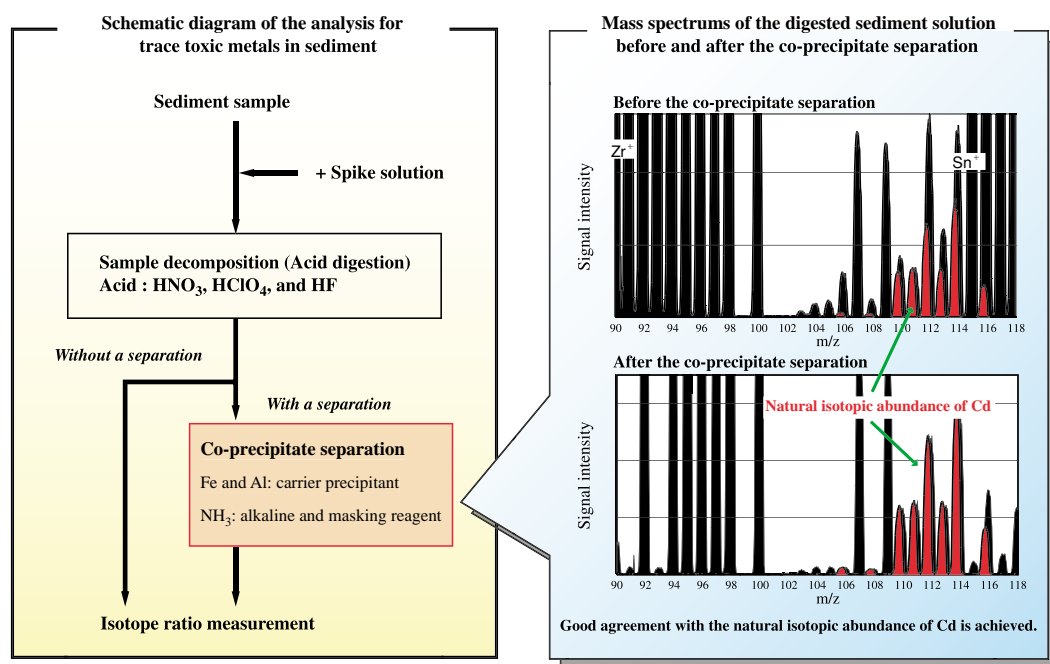


# Precise Analysis for Trace Toxic Metals in Sediment

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An isotope-dilution / inductively coupled plasma mass spectrometry (ID/ ICP-MS) is recognized as a precise measurement technique for the determination of toxic metals in sediment. In the application of the ID-ICP-MS measurement of trace elements in sediment, isobaric interferences from concomitant elements in the sample often cause serious analytical errors. For example, all

cadmium isotopes are overlapped with the isobaric interferences, and the separation procedure must inevitably be performed. We have proposed a new co-precipitate separation method utilizing major constituents in the sample as the carrier precipitant. This separation method is simple, reliable and has been applied for the certification for the reference material.



Schematic diagram of the analysis for trace toxic metals in sediment  
 (mass spectrum black: sample solution, red: Cd natural isotopic composition)