

**THE INSTITUTE OF NUCLEAR SCIENCES
EGE UNIVERSITY
TURKEY**

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EGE UNIVERSITY

INSTITUTE OF NUCLEAR SCIENCES

Founded in 1977

at present, the Institute comprises three main departments

- **Nuclear Sciences**
- **Nuclear Technology**
- **Nuclear Applications**

The main purpose of the Institute is to offer graduate education and training in nuclear sciences and to realize pure and applied research in the field.

INSTITUTE OF NUCLEAR SCIENCES

- **Commenced graduate training in February 1984.**
- **29 academic and 11 administration staff**
- **Since 1986, awarded MSc-135 and PhD-33 degrees**

PURPOSES

Due to the interdisciplinary nature of nuclear science, the education and the research activities of the three Departments cover several fields.

- **nuclear physics,**
- **nuclear chemistry,**
- **nuclear electronics,**
- **nuclear fuel technology,**
- **health physics,**
- **nuclear spectroscopy,**
- **radioanalytical chemistry,**
- **radiopharmacy,**
- **radiobiology,**
- **radiation dosimetry.**

Main Topics of the Departments

Department of Nuclear Sciences

**Applied and Theoretical
Nuclear Physics**

**Environmental Studies
and Monitoring**

Department of Nuclear Technology

**Nuclear Chemistry and
Radioanalytical Chemistry**

Environmental Studies

Nuclear Fuel Chemistry

Department of Nuclear Applications

Radiochemistry

Radiopharmacy

Nuclear Electronics

EGE UNIVERSITY INSTITUTE OF NUCLEAR SCIENCES

DIRECTOR

D E P A R T M E N T S

NUCLEAR SCIENCES

**Spectroscopy
Laboratory**

Counting Laboratory

**Radon Measurement
Laboratory**

**Electrodeposition
Laboratory**

NUCLEAR TECHNOLOGY

**Radioanalytical
Chemistry Laboratory**

**Nuclear Fuel
Chemistry Laboratory**

**Instrumental Analysis
Laboratory**

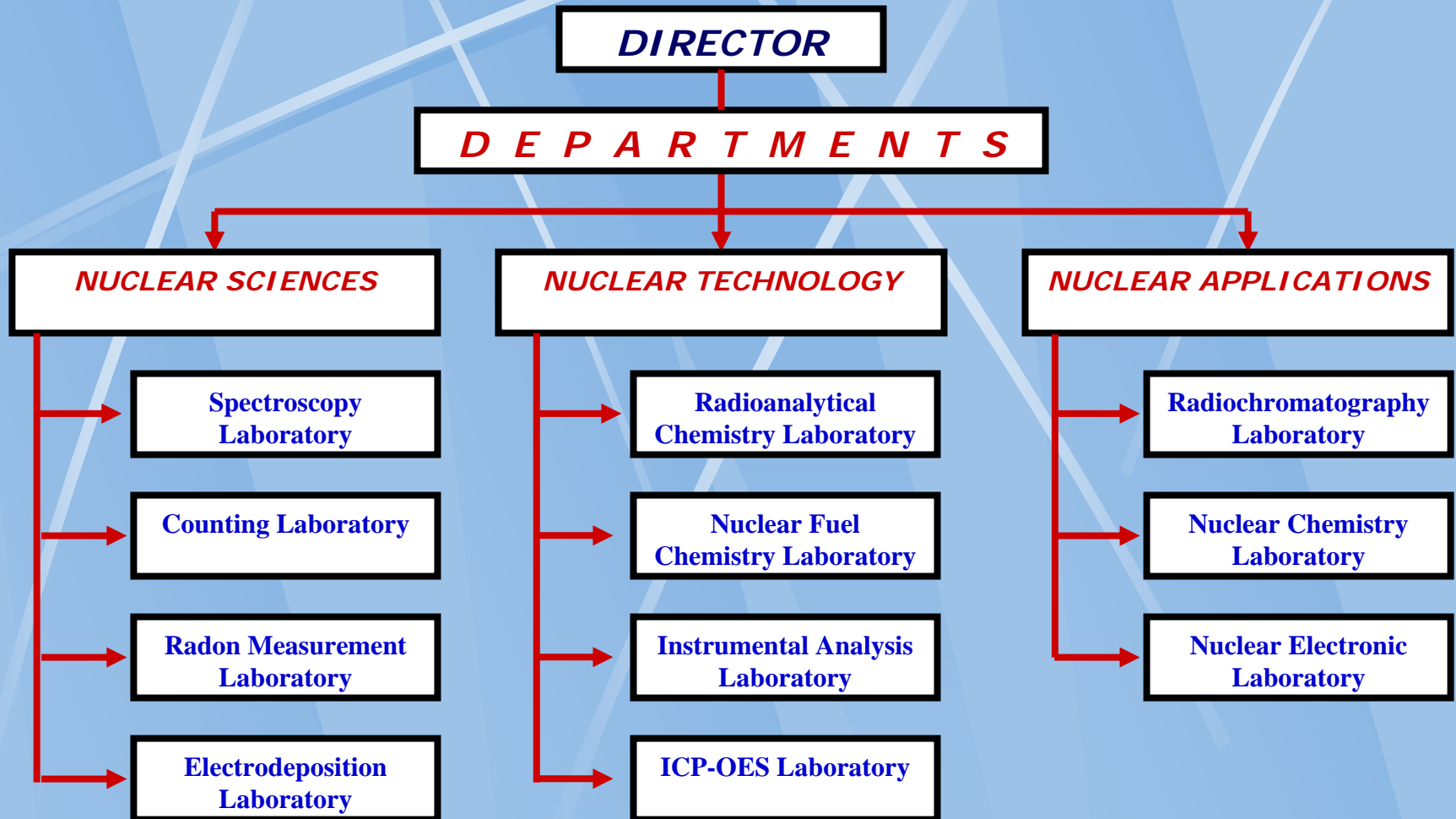
ICP-OES Laboratory

NUCLEAR APPLICATIONS

**Radiochromatography
Laboratory**

**Nuclear Chemistry
Laboratory**

**Nuclear Electronic
Laboratory**



Luminescence Laboratory



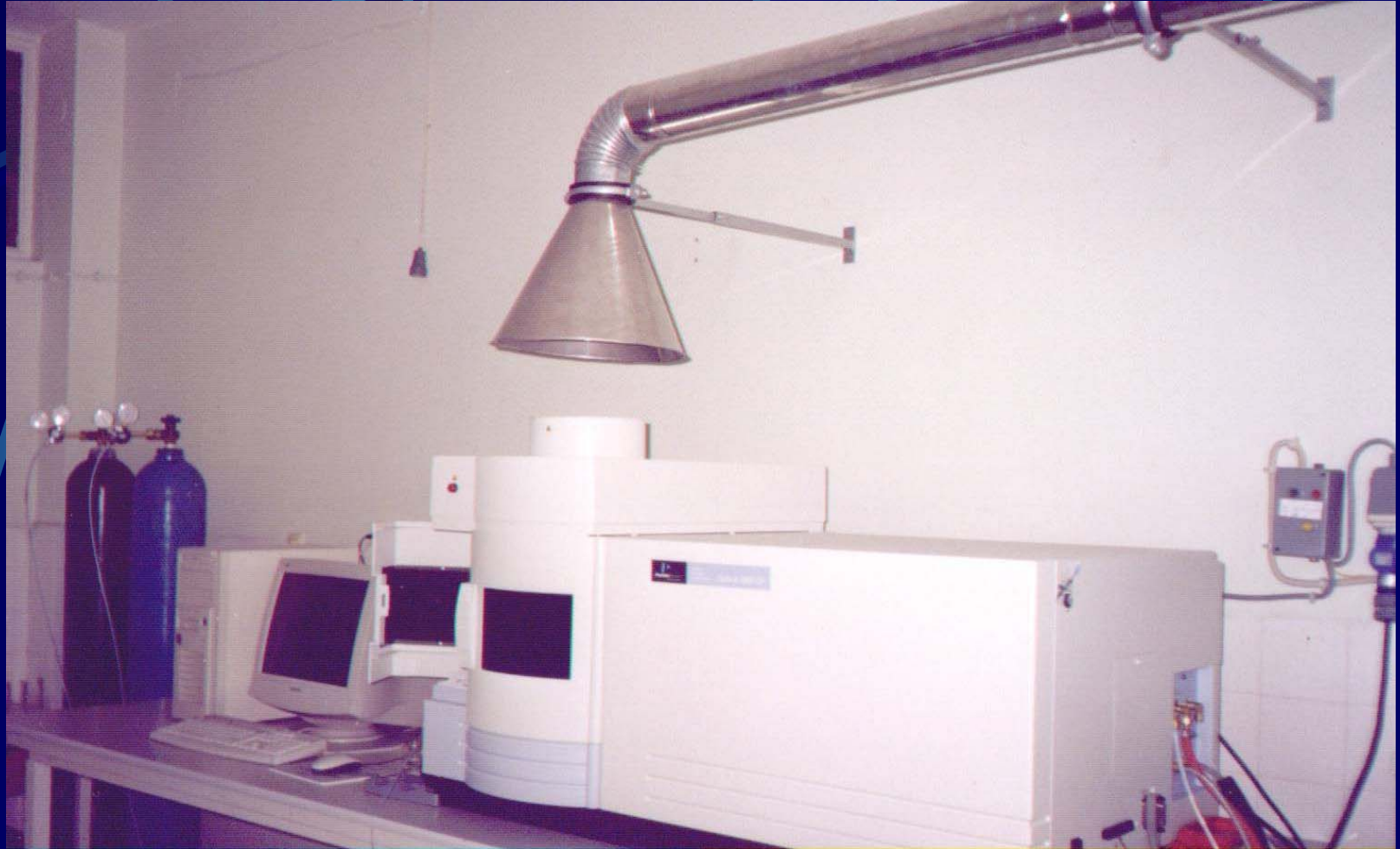
Spectroscopy Laboratory



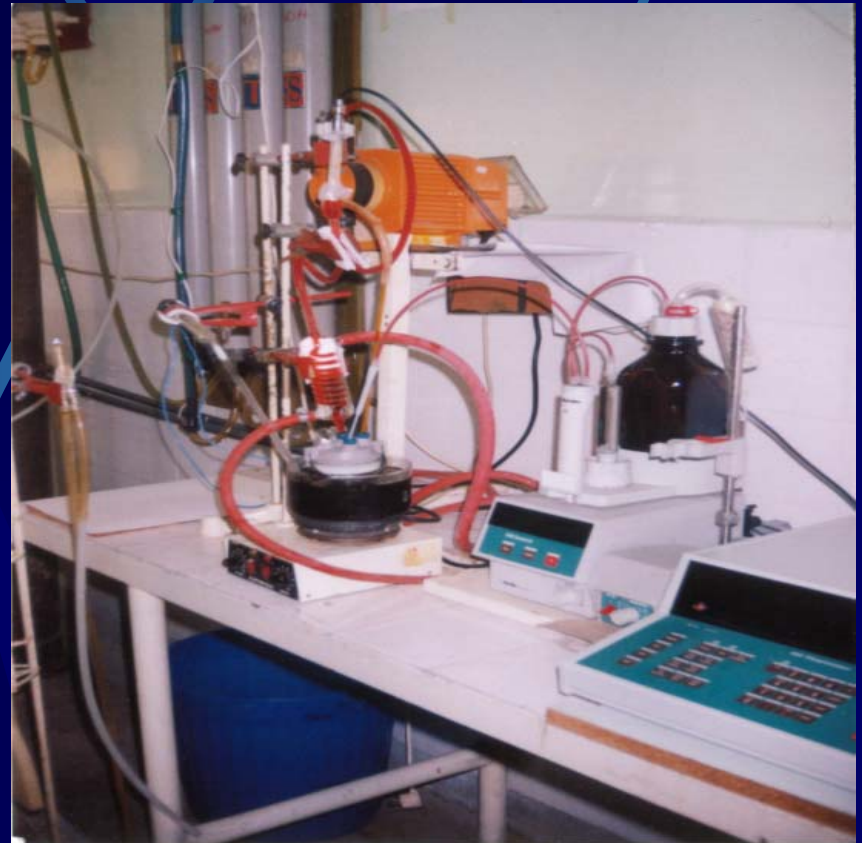
Radium - Radon Laboratory



ICP-OES Laboratory



Nuclear Fuel Chemistry Laboratory



Instrumental Analysis Laboratory



Radiochromatography Laboratory

Analysing some drugs for cancer treatment



Nuclear Chemistry Laboratory



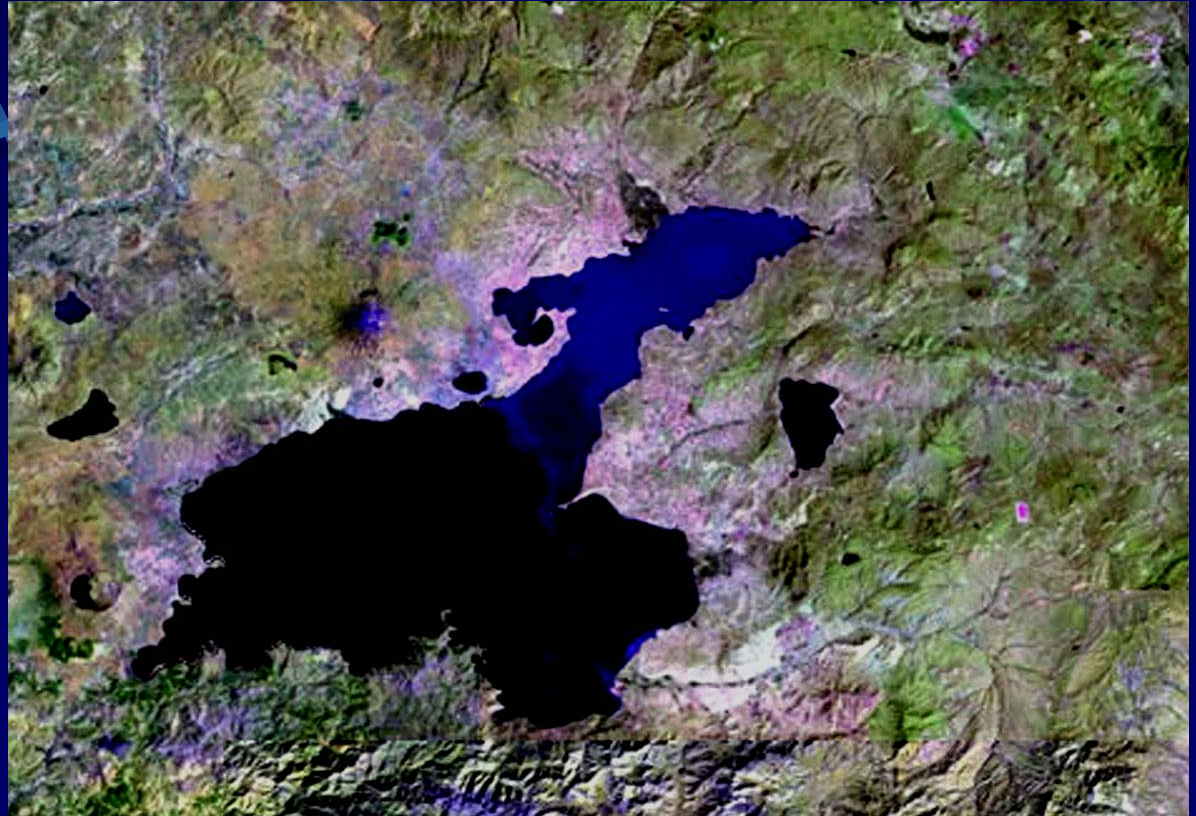
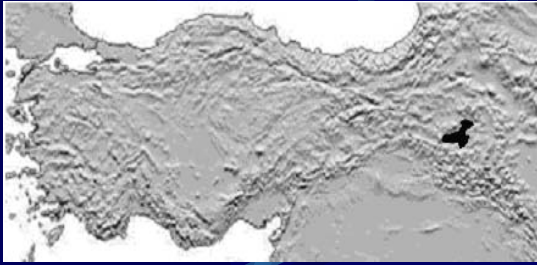


Fig. 1. Location of Van Lake and satellite picture of Van Lake Basin in TURKEY.

EGE UNIVERSITY
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RESEARCH INTERESTS

- **Determination of natural and artificial radionuclides in environmental samples using different methods**
- **Measurement of indoor and outdoor radon concentration**
- **Use of different nuclear techniques in several fields (prediction of earthquake, determination of sedimentation rate in sea and lake sediments, erosion rate, trace elements analyses etc.)**
- **Development of nuclear spectroscopic techniques and the counting systems**
- **Recovery of some radionuclides using natural and synthetic adsorbents and synthesizing new selective adsorbents**

- **Recovery, concentration and purification of uranium and thorium from ore or different sources**
- **Preparation and characterization of nuclear fuel compounds**
- **Design and synthesis of radiopharmaceuticals labelled with radioactive iodine or Tc-99m and determination of their radiopharmaceutical potentials**
- **Thermoluminescence (TL), application of TL dosimeters, TL mechanism of dosimeter, luminescence dating**
- **Actinide complexes and calculation of their stability constants**
- **Nuclear Imaging**

- **Labeling of Benzodiazepin Drug (clordiazepoxide) with I-131 and Determination of Radiopharmaceutical Potential**
- **Preparing of Estrogen-Derivative Compounds Labelled with Tc-99m and Determination of Radiopharmaceuticals Potential**
- **Iodide Determination in Urine and Drinking Water Samples in Ege Region by Isotope Dilution Analyses**
- **Development of a Stand-Alone and Enhanced Digital Bus Controlled Single Channel Analyzer**
- **Development of Computer Based Troubleshooting Tools and Instruments**



Van Lake



Nemrut Crater Lake



Meke Lake

**THANKS FOR
YOUR ATTENTION**

