

Fast Inactivation Technology

eFIT

Vaccine production Research CSS





Fast inactivation time < 1 s



Scalable system



No toxic chemicals



Brief description

eFIT is a device for the inactivation of pathogens and cells in a liquid solution. By low-energy electron irradiation (LEEI) the genetic material is reliably destroyed.

Fields of application

The **eFIT** platform is suitable for both research (R&D) and small-scale manufacturing processes.

- Vaccine production
- Contamination control strategy (CCS): pathogen depletion in process media and blood-derived components incl. sera

Principle of LEEI

intact virus e- e- e- intact antigens low-energy electron radiation inactivated virus intact antigens destroyed nucleic acid

Relevant irradiation targets:

- Bacteria (gram+/-)
- Bacterial spores
- Viruses (enveloped, non-enveloped, DNA, RNA)
- Immunologically relevant cells
- Parasites
- Find more details here: https://kyoobe.tech/ressources/



Specifications - eFIT

Process Specs

Batch size: 10 mL to 1 L

Production speed: 0.33 L/h

• Radiation dosis: 1 - 60 kGy

• Depletion level: > 6 log levels reduction

• Viscosity range: 1.0 - 4.5 mPa · s

• Temperature range: 2-20 °C

Footprint: 1400 mm x 850 mm x 2120 mm

• Weight: 1450 kg

 Power supply: 2x 400 V - 32 A and 1x 400 V - 16 A

Technical Specs

• Energy consumption: 1 kWh/h

• Control: Siemens

Full lead-lined protection system

 Periphery: nitrogen supply, compressed air, cooling water (altogether ~ 5 m²)

Process cassette

Validation cassette

Dosimetry cassette

• Bag sizes: 50 mL / 200 mL / 500 mL / 1000 mL

Accessories



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