CEFood Congress

8th Central European Congress on Food

Food Science for Well-being

23-26 May 2016, Kyiv, Ukraine

UNDER THE AUSPICES OF:

SPONSORED BY:

engineering for a better world

НАЦІОНАЛЬНА АСОЦІАЦІЯ ВИРОБНИКІВ ДИТЯЧОГО ХАРЧУВАННЯ, МОЛОЧНОКОНСЕРВНОЇ ТА СОКОВОЇ ПРОДУКЦІЇ "УКРКОНСЕРВМОЛОКО"

INTERNATIONAL FOUNDATION FOR SCIENCE

BOOK OF ABSTRACTS

Kyiv, 2016

***Olga SLOBODYAN*, Larysa NESHCHADYM, Vira ZAYETS**
olya.slobodyan@gmail.com, larisa_neshchadym@mail.ru,
verazaiets@gmail.com
National University of Food Technologies, Kyiv
UKRAINE

RADIATION EXPOSURE AND FOOD SAFETY

Radiation is permanently present throughout the environment and in all living organisms. Large proportion of the average annual radiation dose is received by people as a result from natural environmental sources. Each human is exposed, on average, to 2,4 mSv/yr of ionizing radiation from natural sources. Only the amount of energy of any type of ionizing radiation that imported to (or absorbed by) the human body can cause harm to health.

We must estimate how much energy is deposited per unit mass of the part (or whole) of our body with which the radiation is interacting. The international (SI) unit of measure for absorbed dose is the gray (Gy), which is defined as 1 joule of energy deposited in 1 kilogram of mass.

The best ways to protect from radiation:

1. Avoid unnecessary exposure of x-rays are the best avoided unless needed due to radiation output.
2. Location — not putting self in situation by harmful radiation.
3. Reduce time standing close to microwave and talking on the cell phone.

But irradiation can serve many purposes.

Food irradiation is a technology that improves the safety and extends the shelf life of food by reducing or eliminating microorganisms and insects.

Preservation-irradiation can be used to destroy or inactivated organisms that cause spoilage and decomposition and extend the shelf life of food.

Control of insects — irradiation can be used to destroy insects in or on tropical fruits. Sterilization — irradiation can be used to sterilize foods, which can then be stored for years without refrigeration.

***KEY WORDS*:** *radiation, Absorbed Dose, Radiation protection*