

GAMMA IRRADIATION TREATMENT OF APICULTURAL PRODUCTS

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Ionizing radiation is applied to bee products as a prophylaxis treatment to control bee diseases caused by bacteria or parasites. This process stands out from alternative methods because it neither leaves residues nor significantly increases temperature.

Gamma irradiation at doses of 10 kGy inactivates **Paenibacillus larvae larvae** spores which are resistant to heat and chemicals, and cause **American Foulbrood**.

Gamma irradiation of different Argentine honey varieties

Studies on chemical and sensory qualities of different Argentine honey varieties irradiated at the Planta de Irradiación Semi-Industrial -PISI- are carried out by the Food Irradiation Section at the Ezeiza Atomic Centre. Irradiated food wholesomeness is guaranteed by the World Health Organization (WHO) and Food and Agriculture Organization (FAO).

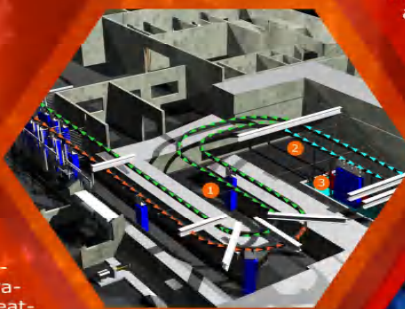


Gamma irradiation of embossed laminated Wax and beehives

Laminated wax and beehives are irradiated in order to fight against American and European foulbrood as well as chalk brood. It is also applied to inactivate harmful microorganisms and eliminate insects.

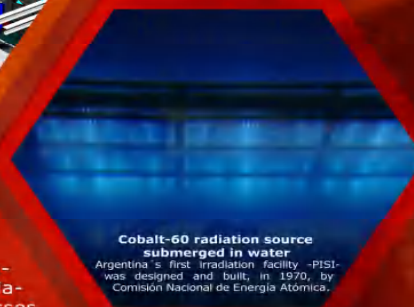
DIFFERENT APPLICATIONS

Sterilization of medical and pharmaceutical products, food preservation, post-harvest quarantine treatment of fresh fruits and vegetables, decontamination of pet food and cosmetics, preservation of antiques are, together with decontamination of bee products, are only a few of the many applications of this technology.



MULTIPURPOSE SEMI-INDUSTRIAL IRRADIATION FACILITY

The product is carried by a conveyor system (1) to the irradiation chamber (2) where it passes through a pre-established path along both sides of the radiation source (3) until the product absorbs the required dose to achieve the purpose of the treatment. Finally it moves away to the irradiated product storage.



Cobalt-60 radiation source submerged in water. Argentina's first irradiation facility -PISI- was designed and built, in 1970, by Comisión Nacional de Energía Atómica.

RADIOLOGICAL SAFETY

Safety is guaranteed by design and complemented by good practices and qualified and trained staff. **The Nuclear Regulatory Authority (ARN)** is the State's institution dedicated to monitoring and controlling the nuclear activity.

ON THE MEMORY OF

Leonardo Núñez
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