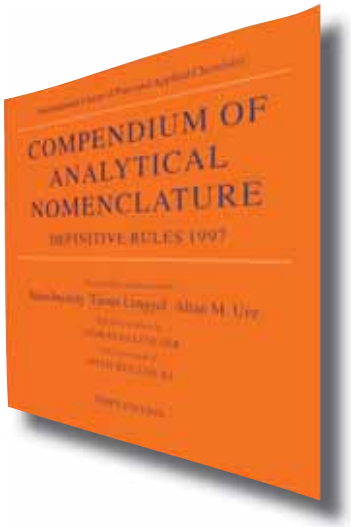
Radioanalytical Chemistry—Revision of the Orange Book Chapter

Since the last edition of the Orange Book was published in 1998, analytical chemistry has moved into new fields of science, and the importance of some areas has changed. The revision of the Orange Book is a major endeavor of the IUPAC Analytical Division and is expected to take until 2013.

The available terms in the field of radioanalytical chemistry were compiled 10 years ago. With the development of modern science and technology, many of the terms are outdated, scientifically inaccurate, or even completely wrong. In the last decade, many new terms in the field of radioananlytical methods have come into use or are emerging. In particular, sophisticated nuclear facilities and detectors, such as advanced neutron nuclear reactors, dedicated particle accelerators, and various new types of radiation detectors, are changing the outlook of radioanalytical methods. For example, synchronous radiation devices and spallation neutron sources are used in many advanced nuclear analytical laboratories in the world. As a result, new nuclear analysis methods have been established or are being developed. Neutron scattering, accelerator mass spectrometry, X-ray absorption, and fluorescence methods based on synchronous radiation, have become more and more popular analytical tools in scientific analysis.



Following are a few examples of outdated terms in the Orange Book:

- **Nuclide:** "A species of atom, characterized by its mass number, atomic number, and nuclear energy state. Usually restricted to situations in which the mean life is long enough to be observable." The second sentence of this term should be deleted because it is not completely correct. A nuclide can be stable or radioactive, and whether it has an observable mean life is inconsequential.
- **Half Life, Biological:** This term should be deleted since it belongs to the field of life sciences and is not used in nuclear science.
- **Tracer, Isotopic:** "A tracer which only differs in isotopic composition from the substance to be traced." This is not a strict definition. It would make more sense to replace "isotopic composition" with "mass number."

The objective of this new project is to prepare a revised vocabulary of concepts and terms in radioanalytical chemistry that is compatible with the glossary format used in the Gold Book.

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www.iupac.org/web/ins/2010-030-1-500

Developing Toolkits for National Chemistry Weeks During IYC

Participants at the meeting of the Committee on Chemistry Education (CCE) in August 2009 in Glasgow, UK, discussed the idea of developing toolkits for the many national chemistry days or weeks that will be held around the world during the International Year of Chemistry. It was felt that this would be especially helpful for countries that do not have a strong tradition of arranging such events.

This project is designed to fulfill the following objectives:

- identify countries that already have established national chemistry days and weeks
- collect information about these countries' planned activities for IYC2011
- develop toolkits to facilitate the widespread celebration of national chemistry days or weeks around the world, particularly in countries that do not have a strong tradition of doing so

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