

Overall, Beta-glucan can be successfully used as a functional ingredient to improve the quality of non-fat or low-fat milk yoghurt. The addition of 0.17% level of Beta-glucan to non-fat yoghurt or 0.10% in low-fat yoghurt fetched significantly better instrumental sensory scores and organoleptic properties. The use of different starter cultures has no technological advantages on prepared yoghurt.

1. Dadi Bhaskar, Sunil Kumar Khatkar, Rekha Chawla, Harsh Panwar, Swati Kapoor, J Food Sci Technol, 54 (9), 2684 (2017).
2. Okan Kurtuldu and Tulay Ozcan, 70, International Journal of Dairy Technology, 10.1111/1471-0307.12414.

INTERNAL EXPOSURE ASSESSMENT OF ^{89}Zr AFTER INJECTION TO HUMAN

Zakaly Hesham M.H.^{1,3*}, Mostafa M. Y.A.¹, Zhukovsky M.²

¹ Ural Federal University, Yekaterinburg, Russia

²Institute of Industrial Ecology UB RAS, Yekaterinburg, Russia

³Physics Department, Al-Azhar University, Assuit Branch, Egypt

*E-mail: h.m.zakaly@gmail.com

In this work, Assessment of the dynamic behavior of ^{89}Zr labeled with the monoclonal antibodies and their fragments after injection it into the human body is simulated for the purpose of the positron emission tomography (PET). Therefore, the absorbed doses in organs and tissues exposed into the maximum radiation exposure can be estimated easy using ICRP 128. The biokinetic model has been built based on reference data about the behavior of MAb and their fragments. The data of the excretion of chelate complexes from the human body is used to describe the bio-distribution and excretion also obtained from literature. The fraction of the administered activity dependence on the time of its presence in the body for different organs is estimated using WinAct 1.0 software package developed at the Oak Ridge National Laboratory. The doses received by the organs depending on the form in which the drug is injected into the human body. The obtained results shows that the fragments of MAb labeled with ^{89}Zr are characterized by both faster accumulations in the organs and a faster excretion of the radionuclide compared to intact MAb. The organs which had the highest dose were the spleen, liver, and lungs when the ^{89}Zr was injected into the human body associated with intact monoclonal antibodies and the kidneys when the injection was associated with the fragments of monoclonal antibodies.

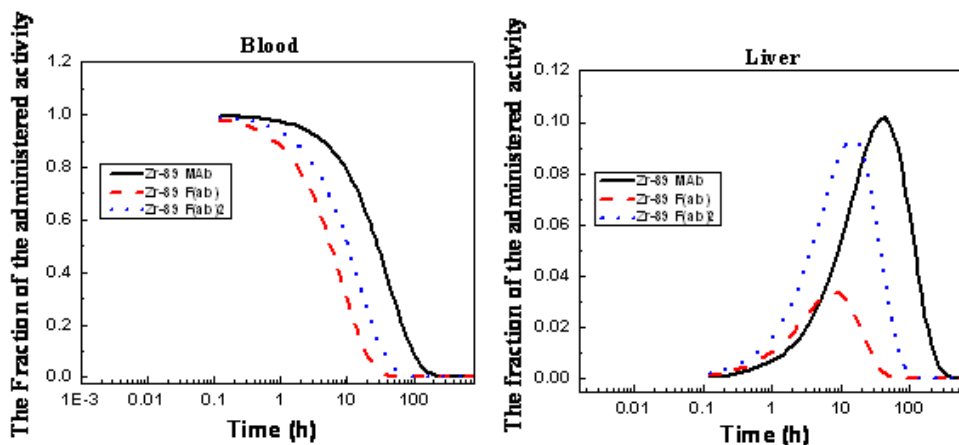


Figure 1 the fraction of the administered activity dependence of time in the blood and the liver for MAb and 2 fragments type.

ВЛИЯНИЕ РАДИАЦИОННОЙ ОБРАБОТКИ НА СВОЙСТВА ГИГИЕНИЧЕСКИХ ИЗДЕЛИЙ

Нурисламова К.А. *, Журавлева Е.Ю.

Уральский федеральный университет имени первого Президента России Б.Н. Ельцина, г. Екатеринбург, Россия

*E-mail: kсениya.timina@bk.ru

INFLUENCE OF RADIATION PROCESSING ON THE PROPERTIES OF HYGIENE PRODUCTS

Nurislamova K.A. *, Zhuravleva E. Yu.

UralFederalUniversity, Yekaterinburg, Russia

Annotation. The effect of ionizing radiation on the properties of medical hygiene products was studied. We investigated the following properties: absorption time, hygroscopicity. Samples were irradiated on an electron accelerator with an energy of 10 MeV. Studies have shown that irradiation with a sterilization dose of 25 kGy and 50 kGy improves these properties. Higher doses worsen the quality of the medical product.

В настоящее время большая часть медицинских изделий одноразового применения стерилизуется радиационными методами. При стерилизации изделий, расширяется круг потребителей, которые согласны платить больше за высокое качество продукта и также существует возможность применения гигиенических медицинских продуктов в других областях, таких как гнойная хирургия. Следовательно, возникает вопрос о влиянии ионизирующего излучения на основные потребительские характеристики материалов. Целью работы является изучение влияния радиационной обработки на свойства гигиенических изделий.