0.58 | 0.51 |  | 0.43 | 0.48 | | 0.40 | 0.48 | 0.37 |
| FeO | 2.36 | 2.20 | 2.14 | 2.34 | 2.29 | 2.36 | 2.02 |  | 1.97 | 1.97 | | 1.90 | 2.20 | 2.07 |
| MnO | 0.09 | 0.08 | 0.10 | 0.06 | 0.09 | 0.11 | 0.11 |  | 0.08 | 0.07 | | 0.05 | 0.03 | 0.11 |
| MgO | 17.48 | 17.41 | 16.85 | 17.08 | 17.17 | 17.92 | 17.48 |  | 17.56 | 17.31 | | 17.31 | 18.18 | 17.46 |
| CaO | 23.83 | 23.65 | 23.86 | 23.48 | 23.48 | 23.26 | 24.17 |  | 23.99 | 24.13 | | 23.91 | 23.63 | 24.21 |
| Na2O | 0.21 | 0.22 | 0.26 | 0.25 | 0.25 | 0.25 | 0.21 |  | 0.10 | 0.10 | | 0.10 | 0.16 | 0.12 |
| K2O | - | 0.01 | - | 0.02 | - | - | - |  | 0.01 | - | | - | - | 0.02 |
| NiO | 0.05 | 0.05 | 0.11 | 0.05 | 0.07 | 0.05 | 0.11 |  | 0.06 | 0.05 | | 0.10 | 0.08 | 0.01 |
| Total | 100.59 | 99.27 | 100.22 | 100.05 | 100.37 | 100.69 | 100.46 |  | 99.46 | 99.32 | | 99.34 | 100.10 | 100.20 |
|  |  |  |  |  |  |  |  |  |  |  | |  |  |  |
| Mg# | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.94 |  | 0.94 | 0.94 | | 0.94 | 0.94 | 0.94 |
| \*(-) means below detection limit | | |  |  |  |  |  |  |  | |  |  |  |  |

Supplementary Table 4. *(continued)*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Spinel harzburgite | |  |  |  |  | Spinel harzburgite | | |  |  |  |  |  |
|  |  |  |  |  |  |  |  | |  |  |  |  |  |  |
| Sample | PALB-10 | PALB-10 | PALB-10 | PALB-10 | PALB-10 |  | PALF-07 | PALF-07 | | PALF-07 | PALF-07 | PALF-07 | PALF-07 | PALF-07 |
|  | C3-6 | C4-3 | C4-4 | C14-3 | C14-4 |  | C3-3 | C3-6 | | C3-7 | C3-8 | C5-3 | C5-5 | C1-08 |
| SiO2 | 54.99 | 55.15 | 54.93 | 54.92 | 54.96 |  | 54.81 | 54.80 | | 54.42 | 54.01 | 54.16 | 53.90 | 54.71 |
| TiO2 | 0.01 | - | - | - | 0.07 |  | 0.04 | - | | 0.01 | 0.04 | 0.04 | - | 0.06 |
| Al2O3 | 1.15 | 1.21 | 1.25 | 1.24 | 1.05 |  | 1.47 | 1.57 | | 1.57 | 1.83 | 1.64 | 1.46 | 1.26 |
| Cr2O3 | 0.45 | 0.43 | 0.40 | 0.47 | 0.45 |  | 0.48 | 0.56 | | 0.52 | 0.76 | 0.57 | 0.53 | 0.18 |
| FeO | 2.00 | 1.88 | 2.16 | 2.32 | 1.70 |  | 1.89 | 1.97 | | 2.00 | 1.92 | 1.80 | 1.77 | 1.92 |
| MnO | 0.08 | 0.09 | 0.06 | 0.02 | 0.10 |  | 0.07 | 0.08 | | 0.06 | 0.05 | 0.07 | 0.05 | 0.10 |
| MgO | 17.39 | 17.52 | 17.31 | 17.66 | 17.27 |  | 18.05 | 18.17 | | 17.23 | 17.86 | 17.90 | 17.96 | 17.82 |
| CaO | 24.04 | 24.05 | 24.06 | 23.91 | 24.65 |  | 23.29 | 23.46 | | 22.93 | 22.28 | 23.40 | 23.68 | 23.60 |
| Na2O | 0.12 | 0.08 | 0.10 | 0.17 | 0.08 |  | 0.27 | 0.28 | | 0.26 | 0.31 | 0.27 | 0.29 | 0.26 |
| K2O | 0.01 | - | - | 0.01 | 0.03 |  | 0.04 | 0.03 | | 0.04 | 0.04 | 0.03 | 0.03 | 0.03 |
| NiO | 0.10 | 0.04 | 0.08 | 0.06 | 0.07 |  | 0.04 | 0.04 | | 0.05 | 0.07 | 0.04 | 0.05 | 0.05 |
| Total | 100.33 | 100.43 | 100.34 | 100.78 | 100.44 |  | 100.44 | 100.96 | | 99.09 | 99.17 | 99.93 | 99.72 | 99.98 |
|  |  |  |  |  |  |  |  |  | |  |  |  |  |  |
| Mg# | 0.94 | 0.94 | 0.93 | 0.93 | 0.95 |  | 0.94 | 0.94 | | 0.94 | 0.94 | 0.95 | 0.95 | 0.94 |
| \*(-) means below detection limit | | |  |  |  |  |  | |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  | |  |  |  |  |  |  |

Supplementary Table 4. *(continued)*

|  |  |  |  |
| --- | --- | --- | --- |
|  | Spinel harzburgite | |  |
|  |  |  |  |
| Sample | PALF-07 | PALF-07 | PALF-07 |
|  | C1-11 | C2-1 | C2-5 |
| SiO2 | 55.21 | 54.75 | 54.55 |
| TiO2 | 0.01 | - | 0.01 |
| Al2O3 | 1.23 | 1.45 | 1.28 |
| Cr2O3 | 0.20 | 0.15 | 0.25 |
| FeO | 1.85 | 2.07 | 1.64 |
| MnO | 0.04 | 0.09 | 0.09 |
| MgO | 17.99 | 17.85 | 17.87 |
| CaO | 23.69 | 23.12 | 23.20 |
| Na2O | 0.24 | 0.26 | 0.30 |
| K2O | 0.03 | 0.02 | 0.04 |
| NiO | 0.03 | 0.03 | 0.04 |
| Total | 100.52 | 99.79 | 99.27 |
|  |  |  |  |
| Mg# | 0.95 | 0.94 | 0.95 |
| \*(-) means below detection limit | | |  |

Supplementary Table 5. Microprobe analysis of plagioclase in the plagioclase peridotites from southern Palawan Ophiolite. Total iron as FeO\*.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Plagioclase lherzolite | |  |  |  |  |  |  |  |  |  | Plagioclase wehrlite | |  |
|  | Plagioclase |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sample | PALB-01 | PALB-01 | PALB-01 | PALB-01 | PALB-01 | PALB-01 | PALB-01 | PALB-01 | PALB-01 | PALB-01 |  | PALB-04 | PALB-04 | PALB-04 |
|  | C5-03 | C7-02 | C7-05 | C7-01 | C7-06 | C7-05 | C10-01 | C5-03 | C7-02 | C7-05 |  | C4-6 | C6-2 | C1-7 |
| SiO2 | 49.64 | 49.28 | 49.93 | 49.52 | 50.09 | 49.75 | 50.11 | 49.64 | 49.28 | 49.93 |  | 49.66 | 50.10 | 49.58 |
| TiO2 | - | 0.01 | 0.04 | 0.03 | 0.04 | - | 0.05 | - | 0.01 | 0.04 |  | 0.04 | - | 0.01 |
| Al2O3 | 31.79 | 31.64 | 31.21 | 31.76 | 31.25 | 31.39 | 31.20 | 31.79 | 31.64 | 31.21 |  | 31.35 | 31.15 | 31.54 |
| Cr2O3 | 0.03 | - | - | - | - | - | - | 0.03 | - | - |  | - | - | 0.01 |
| FeO | 0.23 | 0.20 | 0.18 | 0.21 | 0.18 | 0.19 | 0.19 | 0.23 | 0.20 | 0.18 |  | 0.13 | 0.17 | 0.11 |
| MnO | 0.02 | 0.01 | - | - | 0.02 | - | - | 0.02 | 0.01 | - |  | - | - | - |
| MgO | 0.02 | 0.02 | 0.01 | 0.02 | 0.02 | 0.01 | 0.01 | 0.02 | 0.02 | 0.01 |  | 0.01 | 0.07 | 0.02 |
| CaO | 15.05 | 14.95 | 14.50 | 14.84 | 14.15 | 14.38 | 14.40 | 15.05 | 14.95 | 14.50 |  | 14.05 | 13.79 | 14.05 |
| Na2O | 2.86 | 2.99 | 3.24 | 2.96 | 3.31 | 3.24 | 3.22 | 2.86 | 2.99 | 3.24 |  | 2.84 | 2.91 | 2.89 |
| K2O | 0.01 | - | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | - | 0.01 |  | 0.02 | 0.02 | 0.01 |
| NiO | 0.05 | 0.06 | 0.05 | 0.04 | 0.05 | 0.04 | 0.06 | 0.05 | 0.06 | 0.05 |  | - | 0.02 | 0.05 |
| Total | 99.69 | 99.16 | 99.18 | 99.38 | 99.11 | 99.01 | 99.25 | 99.69 | 99.16 | 99.18 |  | 98.10 | 98.22 | 98.27 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| An | 74.33 | 73.43 | 71.16 | 73.45 | 70.26 | 71.00 | 71.12 | 74.33 | 73.43 | 71.16 |  | 73.18 | 72.24 | 72.85 |
| \*(-) means below detection limit | | |  |  |  |  |  |  |  |  |  |  |  |  |

Supplementary Table 5. *(continued)*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  | |  | |  | |  | |  | |  | | |  | |  | |  | | |
|  | Plagioclase wehrlite | |  |  |  |  | Plagioclase harzburgite | | | |  | |  | |  | |  | | Plagioclase lherzolite | | | | | | |
|  |  |  |  |  |  |  | Plagioclase | |  | |  | |  | |  | |  | |  | | | |  | | |
| Sample | PALB-04 | PALB-04 | PALB-04 | PALB-04 | PALB-04 |  | PALJ-01 | PALJ-01 | | PALJ-01 | | PALJ-01 | | PALJ-01 | |  | | PALF-03 | | | PALF-03 | | | |
|  | C14-1 | C2-03 | C1-9 | C2-4 | C4-09 |  | C10-3 | C11-1 | | C11-3 | | C5-4 | | C6-6 | |  | | C10-02 | | | C10-01 | | | |
| SiO2 | 50.49 | 51.10 | 50.10 | 50.61 | 50.16 |  | 48.98 | 50.16 | | 49.86 | | 49.12 | | 49.60 | |  | | 47.13 | | | 48.52 | | | |
| TiO2 | - | - | 0.01 | 0.05 | 0.01 |  | 0.01 | 0.04 | | 0.09 | | 0.03 | | 0.03 | |  | | - | | | 0.02 | | | |
| Al2O3 | 30.85 | 31.03 | 31.52 | 30.74 | 31.26 |  | 31.82 | 31.25 | | 31.71 | | 31.66 | | 31.49 | |  | | 30.80 | | | 30.78 | | | |
| Cr2O3 | 0.01 | - | 0.04 | - | 0.04 |  | - | - | | 0.02 | | - | | - | |  | | - | | | 0.01 | | | |
| FeO | 0.16 | 0.18 | 0.19 | 0.21 | 0.20 |  | 0.15 | 0.20 | | 0.21 | | 0.17 | | 0.13 | |  | | 1.30 | | | 0.29 | | | |
| MnO | - | 0.02 | 0.04 | 0.03 | - |  | - | 0.01 | | - | | - | | 0.01 | |  | | 0.13 | | | 0.03 | | | |
| MgO | 0.03 | 0.03 | 0.01 | 0.03 | 0.07 |  | 0.02 | 0.03 | | 0.02 | | 0.02 | | 0.03 | |  | | 0.05 | | | 0.03 | | | |
| CaO | 13.94 | 13.84 | 14.41 | 14.02 | 14.12 |  | 15.33 | 14.38 | | 14.81 | | 14.99 | | 14.94 | |  | | 17.38 | | | 17.09 | | | |
| Na2O | 3.26 | 3.55 | 2.95 | 3.57 | 3.46 |  | 2.85 | 3.39 | | 3.12 | | 3.08 | | 3.03 | |  | | 2.81 | | | 3.30 | | | |
| K2O | 0.03 | - | 0.02 | 0.02 | 0.03 |  | 0.01 | 0.02 | | 0.03 | | 0.01 | | - | |  | | - | | | 0.02 | | | |
| NiO | 0.02 | 0.05 | 0.01 | 0.02 | - |  | 0.01 | 0.05 | | - | | - | | 0.04 | |  | | - | | | 0.01 | | | |
| Total | 98.77 | 99.80 | 99.29 | 99.30 | 99.35 |  | 99.19 | 99.54 | | 99.86 | | 99.07 | | 99.31 | |  | | 99.59 | | | 100.09 | | | |
|  |  |  |  |  |  |  |  |  | |  | |  | |  | |  | |  | | |  | | | |
| An | 70.16 | 68.29 | 72.91 | 68.38 | 69.18 |  | 71.27 | 74.79 | | 72.28 | | 72.85 | | 73.13 | |  | | 77.35 | | | 74.07 | | | |
| \*(-) means below detection limit | | |  |  |  |  |  | |  | |  | |  | |  | |  | | |  | |  | |  | | |

Supplementary Table 5. *(continued)*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  | |  | |  | |  | |  |  |  | |  | |
|  | Plagioclase wehrlite | | |  | |  | |  | |  |  |  | |  | |
|  |  |  | |  | |  | |  | |  |  |  | |  | |
| Sample | PALF-02 | | PALF-02 | | PALF-02 | | PALF-02 | | PALF-02 | | PALF-02 | | PALF-02 | | PALF-02 | | PALF-02 |
|  | C4-01 | | C4-02 | | C5-01 | | C5-02 | | C6-03 | | C7-01 | | C7-02 | | C8-01 | | C9-01 |
| SiO2 | 49.61 | | 49.80 | | 50.89 | | 49.92 | | 50.51 | | 50.64 | | 50.65 | | 50.05 | | 49.41 |
| TiO2 | 0.01 | | 0.02 | | 0.07 | | 0.03 | | - | | 0.01 | | - | | 0.03 | | 0.02 |
| Al2O3 | 0.15 | | 0.22 | | 0.17 | | 0.14 | | 0.16 | | 0.12 | | 0.16 | | 0.20 | | 0.16 |
| Cr2O3 | 31.58 | | 31.43 | | 31.41 | | 31.06 | | 31.67 | | 31.61 | | 31.92 | | 31.86 | | 32.03 |
| FeO | - | | - | | - | | - | | - | | - | | - | | - | | 0.04 |
| MnO | 0.01 | | 0.03 | | - | | - | | - | | 0.02 | | 0.01 | | - | | 0.03 |
| MgO | 0.03 | | 0.10 | | 0.06 | | 0.03 | | 0.03 | | 0.03 | | - | | 0.02 | | 0.04 |
| CaO | 14.72 | | 14.59 | | 14.52 | | 14.54 | | 14.69 | | 14.69 | | 14.87 | | 15.08 | | 15.18 |
| Na2O | 3.11 | | 3.12 | | 3.40 | | 3.40 | | 3.43 | | 3.46 | | 3.30 | | 3.16 | | 2.99 |
| K2O | 0.02 | | 0.03 | | 0.01 | | - | | - | | - | | 0.01 | | 0.01 | | 0.01 |
| NiO | 0.02 | | 0.03 | | 0.01 | | 0.02 | | 0.03 | | 0.03 | | 0.02 | | 0.03 | | 0.02 |
| Total | 99.24 | | 99.37 | | 100.54 | | 99.14 | | 100.51 | | 100.62 | | 100.93 | | 100.43 | | 99.93 |
|  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| An | 72.27 | | 71.96 | | 70.17 | | 70.25 | | 70.31 | | 70.13 | | 71.34 | | 72.46 | | 73.69 |
| \*(-) means below detection limit | | | |  | |  | |  | |  |  |  | |  | |

Supplementary Table 6. Microprobe analysis of olivine in the olivine gabbros and troctolite from southern Palawan Ophiolite. Total iron as FeO\*.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Olivine gabbro | |  |  |  |  |  |  |  |  |  | Troctolite |  |  |
|  | Olivine |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sample | PALB-03 | PALB-03 | PALB-03 | PALB-03 | PALB-03 | PALB-03 | PALB-03 | PALB-03 | PALB-03 | PALB-03 |  | PALB-02 | PALB-02 | PALB-02 |
|  | C2-1 | C2-2 | C3-1 | C3-2 | C4-2 | C11-1 | C11-2 | C12-1 | C12-2 | C7-4 |  | C7-1 | C7-3 | C7-4 |
| SiO2 | 38.89 | 39.07 | 38.65 | 39.29 | 39.13 | 39.27 | 38.82 | 39.03 | 38.98 | 39.87 |  | 39.75 | 39.45 | 39.06 |
| TiO2 | - | 0.01 | - | 0.05 | - | - | - | 0.02 | 0.03 | - |  | - | 0.01 | - |
| Al2O3 | 0.01 | - | - | - | - | - | 0.02 | - | 0.01 | - |  | - | 0.01 | - |
| Cr2O3 | 0.05 | 0.01 | 0.03 | - | - | 0.01 | - | - | 0.01 | 0.04 |  | - | 0.01 | - |
| FeO | 18.53 | 18.35 | 18.64 | 18.33 | 18.60 | 18.09 | 18.41 | 18.52 | 17.69 | 17.85 |  | 17.51 | 18.13 | 17.21 |
| MnO | 0.26 | 0.30 | 0.23 | 0.24 | 0.25 | 0.19 | 0.22 | 0.25 | 0.29 | 0.29 |  | 0.23 | 0.30 | 0.21 |
| MgO | 42.90 | 42.67 | 42.73 | 42.11 | 42.26 | 42.81 | 42.74 | 43.06 | 42.91 | 43.49 |  | 43.51 | 43.37 | 43.25 |
| CaO | - | 0.01 | - | - | 0.01 | 0.01 | 0.01 | - | 0.01 | 0.01 |  | - | - | 0.02 |
| Na2O | - | 0.04 | 0.04 | 0.01 | 0.04 | - | 0.03 | - | 0.01 | 0.03 |  | 0.01 | - | 0.05 |
| K2O | - | - | - | - | - | 0.01 | - | - | - | - |  | - | 0.01 | - |
| NiO | 0.21 | 0.26 | 0.23 | 0.26 | 0.22 | 0.22 | 0.25 | 0.24 | 0.23 | 0.20 |  | 0.24 | 0.22 | 0.19 |
| Total | 100.83 | 100.72 | 100.54 | 100.30 | 100.51 | 100.61 | 100.49 | 101.12 | 100.17 | 101.77 |  | 101.27 | 101.52 | 99.99 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Fo | 80.49 | 80.56 | 80.33 | 80.37 | 80.19 | 80.83 | 80.53 | 80.55 | 81.21 | 81.27 |  | 81.57 | 81.00 | 81.75 |
| Mg# | 0.80 | 0.81 | 0.80 | 0.80 | 0.80 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 |  | 0.01 | 0.81 | 0.82 |
| \*(-) means below detection limit | | |  |  |  |  |  |  |  |  |  |  |  |  |

Supplementary Table 6. *(continued)*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Troctolite |  |  |  |  | Olivine gabbro | |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sample | PALB-02 | PALB-02 | PALB-02 | PALB-02 |  | PALB-12 | PALB-12 | PALB-12 | PALB-12 | PALB-12 | PALB-12 | PALB-12 | PALB-12 |
|  | C7-1 | C3-2 | C7-3 | C7-4 |  | C6-3 | C5-2 | C4-1 | C4-2 | C3-1 | C2-1 | C2-2 | C1-1 |
| SiO2 | 38.12 | 37.94 | 38.33 | 38.25 |  | 39.61 | 39.92 | 39.97 | 39.82 | 39.87 | 39.80 | 39.87 | 39.94 |
| TiO2 | 0.01 | 0.01 | - | 0.01 |  | - | 0.03 | - | - | - | - | - | - |
| Al2O3 | 0.01 | - | - | - |  | - | - | - | - | - | - | - | - |
| Cr2O3 | - | - | - | 0.02 |  | 0.01 | - | - | - | - | 0.01 | 0.01 | 0.03 |
| FeO | 17.31 | 17.33 | 17.03 | 17.03 |  | 14.73 | 14.69 | 15.03 | 14.38 | 14.79 | 15.17 | 15.40 | 13.93 |
| MnO | 0.22 | 0.27 | 0.26 | 0.22 |  | 0.22 | 0.22 | 0.20 | 0.21 | 0.19 | 0.24 | 0.19 | 0.19 |
| MgO | 43.20 | 42.67 | 42.65 | 42.92 |  | 45.81 | 45.95 | 46.16 | 45.74 | 45.78 | 45.84 | 45.56 | 45.33 |
| CaO | - | 0.01 | 0.01 | 0.01 |  | - | - | 0.01 | 0.01 | 0.01 | - | - | 0.01 |
| Na2O | 0.01 | 0.01 | 0.01 | 0.02 |  | - | - | - | 0.01 | 0.01 | 0.01 | - | 0.01 |
| K2O | - | 0.01 | - | - |  | - | - | 0.01 | 0.01 | 0.01 | - | - | 0.01 |
| NiO | 0.22 | 0.21 | 0.25 | 0.20 |  | 0.19 | 0.19 | 0.18 | 0.21 | 0.19 | 0.22 | 0.20 | 0.16 |
| Total | 99.10 | 98.47 | 98.54 | 98.66 |  | 100.58 | 100.98 | 101.56 | 100.39 | 100.85 | 101.29 | 101.24 | 99.61 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Fo | 81.64 | 81.44 | 81.69 | 81.79 |  | 84.72 | 84.79 | 84.55 | 85.00 | 84.65 | 84.34 | 84.05 | 85.29 |
| Mg# | 0.82 | 0.82 | 0.82 | 0.81 |  | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.84 | 0.84 | 0.85 |
| \*(-) means below detection limit | | |  |  |  |  |  |  |  |  |  |  |  |

Supplementary Table 6. *(continued)*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Olivine gabbro | |  | Olivine gabbro | |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sample | PALB-12 | PALB-12 |  | PALJ-03 | PALJ-03 | PALJ-03 | PALJ-03 | PALJ-03 | PALJ-03 | PALJ-03 | PALJ-03 | PALJ-03 | PALJ-03 |
|  | C1-2 | C1-3 |  | C2-8 | C2-9 | C3-3 | C3-2 | C4-1 | C4-2 | C7-1 | C7-2 | C7-3 | C7-5 |
| SiO2 | 39.86 | 39.87 |  | 39.50 | 40.56 | 39.94 | 40.02 | 39.86 | 40.13 | 39.93 | 39.93 | 39.83 | 40.05 |
| TiO2 | 0.02 | - |  | - | - | - | 0.02 | - | - | - | - | - | 0.02 |
| Al2O3 | - | - |  | - | 0.02 | - | 0.03 | 0.06 | 0.01 | - | 0.02 | - | 0.02 |
| Cr2O3 | 0.01 | - |  | - | - | - | - | 0.01 | - | - | - | - | - |
| FeO | 15.42 | 15.26 |  | 14.13 | 14.38 | 13.98 | 14.13 | 14.56 | 14.23 | 14.20 | 14.16 | 14.51 | 14.58 |
| MnO | 0.18 | 0.23 |  | 0.19 | 0.16 | 0.20 | 0.24 | 0.19 | 0.20 | 0.16 | 0.18 | 0.18 | 0.17 |
| MgO | 46.22 | 45.90 |  | 45.20 | 45.07 | 45.31 | 45.20 | 44.69 | 44.79 | 44.85 | 44.68 | 45.19 | 44.79 |
| CaO | - | 0.02 |  | 0.01 | 0.01 | 0.02 | 0.01 | 0.01 | - | 0.02 | 0.01 | 0.01 | 0.01 |
| Na2O | - | 0.01 |  | 0.01 | 0.01 | 0.02 | 0.01 | 0.01 | - | 0.02 | 0.01 | 0.01 | 0.01 |
| K2O | - | - |  | - | 0.01 | - | 0.02 | 0.01 | 0.01 | - | 0.01 | - | - |
| NiO | 0.21 | 0.20 |  | 0.17 | 0.22 | 0.18 | 0.19 | 0.16 | 0.16 | 0.19 | 0.21 | 0.18 | 0.18 |
| Total | 101.93 | 101.49 |  | 99.21 | 100.45 | 99.63 | 99.86 | 99.56 | 99.55 | 99.36 | 99.21 | 99.90 | 99.83 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Fo | 84.23 | 84.27 |  | 85.07 | 84.81 | 85.24 | 85.08 | 84.54 | 84.87 | 84.91 | 84.90 | 84.73 | 84.55 |
| Mg# | 0.84 | 0.84 |  | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 |
| \*(-) means below detection limit | | |  |  |  |  |  |  |  |  |  |  |  |

Supplementary Table 6. *(continued)*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Olivine gabbro | |  |  |  |  |  |  | Olivine gabbro | |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sample | PALEG-01A | PALEG-01A | PALEG-01A | PALEG-01A | PALEG-01A | PALEG-01A | PALEG-01A |  | PALEG-02A | PALEG-02A | PALEG-02A | PALEG-02A | PALEG-02A |
|  | C4-2 | C5-2 | C6-1 | C6-2 | C7-1 | C7-2 | C5-1 |  | C6-3 | C5-2 | C4-1 | C4-2 | C3-1 |
| SiO2 | 38.36 | 38.23 | 38.31 | 38.18 | 38.41 | 38.38 | 38.26 |  | 39.61 | 39.92 | 39.97 | 39.82 | 39.87 |
| TiO2 | - | - | - | - | - | - | 0.02 |  | - | 0.03 | - | - | - |
| Al2O3 | - | - | - | - | 0.01 | - | - |  | - | - | - | - | - |
| Cr2O3 | - | 0.01 | - | - | - | 0.02 | - |  | 0.01 | - | - | - | - |
| FeO | 22.28 | 22.11 | 22.60 | 22.58 | 22.62 | 22.53 | 22.29 |  | 14.73 | 14.69 | 15.03 | 14.38 | 14.79 |
| MnO | 0.26 | 0.27 | 0.32 | 0.31 | 0.27 | 0.23 | 0.24 |  | 0.22 | 0.22 | 0.20 | 0.21 | 0.19 |
| MgO | 40.36 | 40.26 | 40.11 | 39.89 | 40.28 | 40.47 | 39.96 |  | 45.81 | 45.95 | 46.16 | 45.74 | 45.78 |
| CaO | 0.01 | - | 0.02 | 0.03 | 0.01 | 0.01 | 0.01 |  | - | - | 0.01 | 0.01 | 0.01 |
| Na2O | 0.02 | 0.01 | 0.02 | 0.02 | 0.01 | - | 0.02 |  | - | - | - | 0.01 | 0.01 |
| K2O | 0.02 | - | 0.02 | 0.01 | 0.01 | 0.02 | - |  | - | - | 0.01 | 0.01 | 0.01 |
| NiO | 0.16 | 0.18 | 0.15 | 0.14 | 0.16 | 0.14 | 0.07 |  | 0.19 | 0.19 | 0.18 | 0.21 | 0.19 |
| Total | 101.45 | 101.06 | 101.54 | 101.15 | 101.76 | 101.79 | 100.86 |  | 100.58 | 100.98 | 101.56 | 100.39 | 100.85 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Fo | 76.34 | 76.44 | 75.97 | 75.89 | 76.04 | 76.19 | 76.16 |  | 84.72 | 84.79 | 84.55 | 85.00 | 84.65 |
| Mg# | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 |  | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 |
| \*(-) means below detection limit | | |  |  |  |  |  |  |  |  |  |  |  |

Supplementary Table 6. *(continued)*

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Olivine gabbro | | |  | |  | |  | | |
|  |  |  | |  | |  | |  | | |
| Sample | PALEG-02A | | PALEG-02A | | PALEG-02A | | PALEG-02A | | | PALEG-02A | |
|  | C2-1 | | C2-2 | | C1-1 | | C1-2 | | | C1-3 | |
| SiO2 | 39.80 | | 39.87 | | 39.94 | | 39.86 | | | 39.87 | |
| TiO2 | - | | - | | - | | 0.02 | | | - | |
| Al2O3 | - | | - | | - | | - | | | - | |
| Cr2O3 | 0.01 | | 0.01 | | 0.03 | | 0.01 | | | - | |
| FeO | 15.17 | | 15.40 | | 13.93 | | 15.42 | | | 15.26 | |
| MnO | 0.24 | | 0.19 | | 0.19 | | 0.18 | | | 0.23 | |
| MgO | 45.84 | | 45.56 | | 45.33 | | 46.22 | | | 45.90 | |
| CaO | - | | - | | 0.01 | | - | | | 0.02 | |
| Na2O | 0.01 | | - | | 0.01 | | - | | | 0.01 | |
| K2O | - | | - | | 0.01 | | - | | | - | |
| NiO | 0.22 | | 0.20 | | 0.16 | | 0.21 | | | 0.20 | |
| Total | 101.29 | | 101.24 | | 99.61 | | 101.93 | | | 101.49 | |
|  |  | |  | |  | |  | | |  | |
| Fo | 84.34 | | 84.05 | | 85.29 | | 84.23 | | | 84.27 | |
| Mg# | 0.84 | | 0.84 | | 0.85 | | 0.84 | | | 0.84 | |
| \*(-) means below detection limit | | | |  | |  | |  |

Supplementary Table 7. Microprobe analysis of clinopyroxene in the olivine gabbros and troctolite from southern Palawan Ophiolite. Total iron as FeO\*.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Olivine gabbro | |  |  |  |  |  |  |  |  |  | Troctolite |  |  |  |
|  | Clinopyroxene | |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sample | PALB-03 | PALB-03 | PALB-03 | PALB-03 | PALB-03 | PALB-03 | PALB-03 | PALB-03 | PALB-03 | PALB-03 |  | PALB-02 | PALB-02 | PALB-02 | PALB-02 |
|  | C9-2 | C13-1 | C13-2 | C4-4 | C6-1 | C9-1 | C3-7 | C4-4 | C5-1 | C5-3 |  | C1-1 | C1-3 | C1-4 | C2-1 |
| SiO2 | 53.11 | 53.59 | 52.89 | 52.20 | 52.47 | 52.04 | 53.22 | 53.23 | 52.90 | 52.93 |  | 53.09 | 53.33 | 53.44 | 53.20 |
| TiO2 | 0.31 | 0.36 | 0.25 | 0.39 | 0.28 | 0.32 | 0.38 | 0.35 | 0.31 | 0.35 |  | 0.91 | 0.59 | 0.84 | 0.85 |
| Al2O3 | 2.79 | 2.55 | 2.79 | 2.79 | 2.79 | 2.83 | 2.94 | 2.84 | 2.95 | 3.27 |  | 2.75 | 2.15 | 2.80 | 2.85 |
| Cr2O3 | 0.65 | 0.72 | 0.82 | 0.80 | 0.75 | 0.88 | 0.93 | 0.90 | 0.85 | 0.79 |  | 0.63 | 0.50 | 0.63 | 0.75 |
| FeO | 6.01 | 5.43 | 4.42 | 6.49 | 4.73 | 5.43 | 4.94 | 5.10 | 5.20 | 5.45 |  | 5.06 | 4.49 | 4.38 | 4.04 |
| MnO | 0.12 | 0.11 | 0.15 | 0.19 | 0.15 | 0.09 | 0.14 | 0.18 | 0.15 | 0.15 |  | 0.13 | 0.11 | 0.13 | 0.10 |
| MgO | 17.62 | 16.95 | 15.59 | 18.26 | 15.57 | 16.65 | 15.66 | 16.14 | 15.94 | 16.70 |  | 16.36 | 16.57 | 16.16 | 15.57 |
| CaO | 18.54 | 19.61 | 22.19 | 16.84 | 21.81 | 19.97 | 21.77 | 21.23 | 21.29 | 19.86 |  | 21.12 | 21.60 | 21.68 | 21.91 |
| Na2O | 0.31 | 0.25 | 0.34 | 0.26 | 0.28 | 0.33 | 0.32 | 0.31 | 0.36 | 0.35 |  | 0.43 | 0.36 | 0.44 | 0.43 |
| K2O | - | 0.01 | - | - | - | 0.01 | - | - | - | 0.03 |  | - | - | 0.01 | 0.02 |
| NiO | 0.02 | 0.04 | 0.09 | 0.09 | 0.01 | 0.02 | 0.03 | 0.06 | 0.04 | 0.03 |  | 0.03 | - | 0.03 | 0.04 |
| Total | 99.48 | 99.63 | 99.53 | 98.31 | 98.86 | 98.56 | 100.32 | 100.34 | 99.98 | 99.91 |  | 100.52 | 99.68 | 100.52 | 99.75 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Mg# | 0.84 | 0.85 | 0.86 | 0.83 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 |  | 0.85 | 0.87 | 0.87 | 0.87 |
| \*(-) means below detection limit | | |  |  |  |  |  |  |  |  |  |  |  |  |  |

Supplementary Table 7. *(continued)*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Troctolite |  |  |  |  |  |  | Olivine gabbro | |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sample | PALB-02 | PALB-02 | PALB-02 | PALB-02 | PALB-02 | PALB-02 |  | PALB-12 | PALB-12 | PALB-12 | PALB-12 | PALB-12 | PALB-12 |
|  | C2-2 | C2-5 | C2-6 | C3-3 | C4-2 | C4-3 |  | C8-4 | C8-5 | C7-5 | C6-1 | C6-2 | C4-3 |
| SiO2 | 52.34 | 52.73 | 52.78 | 53.13 | 53.03 | 52.71 |  | 53.12 | 52.94 | 53.15 | 53.30 | 53.28 | 53.19 |
| TiO2 | 0.85 | 0.94 | 1.04 | 0.76 | 0.97 | 0.90 |  | 0.11 | 0.10 | 0.16 | 0.08 | 0.09 | 0.09 |
| Al2O3 | 2.78 | 2.70 | 2.80 | 2.76 | 2.83 | 2.82 |  | 1.95 | 1.99 | 2.03 | 2.35 | 2.40 | 2.09 |
| Cr2O3 | 0.79 | 0.82 | 0.75 | 0.71 | 0.79 | 0.73 |  | 0.25 | 0.24 | 0.20 | 0.19 | 0.22 | 0.23 |
| FeO | 4.88 | 5.34 | 4.98 | 4.70 | 5.00 | 4.69 |  | 4.73 | 4.57 | 4.26 | 4.70 | 4.52 | 4.55 |
| MnO | 0.15 | 0.16 | 0.15 | 0.11 | 0.15 | 0.18 |  | 0.15 | 0.08 | 0.12 | 0.16 | 0.15 | 0.14 |
| MgO | 16.24 | 16.39 | 15.88 | 16.00 | 16.42 | 16.00 |  | 17.26 | 17.46 | 17.17 | 18.12 | 17.33 | 17.74 |
| CaO | 20.79 | 20.62 | 21.43 | 21.26 | 20.69 | 21.85 |  | 22.50 | 22.30 | 22.82 | 21.16 | 21.99 | 21.72 |
| Na2O | 0.47 | 0.44 | 0.48 | 0.48 | 0.43 | 0.44 |  | 0.27 | 0.26 | 0.27 | 0.30 | 0.27 | 0.27 |
| K2O | 0.01 | - | 0.01 | - | - | - |  | - | - | - | 0.02 | 0.02 | 0.01 |
| NiO | 0.05 | 0.09 | 0.05 | 0.11 | 0.02 | 0.02 |  | 0.06 | 0.02 | 0.02 | 0.05 | 0.02 | 0.02 |
| Total | 99.34 | 100.22 | 100.34 | 100.01 | 100.33 | 100.34 |  | 100.38 | 99.96 | 100.19 | 100.41 | 100.28 | 100.04 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Mg# | 0.86 | 0.85 | 0.85 | 0.86 | 0.85 | 0.86 |  | 0.87 | 0.87 | 0.88 | 0.87 | 0.87 | 0.87 |
| \*(-) means below detection limit | | |  |  |  |  |  |  |  |  |  |  |  |

Supplementary Table 7. *(continued)*

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Olivine gabbro | |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Sample | PALB-12 | PALB-12 | PALB-12 | PALB-12 | PALB-12 | PALB-12 | PALB-12 | PALB-12 | PALB-12 | PALB-12 |  |
|  | C8-4 | C8-5 | C7-5 | C6-1 | C6-2 | C4-3 | C4-4 | C3-7 | C3-8 | C3-9 |  |
| SiO2 | 53.12 | 52.94 | 53.15 | 53.30 | 53.28 | 53.19 | 53.29 | 53.01 | 53.19 | 52.72 |  |
| TiO2 | 0.11 | 0.10 | 0.16 | 0.08 | 0.09 | 0.09 | 0.11 | 0.14 | 0.12 | 0.17 |  |
| Al2O3 | 1.95 | 1.99 | 2.03 | 2.35 | 2.40 | 2.09 | 2.08 | 2.24 | 2.22 | 2.65 |  |
| Cr2O3 | 0.25 | 0.24 | 0.20 | 0.19 | 0.22 | 0.23 | 0.20 | 0.35 | 0.31 | 0.20 |  |
| FeO | 4.73 | 4.57 | 4.26 | 4.70 | 4.52 | 4.55 | 4.12 | 4.44 | 4.54 | 4.07 |  |
| MnO | 0.15 | 0.08 | 0.12 | 0.16 | 0.15 | 0.14 | 0.09 | 0.13 | 0.14 | 0.12 |  |
| MgO | 17.26 | 17.46 | 17.17 | 18.12 | 17.33 | 17.74 | 17.01 | 17.31 | 17.25 | 16.45 |  |
| CaO | 22.50 | 22.30 | 22.82 | 21.16 | 21.99 | 21.72 | 22.75 | 22.00 | 22.60 | 23.16 |  |
| Na2O | 0.27 | 0.26 | 0.27 | 0.30 | 0.27 | 0.27 | 0.24 | 0.27 | 0.28 | 0.32 |  |
| K2O | - | - | - | 0.02 | 0.02 | 0.01 | - | - | 0.01 | - |  |
| NiO | 0.06 | 0.02 | 0.02 | 0.05 | 0.02 | 0.02 | 0.04 | 0.04 | 0.05 | 0.02 |  |
| Total | 100.38 | 99.96 | 100.19 | 100.41 | 100.28 | 100.04 | 99.93 | 99.93 | 100.68 | 99.89 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Mg# | 0.87 | 0.87 | 0.88 | 0.87 | 0.87 | 0.87 | 0.88 | 0.87 | 0.87 | 0.88 |  |
| \*(-) means below detection limit | | |  |  |  |  |  |  |  |  |  |  |  |

Supplementary Table 8. Microprobe analysis of orthopyroxene in the olivine gabbros and troctolite from southern Palawan Ophiolite. Total iron as FeO\*.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Olivine gabbro | |  |  |  |  |  |  | Troctolite |
|  | Orthopyroxene | |  |  |  |  |  |  |  |
| Sample | PALB-03 | PALB-12 | PALB-12 | PALEG-01A | PALEG-01A | PALEG-02A | PALEG-02A |  | PALB-02 |
|  | C4-3 | C11-4 | C3-2 | C4-6 | C8-3 | C9-4 | C9-6 |  | C3-1 |
| SiO2 | 55.16 | 55.63 | 55.46 | 54.33 | 54.58 | 54.77 | 54.37 |  | 52.96 |
| TiO2 | 0.19 | 0.07 | 0.01 | 0.04 | 0.11 | 0.14 | 0.08 |  | 0.34 |
| Al2O3 | 1.48 | 1.40 | 1.29 | 1.26 | 1.27 | 1.35 | 1.35 |  | 1.46 |
| Cr2O3 | 0.28 | 0.11 | 0.30 | 0.13 | 0.09 | 0.16 | 0.13 |  | 0.25 |
| FeO | 12.05 | 10.30 | 10.16 | 14.92 | 14.37 | 14.36 | 13.54 |  | 11.73 |
| MnO | 0.31 | 0.22 | 0.22 | 0.30 | 0.30 | 0.27 | 0.28 |  | 0.29 |
| MgO | 30.42 | 31.98 | 31.91 | 28.74 | 28.87 | 28.99 | 29.07 |  | 30.35 |
| CaO | 0.56 | 0.96 | 0.74 | 0.97 | 1.00 | 0.98 | 0.72 |  | 0.63 |
| Na2O | 0.01 | 0.01 | 0.02 | 0.02 | 0.02 | 0.04 | - |  | 0.01 |
| K2O | - | 0.03 | - | 0.03 | 0.03 | - | - |  | 0.01 |
| NiO | 0.08 | 0.03 | 0.04 | 0.03 | 0.02 | 0.02 | 0.06 |  | 0.06 |
| Total | 100.52 | - | 100.15 | 100.77 | 100.66 | 101.07 | 99.59 |  | 98.08 |
|  |  |  |  |  |  |  |  |  |  |
| Mg# | 0.82 | 0.85 | 0.85 | 0.77 | 0.78 | 0.78 | 0.79 |  | 0.82 |
| \*(-) means below detection limit | | |  |  |  |  |  |  |  |

Supplementary Table 9. Microprobe analysis of plagioclase in the olivine gabbros from southern Palawan Ophiolite. Total iron as FeO\*.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Olivine gabbro | |  | |  | |  | |  | |  | | Olivine gabbro | | | | | |  | | | |  | |  | |  | |  | |
|  | Plagioclase |  |  | |  | |  | |  | |  | |  | | | |  | |  | | | |  | |  | |  | |  | |
| Sample | PALB-03 | PALB-03 | | PALB-03 | | PALB-03 | | PALB-03 | | PALB-03 | |  | | PALB-12 | | | | PALB-12 | | | PALB-12 | | | PALB-12 | | PALB-12 | | PALB-12 | | PALB-12 | |
|  | C12-5 | C3-3 | | C3-4 | | C3-6 | | C8-2 | | C11-3 | |  | | C7-3 | | | | C7-4 | | | C5-1 | | | C5-4 | | C5-5 | | C5-6 | | C2-4 | |
| SiO2 | 48.27 | 47.75 | | 47.86 | | 48.39 | | 47.51 | | 47.26 | |  | | 45.03 | | | | 45.94 | | | 45.95 | | | 45.92 | | 46.44 | | 45.64 | | 45.62 | |
| TiO2 | - | - | | 0.06 | | - | | 0.03 | | 0.02 | |  | | - | | | | - | | | - | | | - | | - | | - | | - | |
| Al2O3 | 32.73 | 33.05 | | 32.69 | | 32.36 | | 32.74 | | 32.73 | |  | | 34.72 | | | | 33.98 | | | 34.51 | | | 34.70 | | 34.30 | | 34.63 | | 34.51 | |
| Cr2O3 | 0.05 | 0.01 | | 0.01 | | - | | 0.06 | | - | |  | | - | | | | - | | | - | | | - | | - | | 0.04 | | 0.02 | |
| FeO | 0.20 | 0.24 | | 0.30 | | 0.30 | | 0.22 | | 0.31 | |  | | 0.31 | | | | 0.27 | | | 0.30 | | | 0.25 | | 0.29 | | 0.21 | | 0.24 | |
| MnO | - | 0.03 | | 0.03 | | - | | - | | 0.03 | |  | | 0.02 | | | | 0.02 | | | - | | | - | | 0.01 | | - | | 0.01 | |
| MgO | 0.03 | - | | 0.03 | | 0.03 | | 0.07 | | 0.05 | |  | | 0.02 | | | | 0.01 | | | 0.01 | | | - | | 0.02 | | - | | 0.03 | |
| CaO | 15.88 | 15.45 | | 15.22 | | 15.40 | | 15.71 | | 15.93 | |  | | 18.49 | | | | 17.68 | | | 17.98 | | | 17.99 | | 17.67 | | 18.16 | | 18.10 | |
| Na2O | 2.11 | 1.90 | | 1.97 | | 2.08 | | 1.87 | | 1.84 | |  | | 1.07 | | | | 1.56 | | | 1.39 | | | 1.38 | | 1.43 | | 1.30 | | 1.23 | |
| K2O | 0.01 | 0.01 | | - | | 0.01 | | 0.02 | | 0.01 | |  | | 0.01 | | | | 0.02 | | | - | | | - | | 0.03 | | - | | 0.02 | |
| NiO | 0.01 | 0.02 | | 0.04 | | - | | 0.05 | | 0.03 | |  | | 0.02 | | | | - | | | 0.01 | | | 0.01 | | 0.05 | | 0.02 | | 0.06 | |
| Total | 99.29 | 98.45 | | 98.19 | | 98.57 | | 98.26 | | 98.21 | |  | | 99.67 | | | | 99.47 | | | 100.15 | | | 100.25 | | 100.23 | | 100.00 | | 99.83 | |
|  |  |  | |  | |  | |  | |  | |  | |  | | | |  | | |  | | |  | |  | |  | |  | |
| An | 80.61 | 81.77 | | 81.03 | | 80.33 | | 82.19 | | 82.68 | |  | | 87.27 | | | | 90.47 | | | 86.12 | | | 87.73 | | 87.80 | | 87.10 | | 88.61 | |
| \*(-) means below detection limit | | |  | |  | |  | |  | |  | | | |  |  | | | |  | |  | | |  | |  | |  | |  | |

Supplementary Table 9. *(continued)*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Olivine gabbro | |  |  | Olivine gabbro | |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sample | PALB-12 | PALB-12 | PALB-12 |  | PALJ-03 | PALJ-03 | PALJ-03 | PALJ-03 | PALJ-03 | PALJ-03 | PALJ-03 | PALJ-03 | PALJ-03 | PALJ-03 |
|  | C11-6 | C9-4 | C9-5 |  | C1-1 | C1-2 | C1-3 | C4-8 | C5-7 | C5-8 | C6-1 | C6-2 | C7-6 | C7-7 |
| SiO2 | 46.56 | 45.97 | 46.56 |  | 47.34 | 46.47 | 46.48 | 46.53 | 46.78 | 46.40 | 47.06 | 46.26 | 45.97 | 46.31 |
| TiO2 | - | 0.01 | - |  | 0.01 | - | 0.06 | 0.02 | 0.04 | - | 0.02 | - | 0.02 | - |
| Al2O3 | 34.26 | 34.46 | 34.02 |  | 33.74 | 33.60 | 34.61 | 33.98 | 34.48 | 34.27 | 33.81 | 33.81 | 34.57 | 34.58 |
| Cr2O3 | - | - | - |  | 0.01 | - | 0.01 | - | - | - | - | - | - | - |
| FeO | 0.21 | 0.29 | 0.28 |  | 0.27 | 0.26 | 0.25 | 0.25 | 0.24 | 0.19 | 0.25 | 0.29 | 0.27 | 0.24 |
| MnO | 0.03 | - | - |  | 0.02 | 0.01 | 0.03 | 0.02 | 0.02 | - | - | 0.02 | - | 0.01 |
| MgO | 0.02 | 0.01 | 0.02 |  | 0.01 | 0.04 | 0.03 | 0.03 | 0.02 | 0.02 | 0.02 | 0.05 | - | 0.04 |
| CaO | 17.60 | 18.14 | 17.56 |  | 16.74 | 17.08 | 17.65 | 17.19 | 17.54 | 17.71 | 17.49 | 17.36 | 17.57 | 17.55 |
| Na2O | 1.64 | 1.26 | 1.57 |  | 1.72 | 1.53 | 1.33 | 1.55 | 1.51 | 1.30 | 1.50 | 1.43 | 1.38 | 1.33 |
| K2O | 0.02 | 0.01 | 0.02 |  | 0.01 | 0.03 | 0.01 | 0.01 | 0.03 | - | - | 0.06 | - | 0.02 |
| NiO | 0.04 | 0.04 | 0.03 |  | 0.03 | 0.06 | 0.03 | 0.02 | 0.01 | 0.07 | 0.07 | 0.01 | - | 0.05 |
| Total | 100.38 | 100.16 | 100.05 |  | 99.87 | 99.06 | 100.49 | 99.59 | 100.65 | 99.96 | 100.22 | 99.29 | 99.77 | 100.13 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| An | 88.95 | 89.20 | 88.85 |  | 84.26 | 85.92 | 88.00 | 85.91 | 86.40 | 88.26 | 86.55 | 86.71 | 87.56 | 87.89 |
| \*(-) means below detection limit | | |  |  |  |  |  |  |  |  |  |  |  |  |

Supplementary Table 9. *(continued)*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Olivine gabbro | |  |  |  |  |  |  |  |  |  | Olivine gabbro | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sample | PALEG-01A | PALEG-01A | PALEG-01A | PALEG-01A | PALEG-01A | PALEG-01A | PALEG-01A | PALEG-01A | PALEG-01A | PALEG-01A |  | PALEG-02A | PALEG-02A |
|  | C4-3 | C4-4 | C5-3 | C5-7 | C6-7 | C8-5 | C9-2 | C9-2B | C11-6 | C11-7 |  | C7-1 | C7-1B |
| SiO2 | 47.70 | 48.42 | 47.29 | 47.81 | 47.67 | 48.04 | 48.02 | 47.06 | 47.77 | 47.85 |  | 48.11 | 47.94 |
| TiO2 | - | 0.05 | 0.03 | 0.03 | - | - | 0.02 | - | 0.04 | 0.02 |  | 0.03 | 0.03 |
| Al2O3 | 32.75 | 32.16 | 32.97 | 32.65 | 32.62 | 32.79 | 32.79 | 30.58 | 32.39 | 33.08 |  | 32.62 | 32.60 |
| Cr2O3 | - | - | - | - | - | - | 0.01 | - | 0.10 | - |  | - | 0.02 |
| FeO | 0.36 | 0.33 | 0.31 | 0.37 | 0.32 | 0.32 | 0.36 | 1.13 | 0.33 | 0.31 |  | 0.43 | 0.35 |
| MnO | - | - | - | 0.02 | 0.01 | 0.02 | 0.02 | 0.03 | 0.00 | 0.01 |  | - | - |
| MgO | 0.03 | 0.03 | 0.01 | 0.01 | 0.03 | 0.02 | 0.04 | 0.43 | 0.03 | 0.01 |  | 0.05 | 0.01 |
| CaO | 16.23 | 15.81 | 16.36 | 16.19 | 15.94 | 15.70 | 16.13 | 17.17 | 16.11 | 16.36 |  | 16.01 | 16.08 |
| Na2O | 2.29 | 2.58 | 2.20 | 2.24 | 2.42 | 2.43 | 2.34 | 2.05 | 2.35 | 2.28 |  | 2.31 | 2.28 |
| K2O | 0.01 | 0.03 | 0.01 | 0.01 | 0.04 | 0.02 | 0.02 | 0.02 | 0.01 | 0.01 |  | 0.01 | 0.01 |
| NiO | 0.01 | 0.06 | 0.04 | 0.02 | 0.04 | - | 0.01 | 0.03 | 0.05 | 0.05 |  | 0.03 | 0.01 |
| Total | 99.38 | 99.46 | 99.23 | 99.33 | 99.09 | 99.35 | 99.76 | 98.50 | 99.17 | 99.97 |  | 99.59 | 99.31 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| An | 79.85 | 79.58 | 79.64 | 80.37 | 79.95 | 78.32 | 78.00 | 81.50 | 80.24 | 79.09 |  | 79.25 | 79.12 |
| \*(-) means below detection limit | | |  |  |  |  |  |  |  |  |  |  |  |

Supplementary Table 9. *(continued)*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Olivine gabbro | | |  | |  | |  | |  | |  | |  |
|  |  |  | |  | |  | |  | |  | |  | |  |
| Sample | PALEG-02A | PALEG-02A | | PALEG-02A | | PALEG-02A | | PALEG-02A | | PALEG-02A | | PALEG-02A | | PALEG-02A |
|  | C7-3 | C7-4 | | C8-3 | | C8-3B | | C9-3 | | C3-5 | | C4-6B | | C4-6 |
| SiO2 | 48.20 | 48.09 | | 48.09 | | 48.14 | | 48.16 | | 47.73 | | 47.10 | | 47.36 |
| TiO2 | - | 0.03 | | 0.04 | | - | | 0.01 | | 0.01 | | 0.01 | | - |
| Al2O3 | 32.81 | 32.64 | | 32.75 | | 32.59 | | 32.73 | | 32.61 | | 32.98 | | 32.91 |
| Cr2O3 | 0.01 | - | | - | | - | | - | | - | | - | | - |
| FeO | 0.38 | 0.35 | | 0.38 | | 0.38 | | 0.37 | | 0.37 | | 0.34 | | 0.27 |
| MnO | - | - | | - | | - | | - | | - | | - | | - |
| MgO | 0.04 | 0.02 | | 0.03 | | 0.02 | | 0.06 | | 0.03 | | 0.03 | | 0.03 |
| CaO | 16.22 | 16.26 | | 16.15 | | 16.16 | | 16.04 | | 16.36 | | 16.76 | | 16.63 |
| Na2O | 2.38 | 2.29 | | 2.32 | | 2.35 | | 2.35 | | 2.22 | | 2.06 | | 2.07 |
| K2O | 0.03 | - | | 0.01 | | 0.01 | | 0.01 | | - | | 0.03 | | - |
| NiO | 0.03 | 0.01 | | 0.02 | | - | | 0.03 | | - | | 0.03 | | 0.04 |
| Total | 100.09 | 99.69 | | 99.78 | | 99.65 | | 99.75 | | 99.33 | | 99.35 | | 99.31 |
|  |  |  | |  | |  | |  | |  | |  | |  |
| An | 79.25 | 78.93 | | 79.70 | | 79.01 | | 79.34 | | 79.56 | | 80.26 | | 82.22 |
| \*(-) means below detection limit | | |  | |  | |  | |  |  |  | |

Supplementary Table 10. Trace element composition of clinopyroxene and orthopyroxene in theplagioclase peridotites, spinel harzburgites and gabbros from southern Palawan Ophiolite.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Clinopyroxene | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sample No: | PALB-01 |  |  | PALB-04 |  |  |  | PALB-09 |  |  | PALB-05 |  | PALF-07 |  |  |  |
| Rock Type: | Plagioclase lherzolite | |  | Plagioclase wehrlite | |  |  | Spinel harzburgite | |  | Spinel harzburgite | | Spinel harzburgite | |  |  |
| Ti | 2192.89 | 2468.04 |  | 1831.30 | 1638.86 | 1784.97 |  | 102.49 | 105.08 |  | 217.23 | 264.29 | 88.20 | 122.35 | 153.91 | 114.96 |
| Sr | 5.30 | 4.89 |  | 5.36 | 3.72 | 4.69 |  | 17.65 | 15.72 |  | 34.35 | 20.96 | 6.96 | 4.00 | 8.83 | 3.69 |
| Y | 14.55 | 16.98 |  | 11.80 | 12.48 | 12.22 |  | 0.95 | 0.86 |  | 9.02 | 9.64 | 1.05 | 1.37 | 1.64 | 1.51 |
| Zr | 5.01 | 5.45 |  | 3.34 | 3.58 | 3.38 |  | 0.22 | 0.19 |  | 7.86 | 8.48 | 0.33 | 0.47 | 0.67 | 0.49 |
| La | 0.06 | 0.09 |  | 0.06 | 0.06 | 0.07 |  | 0.04 | 0.05 |  | 0.27 | 0.33 | 0.01 | 0.02 | 0.03 | 0.02 |
| Ce | 0.54 | 0.76 |  | 0.52 | 0.52 | 0.47 |  | 0.22 | 0.26 |  | 1.62 | 1.98 | 0.07 | 0.10 | 0.11 | 0.10 |
| Pr | 0.14 | 0.20 |  | 0.13 | 0.14 | 0.12 |  | 0.04 | 0.04 |  | 0.35 | 0.43 | 0.01 | 0.02 | 0.02 | 0.02 |
| Nd | 1.02 | 1.65 |  | 1.06 | 1.10 | 1.02 |  | 0.21 | 0.22 |  | 2.14 | 2.66 | 0.11 | 0.14 | 0.17 | 0.14 |
| Sm | 0.59 | 0.95 |  | 0.65 | 0.65 | 0.60 |  | 0.06 | 0.06 |  | 0.87 | 1.06 | 0.06 | 0.08 | 0.10 | 0.07 |
| Eu | 0.31 | 0.42 |  | 0.28 | 0.27 | 0.27 |  | 0.03 | 0.04 |  | 0.35 | 0.42 | 0.03 | 0.03 | 0.05 | 0.04 |
| Gd | 1.17 | 1.88 |  | 1.11 | 1.27 | 1.11 |  | 0.08 | 0.08 |  | 1.23 | 1.45 | 0.09 | 0.15 | 0.18 | 0.14 |
| Tb | 0.28 | 0.38 |  | 0.24 | 0.26 | 0.22 |  | 0.02 | 0.02 |  | 0.22 | 0.26 | 0.02 | 0.03 | 0.03 | 0.03 |
| Dy | 2.42 | 2.98 |  | 1.94 | 2.18 | 1.91 |  | 0.14 | 0.14 |  | 1.63 | 1.92 | 0.18 | 0.23 | 0.28 | 0.24 |
| Ho | 0.57 | 0.65 |  | 0.46 | 0.48 | 0.47 |  | 0.03 | 0.03 |  | 0.34 | 0.39 | 0.04 | 0.05 | 0.06 | 0.06 |
| Er | 1.87 | 2.10 |  | 1.46 | 1.52 | 1.52 |  | 0.12 | 0.11 |  | 0.99 | 1.15 | 0.12 | 0.18 | 0.21 | 0.18 |
| Tm | 0.29 | 0.33 |  | 0.22 | 0.23 | 0.24 |  | 0.02 | 0.02 |  | 0.15 | 0.16 | 0.02 | 0.03 | 0.03 | 0.03 |
| Yb | 2.02 | 2.29 |  | 1.65 | 1.59 | 1.84 |  | 0.16 | 0.17 |  | 0.95 | 1.04 | 0.16 | 0.19 | 0.25 | 0.21 |
| Lu | 0.29 | 0.33 |  | 0.23 | 0.24 | 0.26 |  | 0.03 | 0.03 |  | 0.12 | 0.15 | 0.02 | 0.03 | 0.04 | 0.03 |

Supplementary Table 10. *(continued)*

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Clinopyroxene | |  |  |  |  |  |  |  |  |  |
| Sample No: | PALF-04 |  |  |  | PALB-03 |  |  |  | PALJ-03 |  |  |
| Rock Type: | Olivine gabbro | |  |  | Olivine gabbro | |  |  | Olivine gabbro | |  |
| Ti | 3452.77 | 3441.50 | 1173.60 |  | 1755.04 | 1710.29 | 1725.14 |  | 1407.22 | 1397.49 | 1186.15 |
| Sr | 12.98 | 9.06 | 8.35 |  | 4.21 | 3.77 | 3.77 |  | 3.07 | 2.98 | 2.98 |
| Y | 14.38 | 16.62 | 10.53 |  | 10.55 | 9.45 | 8.58 |  | 6.91 | 7.02 | 6.89 |
| Zr | 15.45 | 17.16 | 9.30 |  | 3.82 | 3.89 | 4.23 |  | 6.48 | 5.57 | 5.39 |
| La | 0.16 | 0.18 | 0.13 |  | 0.06 | 0.06 | 0.07 |  | 0.10 | 0.09 | 0.11 |
| Ce | 1.11 | 1.26 | 0.91 |  | 0.50 | 0.50 | 0.53 |  | 0.70 | 0.65 | 0.74 |
| Pr | 0.28 | 0.34 | 0.23 |  | 0.14 | 0.13 | 0.13 |  | 0.15 | 0.15 | 0.17 |
| Nd | 2.29 | 2.63 | 1.80 |  | 1.10 | 1.06 | 1.00 |  | 1.06 | 1.02 | 1.09 |
| Sm | 1.32 | 1.48 | 0.98 |  | 0.67 | 0.63 | 0.59 |  | 0.48 | 0.49 | 0.48 |
| Eu | 0.56 | 0.63 | 0.46 |  | 0.27 | 0.24 | 0.25 |  | 0.19 | 0.18 | 0.22 |
| Gd | 2.17 | 2.39 | 1.51 |  | 1.29 | 1.15 | 1.09 |  | 0.83 | 0.91 | 0.83 |
| Tb | 0.40 | 0.45 | 0.29 |  | 0.24 | 0.23 | 0.21 |  | 0.19 | 0.16 | 0.17 |
| Dy | 3.02 | 3.31 | 2.11 |  | 1.92 | 1.78 | 1.67 |  | 1.24 | 1.23 | 1.27 |
| Ho | 0.58 | 0.72 | 0.43 |  | 0.43 | 0.38 | 0.35 |  | 0.27 | 0.29 | 0.26 |
| Er | 1.71 | 1.93 | 1.22 |  | 1.26 | 1.14 | 1.04 |  | 0.78 | 0.79 | 0.81 |
| Tm | 0.24 | 0.25 | 0.18 |  | 0.19 | 0.18 | 0.15 |  | 0.11 | 0.12 | 0.13 |
| Yb | 1.51 | 1.78 | 1.19 |  | 1.23 | 1.12 | 1.04 |  | 0.76 | 0.80 | 0.86 |
| Lu | 0.20 | 0.24 | 0.16 |  | 0.17 | 0.16 | 0.15 |  | 0.12 | 0.11 | 0.12 |

Supplementary Table 10. *(continued)*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Orthopyroxene | | |  |  | |  |  | |  | |  | |  |  | |  | |  |  |  |  |  |
| Sample No: | PALB-01 |  | |  | PALB-09 | |  | PALB-05 | |  | |  | |  | PALF-07 | |  | |  | PALF-04 |  |  | PALB-03 |
| Rock Type: | Plagioclase lherzolite | | |  | Spinel harzburgite | | | Spinel harzburgite | | | |  | |  | Spinel harzburgite | | | |  | Olivine gabbro | |  | Olivine gabbro |
| Ti | - | - | |  | - | |  | - | | - | | - | |  | - | | - | | - | - | - |  | - |
| Sr | 0.44 | 0.10 | |  | 0.69 | |  | 1.20 | | 1.10 | | 1.41 | |  | 0.29 | | 0.07 | | 0.05 | 5.33 | 5.14 |  | 0.84 |
| Y | 1.21 | 1.89 | |  | 0.08 | |  | 0.96 | | 0.98 | | 0.82 | |  | 0.16 | | 0.22 | | 0.20 | 0.51 | 0.51 |  | 1.15 |
| Zr | 0.23 | 0.46 | |  | 0.03 | |  | 0.96 | | 1.10 | | 0.54 | |  | 0.08 | | 0.11 | | 0.10 | 0.33 | 0.34 |  | 0.30 |
| La | - | - | |  | - | |  | - | | - | | - | |  | - | | - | | - | - | - |  | - |
| Ce | - | - | |  | - | |  | - | | - | | - | |  | - | | - | | - | - | - |  | - |
| Pr | - | - | |  | - | |  | - | | - | | - | |  | - | | - | | - | - | - |  | - |
| Nd | 0.01 | 0.02 | |  | - | |  | 0.06 | | 0.08 | | 0.01 | |  | - | | 0.01 | | - | - | 0.01 |  | 0.02 |
| Sm | 0.01 | 0.02 | |  | - | |  | 0.03 | | 0.04 | | 0.01 | |  | - | | - | | - | 0.01 | 0.01 |  | 0.01 |
| Eu | - | 0.01 | |  | - | |  | 0.01 | | 0.01 | | 0.01 | |  | - | | - | | - | 0.01 | - |  | - |
| Gd | 0.03 | 0.06 | |  | - | |  | 0.05 | | 0.06 | | 0.02 | |  | 0.01 | | 0.01 | | 0.01 | 0.02 | 0.02 |  | 0.04 |
| Tb | - | - | |  | - | |  | - | | - | | - | |  | - | | - | | - | - | - |  | - |
| Dy | 0.12 | 0.22 | |  | 0.01 | |  | 0.11 | | 0.13 | | 0.10 | |  | 0.01 | | 0.02 | | 0.02 | 0.06 | 0.06 |  | 0.14 |
| Ho | 0.04 | 0.07 | |  | - | |  | 0.03 | | 0.03 | | 0.03 | |  | 0.01 | | 0.01 | | 0.01 | 0.02 | 0.02 |  | 0.04 |
| Er | 0.20 | 0.28 | |  | 0.01 | |  | 0.13 | | 0.14 | | 0.12 | |  | 0.03 | | 0.03 | | 0.03 | 0.08 | 0.08 |  | 0.17 |
| Tm | 0.05 | 0.06 | |  | - | |  | 0.03 | | 0.03 | | 0.03 | |  | 0.01 | | 0.01 | | 0.01 | 0.02 | 0.02 |  | 0.03 |
| Yb | 0.47 | 0.55 | |  | 0.04 | |  | 0.25 | | 0.26 | | 0.25 | |  | 0.06 | | 0.07 | | 0.07 | 0.17 | 0.18 |  | 0.29 |
| Lu | 0.09 | 0.10 | |  | 0.01 | |  | 0.05 | | 0.05 | | 0.05 | |  | 0.01 | | 0.01 | | 0.01 | 0.03 | 0.03 |  | 0.05 |
| \*(-) means below detection limit | | |  | | |  | | |  | |  | |  | | |  | |