**République Algérienne Démocratique et Populaire**

**Université Ahmed Zabana - Relizane**

**Faculté des sciences et de la technologie**

**Département des sciences agronomiques**

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**TD n° 01**

During radiation treatment, food are exposed to a source of gamma-emitting cobalt 60 or cesium 137. As the radiation penetrates the food, part of the energy contained in each gamma photon is dissipated by the ionizing of water, protein, carbohydrate, fat, nucleic acids, vitamins, minerals, and other food components. The ionyzing of these substances causes to undergo complex chemical changes, resulting in a residue of chemically transformed material. This residue is referred to us a radiolyctic products. The complexity of food chemistry and the limitations of chemical analyses make it impossible to identify all radiolytic products. This, together with the experimental results causes concern that the diverse mixture of chemicals genarated in irradiated food contains substances that are capable of causing cancer or genetic damage. Examination of the scientific literature reveals a large number of research reports which attest to the presence of carcinogenic or mutagenic activity in irradiated foods. Multiple effects have been reported in mice, rats, and hamsters fed on irradiated diet, including lethal mutations in developing germ cells, reduced sperm counts, and aneuploidy and chromosome damage in bone marrow cells. A series of experiments, using mice, rats and monkeys confirms a finding first made in a study of malnourished children that diet containing freshly irradiated wheat increased the incidence of polyploidy in periphenal blood lymphocytes.

I**- Questions of comprehensions:**

**1- Give a suitable title to the text:...........................................................................**

**2- What is the main idea of the text?...................................................................................**

**.........................................................................................................................**

**3-What substances are mentioned in the text?..........................................................**

**............................................................................................................................**

**4-How can food be contaminated? And what are the results of these contamination.......................................................................................................**

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**..................................................................................................................................**

**5-Define the following words:**

**carcinogenic:............................................................................................**

**mutagenic:.........................................................................................**

**undergo:............................................................................**

**wheat:...............................................................................**

**........................................**