

Course **Fundamentals of Radiochemistry**

(Three CEUs Awarded Upon Completion)

Who Should Attend

Chemists, engineers, scientists, technicians, and managers who recognize the need for improvement of their skill set and fundamental knowledge of radiochemistry. Completion of this three day course will enhance and support nuclear related decision-making as well as provide formal academic principles in radiochemistry.



Key Topics You'll Learn About

- Fundamental Principles of Gamma Spectrometry
- Fundamental Principles of Alpha Spectrometry
- Fundamental Principles of Liquid Scintillation Counting
- Fundamental Principles of Gas Flow Proportional Counting
- Best Methods and Strategies for Separation Chemistry
- Making Reliable & High Quality Measurements in Radiochemistry
- Chemistry of Actinides, Fission Products & Naturally Occurring Nuclides

How You'll Benefit from this Course

Globally there has been a dramatic decrease of teaching and training opportunities in radiochemistry over the past three decades. As a result there has also been a dramatic decrease in closure of institutes world-wide. Lack of formal academic training in radiochemistry as the basic discipline for radiopharmaceutical, nuclear medicine, health physics, and nuclear energy technology has had a strong multiplicity effect on various branches of applied and basic research and, hence, on some major parts of society's welfare.

Many in both undergraduate and graduate studies have not had a great deal of formal academic training in the fundamentals radiochemistry. There is an urgent need for formal education on both nuclear and radiochemical concepts. In the past, many learning opportunities at nuclear sites have consisted of on the job training as well as safety related training. This training does fulfill its intended purpose, however, it is not a substitute for formal fundamental training as a scientific tool to be deployed by scientist and engineers.

In this course you will:

- Consult with seasoned experts on your separations problems and challenges
- Develop a knowledge of radiochemistry principles needed for decision making in the nuclear arena
- Better understand which instrument techniques meet a specific radioanalytical need
- Receive references to deepen your understanding of nuclear concepts and fundamentals
- Learn methods of optimizing laboratory operations

Program Agenda

**All courses are taught from 8:30 am to 4:00 pm each day*

Day 1 Fundamentals:

- Background & History
- Chemistry & the Periodic Table
- Classification of Radionuclides
- Nuclear Interactions & Reactions
- Chart of the Nuclides and Nuclear Concepts
- Statistics, Nuclear Decay Calculations & Detection Limits



Day 2 Strategies:

- Sample Preparation Strategies
- Chemical Separation Strategies
- Nuclear Measurement Strategies
- Laboratory Optimization Strategies

Day 3 Applications & Problem Solving:

- In the environment
- At Nuclear Sites
- In Nuclear Medicine & Pharmacy
- Health Physics
- Basic Research

Cost/Reservations

Cost for this course is \$1,495.00 [U.S.] and the optional **Certification Exam** is an additional \$250.00 [U.S.], with All Proceeds going to the Radiochemistry Society. Space is extremely limited. In order to assure placement we encourage a prompt response.

Registration

You can register and make payment online via our Secure Cart using Visa, Master Card, American Express & Diners Club credit cards or by Check or Money Order.



REGISTER NOW ONLINE »



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