

Mercury speciation in fish muscles from Lake Biwa and human health risk assessment

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Fish are exposed to metals via both aqueous and dietary routes. Some metals such as mercury (Hg) come mainly from dietary sources, with accumulation from aqueous routes providing a small contribution to the total Hg burden. Many studies have been conducted to understand the Hg accumulation focused on marine fish, however, only a few study has been conducted in fresh water. People who live near lake may also eat fresh water fish as well as marine fish. Therefore, it is important to understand the mercury concentration in fresh water fish as well as marine water fish. In our study, mercury concentration and other metals in fish was measured caught from Lake Biwa, the largest lake in Japan. Result from mercury concentration in fish, we estimated the human health risk caused from fish intake. Sampling was conducted during May 2011 to May 2012 sampling campaign. 82 fish sample, plankton sample, and water sample were sampled in Lake Biwa. Mercury concentration in fish muscle tends to be high as the trophic level going up.

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