



World Standard in Irradiation Sterilisation Systems

Disera 10 MeV Linear Electron Accelerator

E-BEAM

The E-beam irradiation facility provides a modern and sustainable solution for a healthy future while meeting the health and safety needs of the community. This facility minimises concerns about health and hygiene while also making significant contributions to leaving a cleaner environment for future generations.

Disera, which began producing laboratory consumables in 1996, has now become an international company specialising in the production and development of vacuum blood collection tubes and stands out with various products such as blood collection accessories, urine collection systems and PRP products. Additionally, Disera is active in the laboratory diagnostics sector within its domestic market.

E-beam sterilisation provides fast, effective, precisely controlled radiation sterilisation services designed to safely reduce or eliminate microbial organisms.

Disera commissioned Turkey's first 10 MeV E-beam irradiation facility at its new factory in the final quarter of 2023. The E-beam irradiation system technology is an extremely clean and safe sterilisation system as it does not use a radiation source or radioactive elements and leaves no residue on products.

Furthermore, no radioactive waste is produced using the E-beam Irradiation System. The device, with its stainless steel conveyor system, rotates the packages without human contact and ensures they are irradiated in both directions.

Disera Sterilisation Facility holds a licence certificate issued by the Nuclear Regulatory Authority and ISO 13485, ISO 22000 and ISO 14001 certificates obtained from internationally accredited organisations. Furthermore, the measuring devices used for process and sterilisation validation, consumables such as dosimeters, are sourced from suppliers with full accreditation as industry leaders worldwide.

Disera's irradiation facility can provide services in various fields such as irradiation for sterilisation purposes, irradiation for food preservation and processing, colouring of precious stones, mould prevention and pest control.

E-BEAM STERILISATION

The sterilisation process using E-beam irradiation occurs when high-energy electrons break the hydrogen bonds between nucleotides in the genetic material found in microorganisms. Microorganisms whose genetic material is broken down are rendered completely ineffective.

SPECIFICATIONS

E-beam renders microorganisms ineffective by directly breaking down their genetic material. Indirectly, it also breaks down water molecules in the cells, thereby fragmenting the microorganisms, primarily their cell walls. The latest technology used makes the irradiation process extremely precise and flexible.

The process involves passing an electron beam through an accelerator and applying it to the product at a speed close to the speed of light.

Materials moving on a conveyor belt system are washed with high-energy electrons at a predetermined, precise dose.

As Turkey's largest electron beam irradiation facility, we offer capacity for large-scale processing and provide a team of experts to support you.

It is much faster than gamma and ethylene oxide (EO) sterilisation processes, saving time and eliminating the risk of residues associated with methods such as EO sterilisation. Dose determination and dose mapping studies are conducted in collaboration with an experienced team of experts, ensuring a professional and reliable process.

Fast, clean, cost-effective solutions for medical devices, medicines and more.

APPLICATION AREAS

Medical Product Sterilisation

Food Irradiation

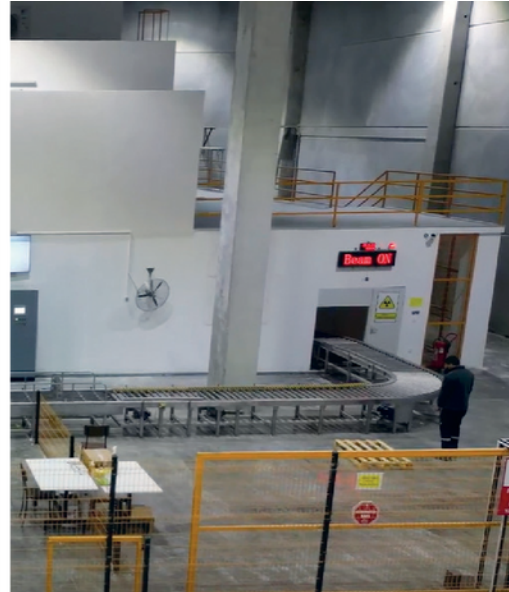
Pharmaceutical and Cosmetic Sterilisation

Irradiation of Animal Feed and Pet

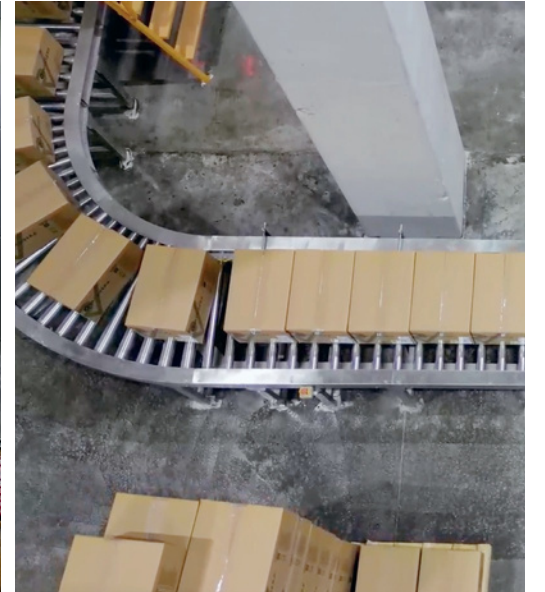
Food Packaging Materials



Application Examples



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DİSERA TIBBİ MALZEME LOJİSTİK SANAYİ VE TİCARET A.Ş.

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