RADIATION PROCESSING IN HUNGARY

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Welcome to Hungary!

Dispomedicor (γ) – Debrecen; Agroster (γ) – Budapest; Institute of Isotopes (γ, EB) – Budapest
GAMMA IRRADIATION FACILITIES
Dispomedicor Rt.

Characteristics of the facility:

– JS – 6900, AECL, Canada, 01. 12. 1976.;

– Carrier type, four levels, 264 positions, continuous mode;

– Product box size: 48 x 48 x 45 cm (0.1 m³);

– Wet storage (pool), max. capacity: 18.5 PBq (500 kCi);

– Present activity: 7.99 PBq (216 kCi);

– Dwell time: 324 sec
Dispomedicor Rt.

Irradiation activity:

- Own product sterilization (in-house facility, 95 %):
  - Blood transfusion sets, infusion sets, syringes, needles (600 – 650 m³/month);
- Contract sterilization (5 %);
  - medical products (30 – 35 m³/month)
Dispomedicor Rt.

- Process control:
  - Oscillometric ethanol-monochlorobenzene dosimeter; (stored for 5 years);
  - In-plant calibration;
  - Etigam dose indicators; (300,000 / year)
AGROSTER Irradiation Co. Ltd.

Characteristics of the facility:

- Hungarian design, 1982;
- Carrier type, 52 carriers, continuous mode;
- Maximum load: 5 t;
- Wet storage (pool), max. capacity: 18.5 PBq (500 kCi);
- Present activity: 6.6 PBq (178 kCi)
AGROSTER Irradiation Co. Ltd.

Irradiation activity:

- Food products (20 %):
  - Spices, herbs, frozen poultry, dried foods;
- Medical products (80 %):
  - Raw materials for medicines;
  - Urine bags, petri dishes,
  - Packing materials, nutritions;
- Treated amount:
  - 500 – 800 t / year
AGROSTER Irradiation Co. Ltd.

- Process control:
  - Oscillometric ethanol-monochlorobenzene dosimeter; (stored for 5 years);
  - In-plant calibration;
  - Traceable to Risø National Laboratory;
  - Megaray dose indicators
Institute of Isotopes Co. Ltd.

Characteristics of the facility:
- Pilot scale, multipurpose facility without product transport;
- Wet storage, max. capacity: 18.5 PBq (500 kCi);
- Present activity: 2.6 PBq (70 kCi);
- Cylindrical source arrangement;
- Batch operation mode
Institute of Isotopes Co. Ltd.

- **Process control:**
  - Oscillometric ethanol-monochlorobenzene dosimeter;
  - Traceable to Risø National Laboratory;
  - Fricke solution;
  - Megaray dose indicators;

- **Irradiation activity:**
  - Medical products, laboratory equipments;
  - Spices, herbs, dried foods;
  - Experimental irradiations;
  - Human tissue;
  - Polymer processing
Institute of Isotopes Co. Ltd.

- Treated amount:
  - 350 m$^3$ medical products;
  - 50 m$^3$ food
Institute of Isotopes, Hungarian Academy of Sciences

LPR-4 linear electron accelerator:
- Producer: TESLA VUVET, Czech Republic;
- Electron energy: 4 MeV;
- Pulse length: 2.6 µs or 800 nsec;
- Scanning frequency: 1 Hz;
- Scanning width: 25 cm;
- Application:
  - Mainly for basic research;
  - Small scale applications;
  - Applied research
THANK YOU FOR YOUR ATTENTION!