Basic research on effect of irradiation of γ-ray on concentration of metal ions in water and water-soil mixture

Xing-Zheng Wu¹⁾, Takayuki Takami¹⁾, Kenichi Somekawa²⁾, Masaaki Harada³⁾, Sigeru Nishio⁴⁾

¹⁾ Department of Materials Science and Engineering, Faculty of Engineering, Fukui University 3-9-1 Bunkyo, Fukui 910-8507

> ²⁾ Japan Radioisotope Association, Koka Laboratory 121-19 Toriino, Kougacyou, Kouga, Shiga 520-3043

³⁾ Fukuoka Educational University 1-1 Akamabunkyou-machi, Munakata, Fukuoka 811-4192

> ⁴⁾The Wakasa Wan Energy Research Center 64-52-1 Nagatani, Tsuruga, Fukui 914-0192

Abstract

In order to study possibility of removing heavily metal ions from water or soil by irradiation of γ -ray, a preliminary investigation on effect of irradiation of γ -ray on concentration change of metal ions in water and water-soil mixture was carried out. As a result, no concentration change was found when aqueous solutions of metal ions were directly irradiated with γ -ray without addition of any chemicals. On the other hand, concentration changes were found in irradiated soil-water mixture.