**Table S1.**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Types** | **Locations** | **Arsenic concentration (mg/kg dry weight)** | | | | |  | **Methods** | **References** |
|  |  |  |  | **Inorganic** |  |  |  |  |  |
|  |  | **DMA** | **MMA** | **As (III)** | **As(V)** | **AsB** | **Total Arsenic** |  |  |
| **Brown Algae** |  |  |  |  |  |  |  |  |  |
| *Laminaria japonica* | Qingdao, Shandong province, China | 36.7 ± 3.2 | 0.0 ± 0.0 | 0.20 ± 0.03 | 0.0 ± 0.0 |  |  | ICP-MS | Zhao et al. 2014 |
| *Undaria pinnatifida* | Qingdao, Shandong province, China | 0.74 ± 0.02 | 0.0 ± 0.0 | 0.10 ± 0.01 | 0.0 ± 0.0 |  |  | ICP-MS | Zhao et al. 2014 |
| *Hizikia fusiformis* | Qingdao, Shandong province, China | 4.38 ± 0.26 | 0.10 ± 0.02 | 0.0 ± 0.0 | 23.0 ± 2.5 |  |  | ICP-MS | Zhao et al. 2014 |
| *Fucus distichus* | Wreck Beach, Vancouver Point Grey, British Columbia, Canada | 3.44 |  |  |  |  |  | HG-GC-AAS | Ojo and Onasanya 2013 |
| **Red algae** |  |  |  |  |  |  |  |  |  |
| *Porphyra yezoensis* | Qingdao, Shandong, province, China | 19.1 ± 2.0 | 0.0 ± 0.0 | 0.0 ± 0.0 | 0.0 ± 0.0 |  |  |  | Zhao et al. 2014 |
| **Green algae** |  |  |  |  |  |  |  |  |  |
| *Enteromorpha prolifera* | Qingdao, Shandong, province, China |  |  |  |  |  |  |  | Zhao et al. 2014 |
| **Crustaceans** |  |  |  |  |  |  |  |  |  |
| *Parapenaeus longirostris* | Mediterranean sea |  |  |  | 45 ug/g |  |  |  | Storelli and Marcotrigiano 2001 |
| *Aristeus antennatus* | Mediterranean sea |  |  |  | 40.76 ug/g | |  |  | Storelli and Marcotrigiano 2001 |
| *Plesionika martia* | Mediterranean sea |  |  |  | 34 ug/g |  |  |  | Storelli and Marcotrigiano 2001 |
| *Nephrops norvegicus* | Mediterranean sea |  |  |  | 15.45 ug/g | |  |  | Storelli and Marcotrigiano 2001 |
| Tiger prawn | Thailand | 0.4±0.01 | ND |  |  | 9.7±0.3 |  |  | Rattanachongkiat et al. ‎2004 |
| Swimming crab | Thailand | 2±0.1 | ND |  |  | 13±1 |  |  | Rattanachongkiat et al. ‎2004 |
| **Finfish** |  |  |  |  |  |  |  |  |  |
| *Micropogonias undulatus* | Calcasieus Lake, Calcasieus River and three associated bayous |  |  |  |  |  | 0.25 | AAS | Ramelow et al. 1989 |
| *Brevoortia patronus* |  |  |  |  |  |  | 0.3 | AAS | Ramelow et al. 1989 |
| *Ictalurus furcatus* | Calcasieus Lake, Calcasieus River and three associated bayous |  |  |  |  |  | 0.25 | AAS | Ramelow et al. 1989 |
| *Leiostomus xanthurus* | Calcasieus Lake, Calcasieus River and three associated bayous |  |  |  |  |  | 0.18 | AAS | Ramelow et al. 1989 |
| **Bivalve** |  |  |  |  |  |  |  |  |  |
| *Crassostrea virginica* | Calcasieus Lake, Calcasieus River and three associated bayous |  |  |  |  |  | 4.5 | AAS | Ramelow et al. 1989 |
| *Brachidontes exustus* | Calcasieus Lake, Calcasieus River and three associated bayous |  |  |  |  |  | 1.4 | AAS | Ramelow et al. 1989 |
| Little neck | Puget Sound, USA | 0.15 |  | 0.08 |  |  | 3.7 | ICP-MS | Cleland et al. 2009 |
| Butter clams | Puget Sound, USA | 0.11 |  | 0.06 |  |  | 4.9 | ICP-MS | Cleland et al. 2009 |
| Varnish clams | Puget Sound, USA | 0.08 |  | 0.05 |  |  | 1.7 | ICP-MS | Cleland et al. 2009 |
| Horse clams | Puget Sound, USA | 0.05 |  | 0.05 |  |  | 0.9 | ICP-MS | Cleland et al. 2009 |
| Eastern softshell clams | Puget Sound, USA | 0.04 |  | 0.04 |  |  | 1.2 | ICP-MS | Cleland et al. 2009 |
| **Shrimp** |  |  |  |  |  |  |  |  |  |
| *Penaeus setiferus* | Calcasieus Lake, Calcasieus River and three associated bayous |  |  |  |  |  | <0.2 | AAS | Ramelow et al. 1989 |
| *Penaeus aztecus* | Calcasieus Lake, Calcasieus River and three associated bayous |  |  |  |  |  | <0.2 | AAS | Ramelow et al. 1989 |
| **Fish** |  |  |  |  |  |  |  |  |  |
| Sardine | Pak Pa-Nang Estuary, Thailand | 1±0.04 | ND |  |  | 4.5±0.3 |  |  | Rattanachongkiat et al. ‎2004 |
| Silurus glanis | Slovene rivers |  | ND | ND |  | 3.7±0.9 | 806 ng/g | HPLC-(UV)-HGAFS | Šlejkovec et al. 2003 |