

Table S1. Mass fractions (ppm) of studied elements in mussel soft tissues and shells among stations.

| Elements | St. 1 | | St. 2 | | St. 3 | |
|----------|--------|---------|--------|----------|--------|---------|
| | Soft | Shells | Soft | Shells | Soft | Shells |
| Na | 5800 | 3300 | 5800 | 2910 | 2480 | 2850 |
| Mg | 2010 | 890 | 1890 | 1050 | 1360 | 1070 |
| Al | 193 | 9.3 | 221 | 7.1 | 61 | 8.9 |
| S | 1200 | BDL | 1100 | BDL | 910 | BDL |
| Cl | 5700 | 164 | 6000 | 149 | 2290 | 221 |
| K | 1050 | BDL | 1230 | BDL | 960 | BDL |
| Ca | 7000 | 380,000 | 7800 | 400,000 | 5200 | 380,000 |
| Sc | 0.168 | 0.0214 | 0.13 | 0.0078 | 0.092 | 0.0207 |
| Ti | 23 | BDL | 48 | BDL | 19 | BDL |
| V | 2.22 | 0.18 | 0.86 | 0.063 | 0.57 | 0.11 |
| Cr | 1.2 | 1.1 | 1.6 | 1.3 | 1.2 | 1.6 |
| Mn | 8.6 | 2.86 | 9.8 | 3.4 | 6.9 | 6 |
| Fe | 348 | 61 | 341 | 29 | 169 | 58 |
| Co | 1.29 | 0.055 | 1.03 | 0.051 | 0.54 | 0.069 |
| Ni | 2.4 | 0.38 | 2.9 | 0.27 | 2 | 0.31 |
| Cu | 9 | BDL | 7.7 | BDL | 8.05 | BDL |
| Zn | 372 | 2.01 | 490 | 2.19 | 359 | 2.14 |
| As | 20.7 | 0.23 | 14.5 | 0.21 | 14.1 | 0.16 |
| Se | 2.55 | 0.054 | 1.64 | 0.058 | 1.66 | 0.06 |
| Br | 219 | 79 | 251 | 67 | 144 | 58.6 |
| Rb | 0.9 | 0.13 | 0.85 | 0.098 | 0.45 | 0.18 |
| Sr | 62 | 1000 | 62 | 1020 | 47 | 990 |
| Sb | 0.03 | 0.012 | 0.03 | 0.005 | 0.0205 | 0.013 |
| I | 11.9 | 6.3 | 18.2 | 5.2 | 7.5 | 6.5 |
| Cs | 0.038 | 0.0262 | 0.038 | 0.0103 | 0.0229 | 0.0302 |
| Ba | 91 | 25 | 18 | 12.7 | 17 | 13.6 |
| La | 0.4 | BDL | 0.3 | BDL | 0.16 | BDL |
| Tb | 0.0104 | 0.0019 | 0.0072 | 0.001195 | 0.0043 | 0.0028 |
| Ta | 0.0052 | BDL | 0.0034 | BDL | 0.002 | BDL |
| Au | 0.016 | BDL | 0.012 | BDL | 0.01 | BDL |
| Th | 0.088 | 0.029 | 0.088 | 0.01 | 0.055 | 0.02 |
| U | 0.34 | BDL | 0.23 | BDL | 0.15 | BDL |

BDL—below detectable limits.

Table S2. Enrichment factors for soft tissues of mussels among studied stations

| | St. 1 | St. 2 | St. 3 |
|----|--------|--------|--------|
| Na | 46.8 | 60.4 | 36.5 |
| Mg | 10.4 | 12.6 | 12.8 |
| Al | 0.2 | 0.3 | 0.1 |
| Cl | 2450.4 | 3333.3 | 1797.7 |
| K | 3.1 | 4.6 | 5.1 |
| Ca | 33.9 | 48.8 | 45.9 |
| Sc | 1.0 | 1.0 | 1.0 |
| Ti | 0.4 | 1.0 | 0.6 |
| V | 1.3 | 0.7 | 0.6 |
| Cr | 1.0 | 1.8 | 1.9 |
| Mn | 0.8 | 1.2 | 1.1 |
| Fe | 0.6 | 0.7 | 0.5 |
| Co | 5.3 | 5.4 | 4.0 |
| Ni | 2.7 | 4.3 | 4.2 |
| Zn | 303.0 | 515.8 | 534.0 |
| As | 123.2 | 111.5 | 153.3 |
| Se | 328.9 | 273.3 | 390.9 |
| Br | 847.3 | 1255 | 1017.4 |
| Rb | 0.5 | 0.6 | 0.5 |
| Sr | 16.0 | 20.7 | 22.1 |
| Sb | 1.5 | 2.0 | 1.9 |
| I | 48.5 | 95.8 | 55.8 |
| Cs | 0.6 | 0.8 | 0.6 |
| Ba | 12.1 | 3.1 | 4.1 |
| La | 1.0 | 0.9 | 0.7 |
| Tb | 0.9 | 0.8 | 0.7 |
| Ta | 0.5 | 0.4 | 0.4 |
| Th | 0.6 | 0.7 | 0.6 |
| U | 7.1 | 6.2 | 5.7 |