DETERMINATION OF TRANSFER COEFFICIENT BETWEEN OYSTER MUSHROMS AND CULTIVATING MEDIUM USING ^{242}Pu AND ^{241}Am TRACERS

D. Galanda, Ľ. Mátel

Department of Nuclear Chemistry, Faculty of Natural Science, Comenius´ University, Mlynská dolina CH – 1, 84215,Bratislava, Slovakia

The mushrooms are not only rich food products, but also a specific component of forest biogeocenoses playing an important role in their functioning, including radionuclide migration.

The reason why fungi work as such good indicators for radioactivity and pollution in general is connected to their structure. Using absorption to obtain their nutrition, fungi lack water-conducting organs like stems and roots. They absorb moisture and nutrients from the soil background through surface cells. Dissolved or airborne materials, which include pollutants, move freely through the compartments of hyphae. What is more, radiation released during nuclear testing or accidents is absorbed, especially in areas where it rained heavily shortly after the incident.
The present work is devoted to an estimation of the transfer coefficient between reared oyster mushrooms and their support die, which was injected with known activity of ^{241}Am and ^{242}Pu.

After 2 months when we get the reared mushrooms of cane oyster mushrooms were dried and prepared by liquid extraction with Aliquat 336.

The samples were measured by α –spectrometry.

The results of activity ^{241}Am and ^{242}Pu in the mushrooms body and residual activity in the support were detected and calculated.