

Development of All-nium Analytical Method for environmental samples(No.1, for flesh water samples)

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In the environmental sample, all elements (from hydrogen (atomic number 1st) to uranium (92nd)) are included. And also, each element exists to relate with some another elements mutually. If we get analytical technique for all elements, we can obtain a very effective tool of elucidate a history of a sample.

Unfortunately, it is impossible for analyzing all elements by one method, because, the range of concentration has 10¹² orders (from % to fg/g). We will aim trial development of All-nium analytical method combining various analytical methods for all type of environmental samples (flesh and sea water, soil and sediment, biological samples et.ct.). At fast, we will introduce All-nium analytical method for flesh water sample.

In this method, five analytical techniques (IC, GF-AAS, ICP-AES, ICP-QMS, HR-ICP-MS) were combined. Using this method, vertical profiles of All-nium in the water of Lake Biwa, which is largest lake of Japan, was produced.