Table S8: Major and trace elements and their uncertainties (±) of the Sparta fault hanging wall soil at Anogia, measured with a handheld XRF. All measurements are reported as percentages.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Height (m)** | **Al** | **±** | **Si** | **±** | **P** | **±** | **S** | **±** | **K** | **±** | **Ca** | **±** | **Ti** | **±** | **V** | **±** |
| 0.0 | 4.95 | 1.39 | 10.50 | 0.44 | ND |  | 0.3368 | 0.0336 | 0.397 | 0.011 | 6.96 | 0.11 | 0.129 | 0.006 | ND |  |
| -0.1 | NDb |  | 11.16 | 0.38 | ND |  | 0.2787 | 0.0292 | 0.423 | 0.009 | 6.84 | 0.04 | 0.114 | 0.005 | ND |  |
| -0.2 | 9.91 | 1.33 | 28.99 | 0.67 | 0.53 | 0.16 | 0.1382 | 0.0342 | 0.891 | 0.022 | 4.80 | 0.08 | 0.349 | 0.011 | 0.025 | 0.003 |
| -0.3 | 5.21 | 1.29 | 29.96 | 0.65 | 0.47 | 0.14 | ND |  | 0.868 | 0.021 | 3.07 | 0.05 | 0.335 | 0.010 | 0.034 | 0.003 |
| -0.4 | 7.69 | 1.36 | 18.17 | 0.55 | ND |  | ND |  | 0.490 | 0.014 | 6.82 | 0.11 | 0.173 | 0.007 | 0.012 | 0.003 |
| -0.5 | 9.36 | 1.32 | 26.61 | 0.64 | 0.48 | 0.15 | ND |  | 0.780 | 0.019 | 3.99 | 0.07 | 0.315 | 0.010 | 0.020 | 0.003 |
| -0.5a | 7.55 | 1.43 | 24.15 | 0.65 | ND |  | ND |  | 0.693 | 0.019 | 5.29 | 0.10 | 0.331 | 0.011 | 0.019 | 0.003 |
| -0.6 | 7.13 | 1.32 | 26.55 | 0.63 | ND |  | ND |  | 0.852 | 0.020 | 4.51 | 0.08 | 0.302 | 0.009 | 0.023 | 0.003 |
| -0.7 | 5.39 | 1.46 | 21.25 | 0.61 | ND |  | ND |  | 0.713 | 0.019 | 7.09 | 0.12 | 0.244 | 0.009 | 0.017 | 0.003 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Height (m)** | **Cr** | **±** | **Mn** | **±** | **Fe** | **±** | **Ni** | **±** | **Cu** | **±** | **Zn** | **±** | **As** | **±** | **Rb** | **±** |
| 0.0 | ND |  | 0.048 | 0.002 | 1.357 | 0.022 | ND |  | 0.0020 | 0.0003 | 0.0053 | 0.0002 | ND |  | 0.0021 | 0.0001 |
| -0.1 | ND |  | 0.045 | 0.001 | 1.224 | 0.008 | ND |  | 0.0020 | 0.0003 | 0.0052 | 0.0002 | ND |  | 0.0020 | 0.0001 |
| -0.2 | 0.0089 | 0.0014 | 0.120 | 0.003 | 3.690 | 0.060 | 0.007 | 0.0006 | 0.0060 | 0.0004 | 0.0091 | 0.0003 | 0.0007 | 0.0002 | 0.0048 | 0.0001 |
| -0.3 | 0.0061 | 0.0013 | 0.118 | 0.003 | 3.850 | 0.060 | 0.008 | 0.0006 | 0.0070 | 0.0004 | 0.0076 | 0.0003 | 0.0012 | 0.0002 | 0.0059 | 0.0001 |
| -0.4 | ND |  | 0.056 | 0.002 | 2.099 | 0.035 | 0.005 | 0.0005 | 0.0050 | 0.0004 | 0.0053 | 0.0002 | ND |  | 0.0042 | 0.0001 |
| -0.5 | 0.0058 | 0.0013 | 0.105 | 0.003 | 3.660 | 0.060 | 0.007 | 0.0006 | 0.0090 | 0.0004 | 0.0080 | 0.0003 | 0.0009 | 0.0002 | 0.0054 | 0.0001 |
| -0.5a | 0.0057 | 0.0014 | 0.103 | 0.003 | 3.750 | 0.070 | 0.006 | 0.0006 | 0.0100 | 0.0005 | 0.0076 | 0.0003 | 0.0007 | 0.0002 | 0.0057 | 0.0002 |
| -0.6 | 0.0047 | 0.0013 | 0.102 | 0.003 | 3.570 | 0.060 | 0.006 | 0.0006 | 0.0080 | 0.0004 | 0.0074 | 0.0003 | 0.0008 | 0.0002 | 0.0056 | 0.0001 |
| -0.7 | ND |  | 0.080 | 0.003 | 2.833 | 0.049 | 0.004 | 0.0005 | 0.0060 | 0.0004 | 0.0065 | 0.0003 | 0.0006 | 0.0001 | 0.0044 | 0.0001 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Height (m)** | **Sr** | **±** | **Y** | **±** | **Zr** | **±** | **Ag** | **±** | **Cd** | **±** | **Pb** | **±** |  | **LE** | **±** |  |
| 0.0 | 0.007 | 0.0001 | 0.0013 | 0.0001 | 0.0036 | 0.0001 | 0.0021 | 0.0006 | 0.0034 | 0.0007 | 0.0024 | 0.0001 |  | 75.30 | 1.16 |  |
| -0.1 | 0.007 | 0.0001 | 0.0011 | 0.0001 | 0.0034 | 0.0001 | 0.0019 | 0.0005 | 0.0031 | 0.0007 | 0.0029 | 0.0001 |  | 79.89 | 0.35 |  |
| -0.2 | 0.007 | 0.0002 | 0.0028 | 0.0001 | 0.0093 | 0.0002 | ND |  | ND |  | 0.0055 | 0.0002 |  | 50.50 | 0.84 |  |
| -0.3 | 0.007 | 0.0001 | 0.0038 | 0.0001 | 0.0114 | 0.0002 | ND |  | ND |  | 0.0029 | 0.0002 |  | 56.02 | 0.87 |  |
| -0.4 | 0.006 | 0.0001 | 0.0033 | 0.0001 | 0.0085 | 0.0002 | ND |  | ND |  | 0.0018 | 0.0002 |  | 64.44 | 1.02 |  |
| -0.5 | 0.006 | 0.0001 | 0.0036 | 0.0001 | 0.0106 | 0.0002 | ND |  | ND |  | 0.0024 | 0.0002 |  | 54.61 | 0.89 |  |
| -0.5a | 0.007 | 0.0002 | 0.0039 | 0.0001 | 0.0116 | 0.0003 | ND |  | ND |  | 0.0022 | 0.0002 |  | 58.05 | 0.99 |  |
| -0.6 | 0.006 | 0.0001 | 0.0037 | 0.0001 | 0.0115 | 0.0002 | ND |  | ND |  | 0.0023 | 0.0002 |  | 56.91 | 0.90 |  |
| -0.7 | 0.010 | 0.0002 | 0.0029 | 0.0001 | 0.0081 | 0.0002 | ND |  | ND |  | 0.0020 | 0.0002 |  | 62.34 | 1.05 |  |
| aDuplicate.  bND = not detected, because the concentration is below the detection limits of the handheld XRF. | | | | | | | | | | | | | | | | |