

# RADI

---

- “Istituto Autorizzato di Radioprotezione” (Authorized Radiation Protection Institute) (Decreto Ministero del Lavoro del 23/05/1984).
- RADI quality system is certified by ISO9001:2000
- **Radiometric Analysis Laboratory:**
- Supplies with analytical support all the RADI processes regarding ionizing radiations and assures precautionary radiometric checks to samples that other labs should analyze (i.e. LAAP)
- Accomplishes radiometric analysis using gamma, beta, alpha spectroscopy technique on samples of various matrix and origin (about 1200 samples/annum of environmental, technological, etc. matrix)
- Provides the Unit with purchase, management and control of the instruments, following the requirements of ISO9001:2000 (calibration, periodic controls of well-functioning for portable and laboratory instruments )
- Assures samples management from their acceptance in the laboratory to their final disposal (following ISO9001:2000)



## Radiometrical Analysis Laboratory:

### ***Laboratory Instrumentation:***

n. 3 - High efficiency gamma ray spectroscopy counting facilities (relative efficiency ranging from 32.8% to 46.1%; resolution of 1.91 KeV on the 1332.4 KeV line of  $^{60}\text{Co}$ ) coupled with the computerized multi-channel analyzer "GENIE2K" (CANBERRA Instruments Inc. – USA)

n.1 - Liquid Scintillation Counter "Beckman LS6000" (Beckman Instruments Inc. – USA)

n.1 "Smear Test Instrument" NT200 (Nutronic – Sweden) for direct determination of beta and/or alpha emitters onto filter "smear test"

Conventional laboratory tools and instruments for samples preparation and manipulation (glove-box, chemical hoods, microwave oven, pH-meters, balances, etc.)

### ***Portable instrumentation ("in field" measurements):***

N. 1 - high efficiency portable Gamma-Ray Spectroscopy system (relative efficiency 36% ; resolution of 1.91 KeV on the 1332.4 KeV line of  $^{60}\text{Co}$ ) coupled with the computerized multi-channel system "GENIE2K" (CANBERRA Instruments Inc. – USA)

n. 6 - contamination monitors equipped with gamma, beta and alpha probes

n. 2 - portable Gamma-Ray Spectroscopy systems

n. 11 - scintillation meters

n. 4 - low energy dose rate meters

n. 9 - dose rate meters equipped with different probes

n. 2 – indoor Radon monitors



## **Dosimetry Laboratory:**

- Supplies with active and/or passive dosimeters eni societies that need dosimetric control (due to the presence of radioactive sources in the plants, industrial radiographies, radiation protection controls, etc.)
- Analysis of passive dosimeters (based on Optically Stimulated Luminescence – OSL- technology)
- Dose assessments, both preventive and final (using direct measurements, mathematical models etc.), for working activities dealing with ionizing radiation, including NORM (Naturally Occurring Radioactive Materials)

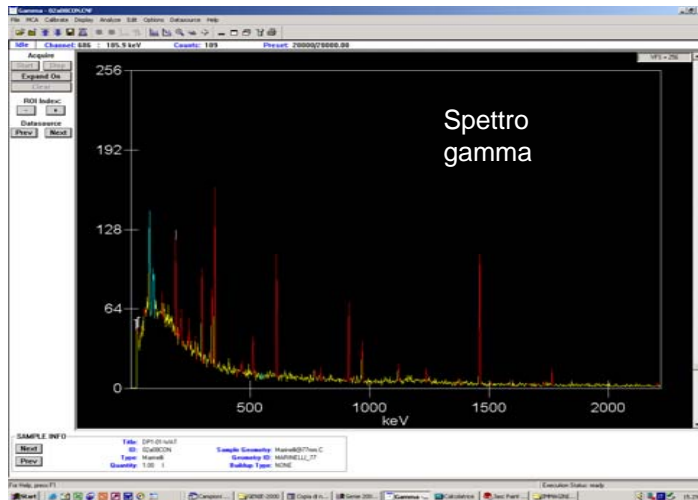
## ***Laboratory instrumentation:***

- Landauer Reader (Landauer Instruments Inc. – USA) to analyze passive OSL InLight dosimeters
- Set of POLIMASTER PM1621 active dosimeters





## Radiometric Analysis Laboratory



*Portable Contamination Monitor  
(with different probes)*



*High Resolution Gamma Ray  
Spectroscopy counting facilities*

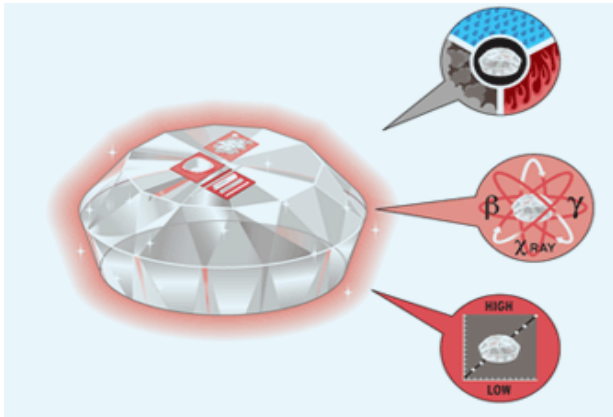




## Dosimetry Laboratory



*Personal/environmental passive dosimeters*



*Personal active dosimeter*



exploration & production

