

F. ROLE OF ATOMIC ENERGY COUNCIL

The major role of AEC in ensuring that irradiated food remains safe is to define the radiation doses for irradiation treatment of food. This ensures that food is treated with a sufficient dose to achieve the intended purpose without compromising the quality of food.



**IONISING
RADIATION
HAZARD**



Atomic Energy Council
Plot 40, Bukoto Street
P. O. Box 7044,
Kampala Uganda
Tel: +25641711700

Website: www.atomiccouncil.go.ug
Email: admin@atomiccouncil.go.ug



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IRRADIATION OF FOOD

*Protecting the public and environment from dangers resulting
from non ionizing radiation*

A: WHAT IS FOOD IRRADIATION?

Food Irradiation is a gentle, non-invasive technique that uses radiation to keep food fresh and safe to eat.

During irradiation, energy is transferred from a source of ionising radiation into the treated product -food.

It eliminates microbes and controls insects and other pests, thereby increasing the shelf life food, while preserving the nutritional content, flavor and overall quality of food.

B: PRIMARY BENEFITS OF FOOD IRRADIATION

1. Prolongs food shelf life by destroying or inactivating organisms that cause spoilage and decomposition
2. Prevents food borne illnesses by effectively eliminating organisms such as Escherichia coli (E. coli) that cause foodborne illnesses
3. Controls insects in tropical fruits by destroying them, thereby reducing the need for other pest control practices which may harm the quality of the fruits
4. Sterilization of food for storage over long periods of time. Such food is useful in hospitals for patients with severely impaired immune systems
5. Delays ripening of fruits and increases longevity
6. Reduces the need for depending on chemicals to preserve food thereby maintaining food quality

C. SAFETY OF IRRADIATED FOOD

Irradiated food is safe for consumption because irradiation does not make food radioactive, nor does it change the texture, taste, appearance or compromise the quality of food.

Extensive research and testing have been conducted on food irradiation, and as result, the technique is widely recognized by the World Health Organization (WHO) and the United Nations Food and Agriculture Organization (FAO) as a completely safe and effective method for -

reducing harmful bacteria in food products.

Irradiation of food cannot be used as a substitute for good manufacturing practices.

Irradiated food should therefore still be handled safely and in accordance with good hygiene practices to ensure that it remains fit for human and animal consumption.



Figure 1: Process of food irradiation

D: EXAMPLES OF IRRADIATED FOODS ON THE UGANDAN MARKET

1. Sea foods such as prawns and shrimp
2. Processed cereals
3. Exotic fruits
4. Herbs and Teas
5. Spices
6. Imported fruits

E: DO WE HAVE A FOOD IRRADIATION FACILITY IN UGANDA?

Currently, there is no food irradiation facility in Uganda. If an exporter or researcher wishes to employ this technology, they would rely on international food irradiation centres.

F. HOW TO KNOW IF FOOD HAS BEEN IRRADIATED

Irradiated foods bear the Radura symbol (figure 2). Look out for this symbol along with the statement "Treated with radiation" or Treated by Irradiation.



Figure 2: Radura symbol