

Answer on Question #58303-Physics-Atomic and Nuclear Physics

What is the effect of radioactive pollution?

Answer

There are many effects of the radioactive pollution which is broadly classified as short and long range.

The first effects were noted in the early 20th century. The people who were working in the uranium mines suffer from skin burn and cancer. These occur due to the radiations from the radioactive material. The different organisms show different sensitivity to the radiations. There are certain conditions in which the oak trees can survive but the pine trees are not able to do so. The plants which are present at the high altitudes have a multiple set of chromosomes which is referred as a polyploidy. It helps in the protection from radiations. The cells which divide rapidly are also damaged easily. It includes the skin cells, intestinal cells, bone marrow and gonads. The cells which do not divide rapidly are also not damaged easily. It includes the bone, muscle and nervous cells.

The short range effects are known as the immediate effects and occur within the few days. It includes the loss of hair, nails, subcutaneous bleeding, and change in the number of cells and metabolism, change in the proportion of cells.

The long range effects are known as the delayed effects and do not occur within the few days. It takes few months to some years to occur. They cause genetic changes, mutations, decrease the life span and form tumors. The human race possesses mutations. The radiation affects all the organisms. In some animals the radioactive materials aggregate and are transferred via food chain. It includes the zinc, iron and strontium.