

## APPLICATION OF IRRADIATION TECHNOLOGY ON FOOD

SUJAYASREE O. J<sup>1</sup> & FASLUDEEN N. S<sup>2</sup>

Research Scholar, Division of Postharvest Technology and Agricultural. Engineering,

ICAR- IARI, New Delhi, Outreach campus:ICAR-IIHR, Bengaluru, India

Research Scholar, Department of Post Harvest Engineering and Technology, AMU, Aligarh, India

### ABSTRACT

Radiation processing of food involves the controlled application of energy from ionizing radiations such as gamma rays, electrons and X-rays for food preservation. Gamma rays and X-rays are short wavelength radiations of the electromagnetic spectrum which includes radiowaves, microwaves, infrared, visible and ultra violet light. Gamma rays are emitted by radioisotopes such as Cobalt-60 and Caesium-137 while electrons and X-rays are generated by machines using electricity. It is a cold process and can be used to pasteurize and sterilize foods without causing changes in freshness and texture of food unlike heat. Unlike chemical fumigants, irradiation does not leave any harmful toxic residues in food and is more effective. It is efficient and can be used to treat prepacked commodities. Radiation technology can complement and supplement existing technologies to ensure food security and safety. It provides effective alternative to fumigants that are being phased out due to their adverse effects on environment and human health.

**KEYWORDS:** Radiation Technology, Processing, Gamma Rays