

Confessions of a Biosciences Rep

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BIOSCIENCE

NON-BEAM COUNTERS

The use of particle accelerators for the production of radioisotopes is a well-established technology. However, the high cost of these facilities has led to the development of alternative methods for the production of radioisotopes. One such method is the use of neutron sources, which can be used to produce radioisotopes in a more cost-effective manner. This article discusses the various types of neutron sources and their applications in the production of radioisotopes.

Neutron sources can be classified into two main categories: natural and artificial. Natural neutron sources include uranium and thorium, which undergo spontaneous fission to produce neutrons. Artificial neutron sources, on the other hand, are produced by the fission of a fissile material, such as uranium-235, in a nuclear reactor. These sources are used to produce a wide range of radioisotopes, including those used in medicine, industry, and research.

The production of radioisotopes using neutron sources is a complex process that involves several steps. First, the neutron source is used to irradiate a target material, which then undergoes a nuclear reaction to produce the desired radioisotope. The radioisotope is then separated from the target material and purified. Finally, the radioisotope is used in a variety of applications, such as in the diagnosis and treatment of cancer, in the production of industrial radiography films, and in the study of biological processes.











Impact?

How often do you make use of the Bioscience website or other resources?

- **Frequently** **20%**
- **Occasionally** **47%**
- **Never** **33%**

Do you access the Bioscience image bank?

Yes 67%

No 33%

Do you access the Bioscience practical compendium?

Yes 13%

No 87%

Have you attended any Bioscience briefing events?

Yes	67%
No	33%

Have you accessed any Bioscience briefing event reports?

Yes	47%
No	53%

Do you belong to a Biosciences SIG?

Yes 20%

No 80%

Do you access the Bioscience audit tools?

Yes 33%

No 67%

Popular Items and Events

- Problem based learning
- Bioethics
- Assessment for learning
- “Sharing” of learning and teaching material
- Resource packs

Desiderata.....

- **More images**
- **More pathology images (? Other centres)**
- **Video clips for Powerpoint**
- **More material on contemporary bioethics issues**
- **More information on the basis for ethical decisions in science.**

In the future.....

- **Activities enshrined within other learning and teaching activities in the school**
- **Encouragement to use other subject and generic centres**
- **Use of “champions” to bring about organic growth**
- **Encouragement to pursue research**