• Assessment of whole-body exposure
• Operational quantities: Personal dose equivalent, \( H_p(10) \) and \( H_p(0.07) \)

**Procedure and Workflow**

- OEW request EPD via Monitoring Service Desk
- Verification of EPD at SSDL
- Assign EPD to OEW in EasyIssue
- Check settings in EasyEPD
- Distribute EPD to OEW
- Decontaminate
- Return of EPD
- Read out EPD manually
- Evaluate dose
- Store and back up data
- Dose profile and report upon request

**Equipment and Instrumentation**

- **Instrument:** Thermo Fisher Scientific IrDA reader with USB interface
- **EPD type:** Thermo Fisher Scientific EPD Mk2 for beta and photons
  Thermo Fisher Scientific EPD N2 for neutrons and photons
- **Energy range:** Photons 33 keV (N-40) – 1.250 keV (S-Co), 6.6 MeV (R-F)
  Beta 230 keV (\(^{147}\)Pm) – 2.27 MeV (\(^{90}\)Sr)
  Neutrons 0.020 eV – 1.5 MeV
- **Dose range:** 0.001 mSv – 10 Sv
- **Software:** Thermo Fisher Scientific EasyIssue, 1.2.1.0
  Thermo Fisher Scientific EasyEPD2, 2.5.0.19
  IAEA Radiation Protection and Monitoring Service Desk
- **Uncertainty:** Standard uncertainty ±5%, coverage interval 95% (\( k_{cov} = 2 \))
  according to IEC/TR 62461:2006 and GUM

**Validation of Method and Uncertainty Budget**

**Assessed performance requirements (IEC 61526:2010)**

- Dose and dose rate response
- Radiation energy and directional response
- Statistical fluctuations
- Response time for dose rate indication and alarm functions
- Accuracy of alarm setting
- Response to natural background radiation
- Overload

**EURADOS Intercomparisons 2012 for whole-body photon and neutron dosimeters. Acceptance criteria according to ISO 14146:2000 and EURADOS.**