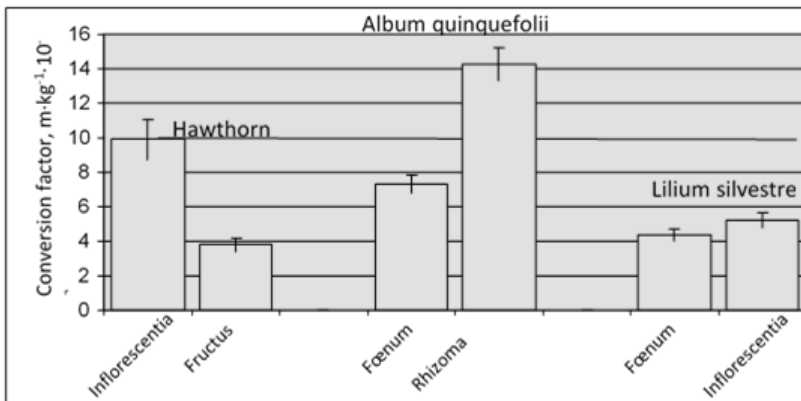


RADIOACTIVE CONTAMINATION OF VARIOUS ORGANS AND ORGAN PARTS OF WILD MEDICINAL PLANTS IN THE FORESTS OF ZHYTOMYR POLISSIA

Forests in Zhytomyr region were exposed to radiation contamination after the Chernobyl NPP accident. The current radiation situation in the forests of Zhytomyr region differs, to some extent, from the situation which developed immediately after the accident. This is due to several factors: the disintegration of the short-lived radioactive elements, radionuclides migration in trophic series, fixation in the soil, radioactive decay.

Edaphic conditions in Zhytomyr Polissia fresh suhrudy are characterized by the highest diversity of wild medicinal materials. In 2013, the long-term monitoring study of ^{137}Cs accumulation intensity by different types of herbs was continued. The obtained data showed the increase of a significant number of plants, certain organs of which are used as a medicinal material. The results of the research substantiated the necessity to take into account several factors which determine the radionuclides content in wild medicinal plants: the biological characteristics of herbs as for the intensity of radionuclides accumulation; forest vegetable conditions which determine the species composition of wild medicinal plants and affect the intensity of ^{137}Cs and ^{90}Sr accumulation in them; the density of soil radiation contamination which determines the radionuclides concentration in plants.

It was found out that radiation contamination of various organs and organ parts of the same species differs substantially. These data should be taken into account while harvesting plants and plant organs for medicinal purposes. Such plant species require strict radiation control as far as the ^{137}Cs content in various parts of medicinal plants can differ by 1,5–4,5 times.



Pic. 1. The average values of ^{137}Cs transfer factor in different medicinal materials derived from plants of the same species in fresh suhrudy