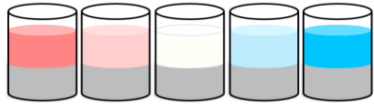


Object Name **pH Dependent Leaching Test Model**
Green compost for Lite

pH Dependent Leaching Test Scenario



Lab Test

Extra L/S Simulation

Model Parameters

| Entity | Unit | Default |
|----------------------|-------|-----------|
| c0 | | -4.278 |
| c1 | | 1.475 |
| c2 | | -0.7258 |
| c3 | | 0.1239 |
| c4 | | -0.008562 |
| c5 | | 0.0002089 |
| Clay | mg/kg | 500.0 |
| Hydrous Ferric Oxide | mg/kg | 200.0 |
| L/S | L/kg | 10.22 |
| pE | | 5.200 |
| pH | | 8.100 |
| Solid Humic Acid | mg/kg | 1.106E+05 |
| Simulated Low L/S | L/kg | 0.4000 |

Available Content

| Entity | Unit | Default | Entity | Unit | Default | Entity | Unit | Default | Entity | Unit | Default |
|--------|-------|-----------|--------|-------|-----------|--------|-------|-----------|--------|------|---------|
| Ag | mg/kg | 1.079E-08 | F | mg/kg | 1.900E-09 | NO3 | mg/kg | 6.200E-09 | | | |
| Al | mg/kg | 1915 | Fe | mg/kg | 1089 | Pb | mg/kg | 14.78 | | | |
| As | mg/kg | 2.212 | B | mg/kg | 24.67 | PO4 | mg/kg | 9510 | | | |
| Ba | mg/kg | 109.3 | Si | mg/kg | 2170 | Sb | mg/kg | 0.3949 | | | |
| Br | mg/kg | 7.990E-09 | Hg | mg/kg | 2.006E-08 | Se | mg/kg | 0.5983 | | | |
| Ca | mg/kg | 4.075E+04 | K | mg/kg | 1.049E+04 | Sn | mg/kg | 0.7894 | | | |
| Cd | mg/kg | 0.3153 | Li | mg/kg | 1.027 | SO4 | mg/kg | 6498 | | | |
| Cl | mg/kg | 4496 | Mg | mg/kg | 4531 | Sr | mg/kg | 149.8 | | | |
| Co | mg/kg | 1.674 | Mn | mg/kg | 809.0 | Th | mg/kg | 2.320E-08 | | | |
| CO32- | mg/kg | 5.170E+04 | Mo | mg/kg | 1.160 | U | mg/kg | 2.380E-08 | | | |
| Cr | mg/kg | 3.384 | Na | mg/kg | 2280 | V | mg/kg | 5.476 | | | |
| Cu | mg/kg | 33.04 | Ni | mg/kg | 4.381 | Zn | mg/kg | 199.6 | | | |

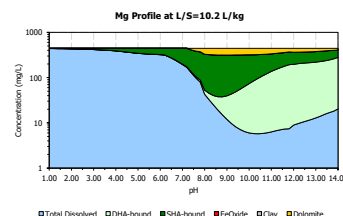
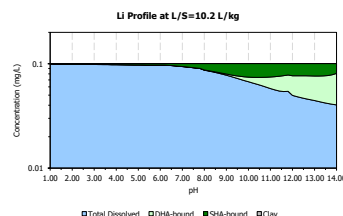
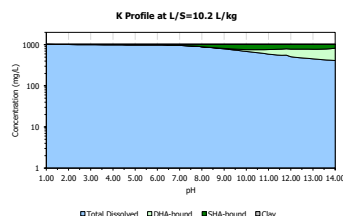
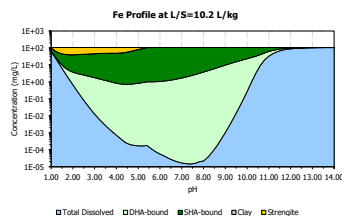
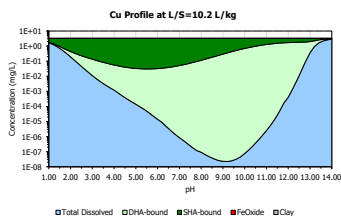
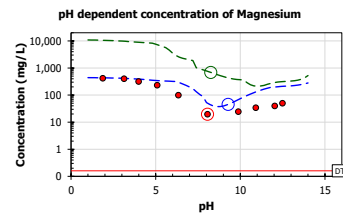
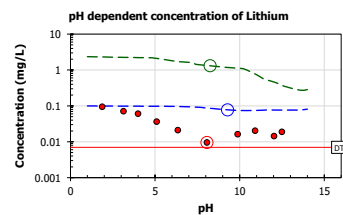
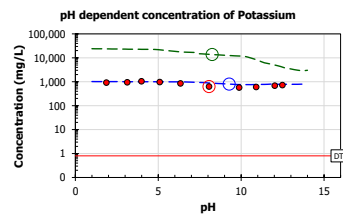
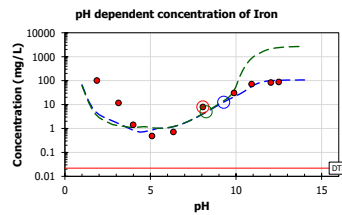
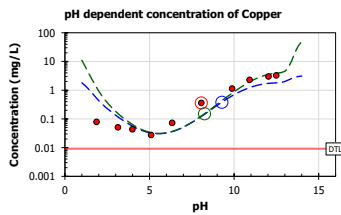
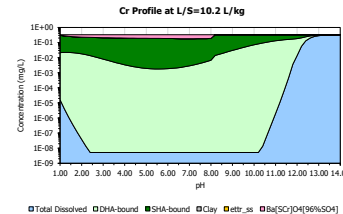
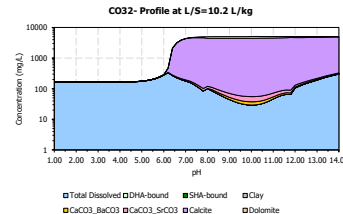
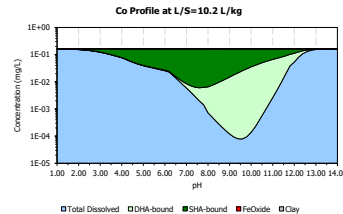
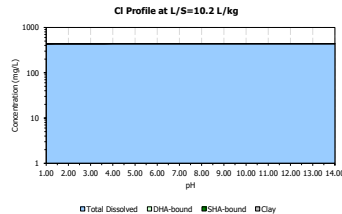
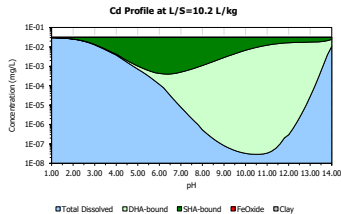
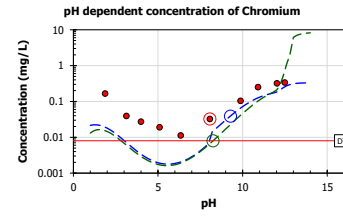
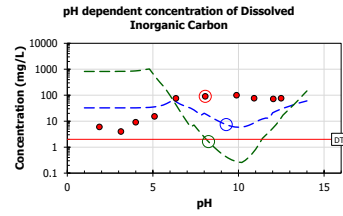
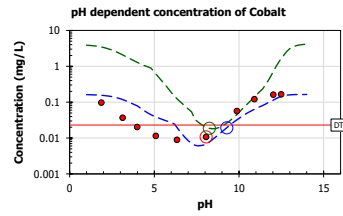
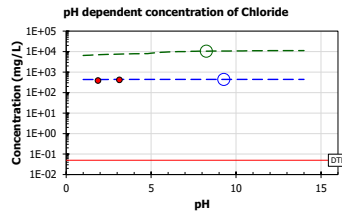
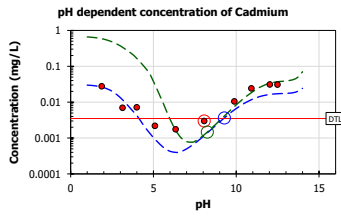
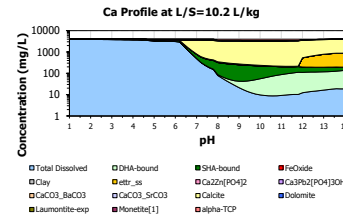
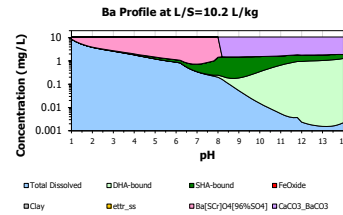
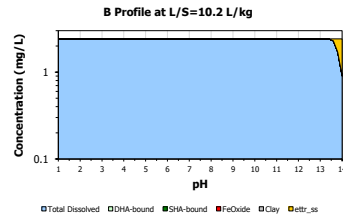
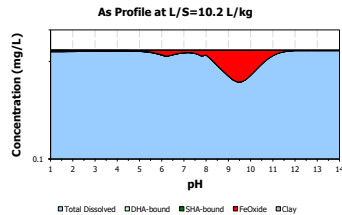
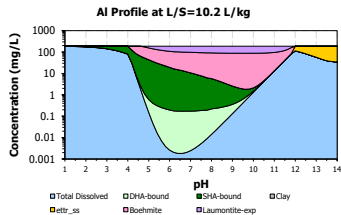
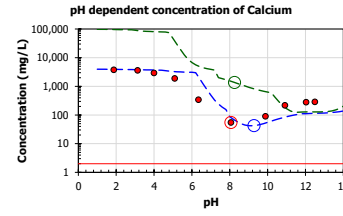
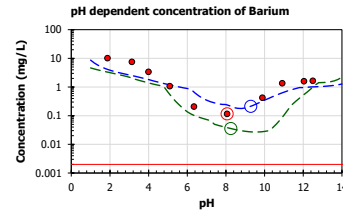
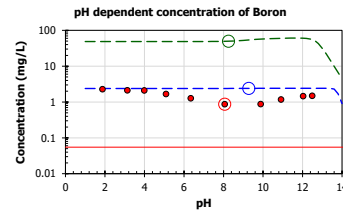
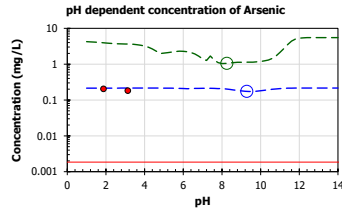
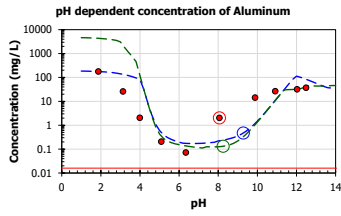
Solid Solutions

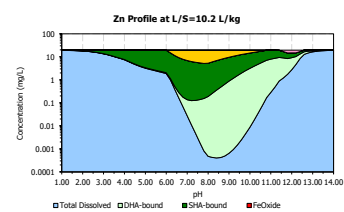
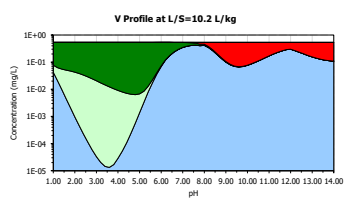
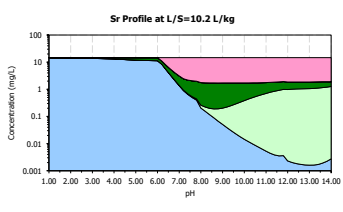
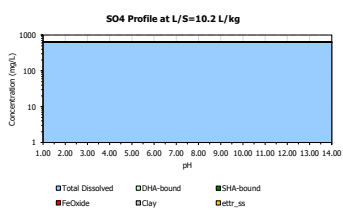
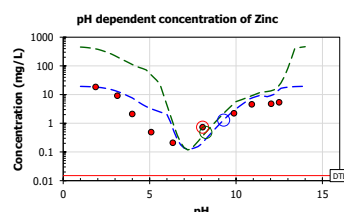
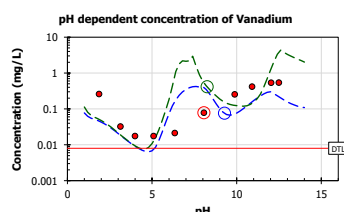
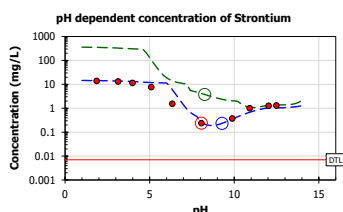
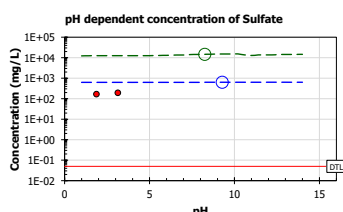
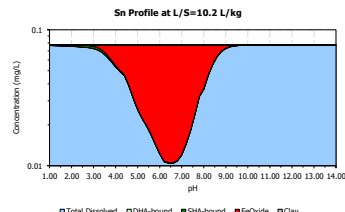
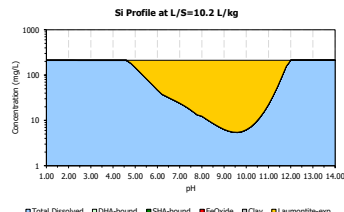
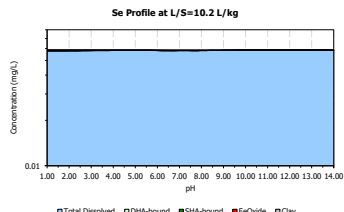
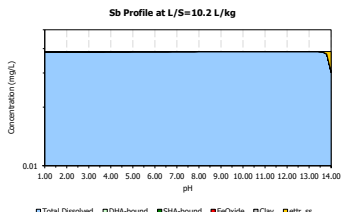
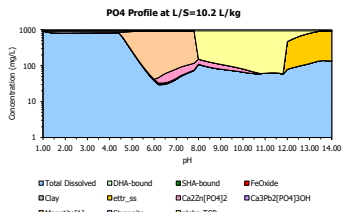
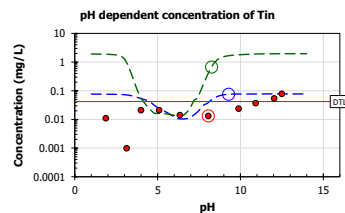
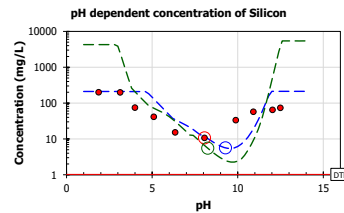
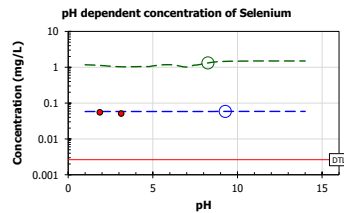
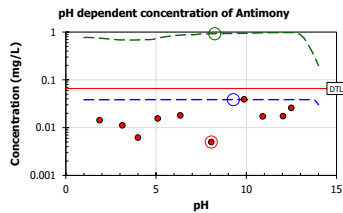
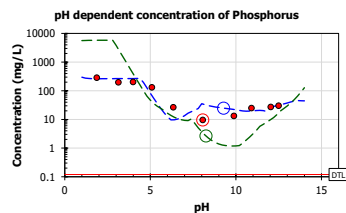
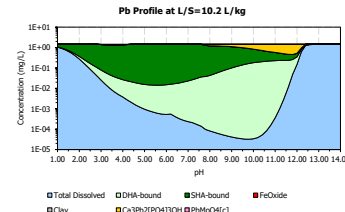
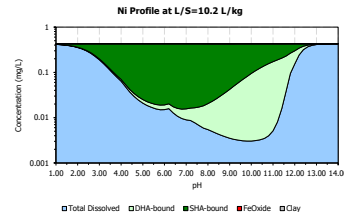
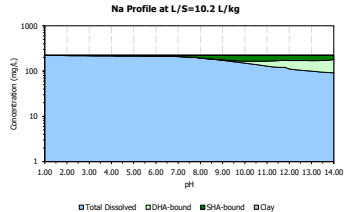
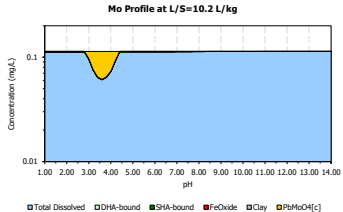
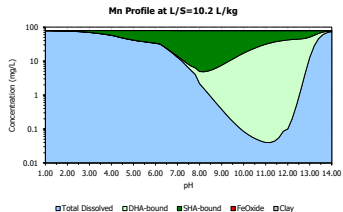
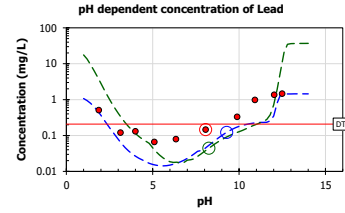
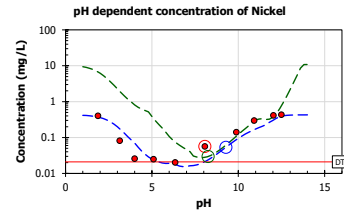
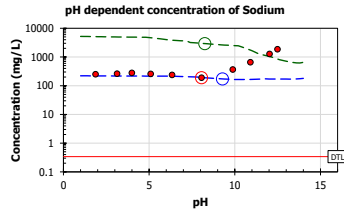
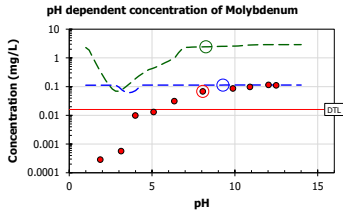
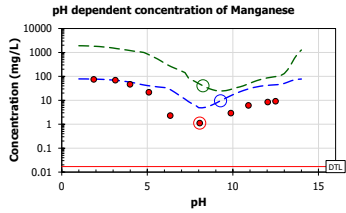
| Name | End Member | Log(K) | Reaction |
|------|------------|--------|----------|
| None | | | |

Minerals

| Name | > 1E-13 mol/kg | Log(K) | Reaction |
|-------------------|----------------|--------|---|
| alpha-TCP | Yes | 25.50 | alpha-TCP -> 3 Ca+2 + 2 PO4-3 |
| Ba[ScR]O4[96%SO4] | Yes | 9.790 | Ba[ScR]O4[96%SO4] -> 1 Ba+2 + 0.04 CrO4-2 + 0.96 SO4-2 |
| Boehmite | Yes | 14.42 | Boehmite + 2 H2O -> 1 Al[OH]4- + 1 H+ |
| Bunsenite | Yes | -12.45 | Bunsenite + 2 H+ -> 1 H2O + 1 Ni+2 |
| Ca2Zn[PO4]2 | Yes | 31.12 | Ca2Zn[PO4]2 -> 2 Ca+2 + 2 PO4-3 + 1 Zn+2 |
| Ca3Pb2[PO4]3OH | Yes | 48.30 | Ca3Pb2[PO4]3OH + 1 H+ -> 3 Ca+2 + 1 H2O + 3 PO4-3 + 2 Pb+2 |
| CaCO3_BaCO3 | Yes | 20.00 | CaCO3_BaCO3 -> 1 Ba+2 + 2 CO3-2 + 1 Ca+2 |
| CaCO3_SrCO3 | Yes | 19.85 | CaCO3_SrCO3 -> 2 CO3-2 + 1 Ca+2 + 1 Sr+2 |
| Calcite | Yes | 8.475 | Calcite -> 1 CO3-2 + 1 Ca+2 |
| Dolomite | Yes | 17.00 | Dolomite -> 2 CO3-2 + 1 Ca+2 + 1 Mg+2 |
| Laumontite-exp | Yes | 116.0 | Laumontite-exp + 8 H2O -> 2 Al[OH]4- + 1 Ca+2 + 8 H+ + 4 H2SiO4-2 |
| Monetite[1] | Yes | 19.09 | Monetite[1] -> 1 Ca+2 + 1 H+ + 1 PO4-3 |
| Pb2V2O7 | Yes | 0.9500 | Pb2V2O7 + 3 H+ -> 1.5 H2O + 1 Pb+2 + 1 VO2+ |
| PbMoO4[c] | Yes | 15.80 | PbMoO4[c] -> 1 MoO4-2 + 1 Pb+2 |
| Strengite | Yes | 48.00 | Strengite + 2 H2O -> 1 Fe[OH]4- + 4 H+ + 1 PO4-3 |
| Zn[OH]2[G] | Yes | -11.71 | Zn[OH]2[G] + 2 H+ -> 2 H2O + 1 Zn+2 |

| Name | > 1E-13 mol/kg | Log(K) | Reaction |
|----------------|----------------|--------|---|
| Al[OH]3[a] | | 12.62 | Al[OH]3[a] + 1 H2O -> 1 Al[OH]4- + 1 H+ |
| Cd[OH]2[A] | | -13.73 | Cd[OH]2[A] + 2 H+ -> 1 Cd+2 + 2 H2O |
| Cerrusite | | 13.13 | Cerrusite -> 1 CO3-2 + 1 Pb+2 |
| Cr[OH]3[A] | | 68.13 | Cr[OH]3[A] + 1 H2O -> 1 CrO4-2 + 5 H+ + 3 e- |
| CuCO3[s] | | 9.630 | CuCO3[s] -> 1 CO3-2 + 1 Cu+2 |
| Fe2[MoO4]3[1] | | 82.02 | Fe2[MoO4]3[1] + 8 H2O -> 2 Fe[OH]4- + 8 H+ + 3 MoO4-2 |
| Fluorite | | 10.96 | Fluorite -> 1 Ca+2 + 2 F- |
| Gibbsite[C] | | 14.23 | Gibbsite[C] + 1 H2O -> 1 Al[OH]4- + 1 H+ |
| Hydromagnesite | | 8.766 | Hydromagnesite + 2 H+ -> 4 CO3-2 + 6 H2O + 5 Mg+2 |
| hydrozincite | | -1.939 | hydrozincite + 1.2 H+ -> 0.4 CO3-2 + 1.2 H2O + 1 Zn+2 |
| NiCO3[s] | | 6.840 | NiCO3[s] -> 1 CO3-2 + 1 Ni+2 |
| Otavite | | 13.74 | Otavite -> 1 CO3-2 + 1 Cd+2 |
| Pb3[VO4]2 | | -3.070 | Pb3[VO4]2 + 4 H+ -> 2 H2O + 1.5 Pb+2 + 1 VO2+ |
| PbMoO4[cc] | | 13.36 | PbMoO4[cc] -> 1 MoO4-2 + 1 Pb+2 |
| Rhodochrosite | | -15.10 | Rhodochrosite -> 1 CO3-2 + 1 Mn+2 |
| Sb[OH]3[s] | | 32.89 | Sb[OH]3[s] + 3 H2O -> 3 H+ + 1 Sb[OH]6- + 2 e- |
| Strontianite | | 9.250 | Strontianite -> 1 CO3-2 + 1 Sr+2 |
| Tyuyamunite | | -4.825 | Tyuyamunite + 4 H+ + 1 e- -> 0.5 Ca+2 + 2 H2O + 1 UO2+ + 1 VO2+ |
| Witherite | | 8.585 | Witherite -> 1 Ba+2 + 1 CO3-2 |





Sample Name Compost from green waste EU

Residual details, concentrations

| Residuals as log(model/sample) | | | | | | | | | | | |
|--------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----------|
| Fraction | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Total Avg |
| pH | 1.87 | 3.13 | 3.99 | 5.09 | 6.34 | 8.06 | 9.88 | 10.9 | 12.0 | 12.5 | Deviation |
| Al | 0.00 | 0.72 | 1.60 | 0.38 | 0.38 | -0.96 | -1.08 | -0.39 | 0.54 | 0.35 | 0.25 |
| As | 0.02 | 0.07 | - | - | - | - | - | - | - | - | 0.04 |
| B | 0.02 | 0.05 | 0.05 | 0.16 | 0.27 | 0.44 | 0.44 | 0.31 | 0.22 | 0.21 | 0.08 |
| Ba | -0.39 | -0.48 | -0.27 | 0.04 | 0.51 | 0.31 | -0.13 | -0.34 | -0.22 | -0.21 | 0.10 |
| Br | - | - | - | - | - | - | - | - | - | - | - |
| Ca | 0.02 | 0.02 | 0.10 | 0.24 | 0.80 | 0.17 | -0.24 | -0.42 | -0.40 | -0.40 | 0.11 |
| Cd | -0.02 | 0.22 | -0.22 | -0.38 | -0.64 | -0.41 | -0.24 | -0.32 | -0.28 | -0.26 | 0.11 |
| Cl | 0.05 | 0.02 | - | - | - | - | - | - | - | - | 0.03 |
| Co | 0.20 | 0.51 | 0.59 | 0.53 | 0.35 | -0.20 | -0.24 | -0.28 | -0.15 | -0.06 | 0.11 |
| CO32- | - | - | - | - | - | - | - | - | - | - | - |
| Cr | -0.94 | -0.74 | -0.91 | -1.00 | -0.74 | -0.58 | -0.20 | -0.30 | -0.24 | -0.12 | 0.21 |
| Cu | 0.83 | 0.37 | 0.11 | 0.07 | -0.31 | -0.47 | -0.26 | -0.27 | -0.24 | -0.26 | 0.12 |
| F | - | - | - | - | - | - | - | - | - | - | - |
| Fe | -1.35 | -0.86 | -0.23 | 0.25 | 0.22 | -0.30 | -0.16 | -0.10 | 0.07 | 0.07 | 0.17 |
| Hg | - | - | - | - | - | - | - | - | - | - | - |
| K | 0.04 | 0.02 | -0.02 | 0.01 | 0.06 | 0.15 | 0.12 | 0.10 | 0.06 | 0.04 | 0.02 |
| Li | 0.02 | 0.14 | 0.21 | 0.43 | 0.66 | 0.96 | 0.66 | 0.56 | 0.73 | 0.61 | 0.18 |
| Mg | 0.01 | 0.01 | 0.09 | 0.17 | 0.47 | 0.41 | 0.44 | 0.58 | 0.70 | 0.62 | 0.14 |
| Mn | 0.01 | -0.01 | 0.10 | 0.27 | 1.09 | 0.64 | 0.73 | 0.69 | 0.70 | 0.69 | 0.19 |
| Mo | 2.59 | 2.16 | 0.86 | 0.93 | 0.56 | 0.22 | 0.12 | 0.06 | -0.01 | 0.01 | 0.37 |
| Na | -0.06 | -0.08 | -0.11 | -0.08 | -0.04 | 0.00 | -0.35 | -0.60 | -0.87 | -1.04 | 0.15 |
| Ni | -0.03 | 0.33 | 0.44 | -0.02 | -0.05 | -0.42 | -0.21 | -0.26 | -0.13 | -0.05 | 0.08 |
| NO3 | - | - | - | - | - | - | - | - | - | - | - |
| Pb | -0.06 | -0.27 | -0.69 | -0.64 | -0.68 | -0.51 | -0.29 | -0.64 | -0.54 | -0.02 | 0.16 |
| PO4 | - | - | - | - | - | - | - | - | - | - | - |
| Sb | 0.43 | 0.54 | 0.79 | 0.39 | 0.33 | 0.89 | -0.01 | 0.35 | 0.35 | 0.17 | 0.16 |
| Se | 0.02 | 0.06 | - | - | - | - | - | - | - | - | 0.03 |
| Si | 0.02 | 0.02 | 0.45 | 0.50 | 0.36 | 0.04 | -0.76 | -0.48 | 0.51 | 0.46 | 0.14 |
| Sn | 0.84 | 1.86 | 0.41 | 0.06 | -0.13 | 0.47 | 0.51 | 0.32 | 0.15 | -0.01 | 0.22 |
| SO4 | 0.58 | 0.51 | - | - | - | - | - | - | - | - | 0.38 |
| Sr | 0.01 | 0.02 | 0.06 | 0.19 | 0.59 | 0.02 | -0.03 | -0.17 | -0.11 | -0.11 | 0.07 |
| Th | - | - | - | - | - | - | - | - | - | - | - |
| U | - | - | - | - | - | - | - | - | - | - | - |
| V | -0.76 | -0.25 | -0.29 | -0.37 | 0.87 | 0.70 | -0.55 | -0.42 | -0.26 | -0.39 | 0.17 |
| Zn | -0.01 | 0.15 | 0.56 | 0.81 | 0.50 | -0.54 | 0.09 | 0.21 | 0.29 | 0.44 | 0.14 |
| Avg Deviat | 0.13 | 0.13 | 0.11 | 0.09 | 0.11 | 0.11 | 0.09 | 0.08 | 0.09 | 0.08 | 0.14 |