

# Radiological Safety Requirements Unification for Brazilian Hospital Radiopharmacies

J. S. Carvalho<sup>1</sup>, A. C. H. Nascimento<sup>2</sup>, J. C. Suita<sup>2</sup>, A. C. A. Mól<sup>2</sup>  
E-mail: [julianedesacarvalho@gmail.com](mailto:julianedesacarvalho@gmail.com), [mol@ien.gov.br](mailto:mol@ien.gov.br)

<sup>1</sup> PEN, UFRJ, <sup>2</sup> IEN

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Radiopharmaceuticals are essential drugs used in nuclear medicine for diagnostic or therapeutic purposes. Due to this, good handling practices are vital for the protection of the patients, workers involved, the public, and also the environment. Therefore, in Brazil, the hospital radiopharmacies, in order to be able to handle such drugs, must comply with national requirements and regulations established by the national nuclear energy commission (CNEN) and the national health surveillance agency (ANVISA). In addition, besides the national legislation, the recommendations of the International Atomic Energy Agency (IAEA) and the experiences derived from the routine of professionals are important for setting quality and safety standards for radiopharmacy. In this context, an important aspect in the whole radiopharmaceuticals utilization in hospitals is the training of the professionals in radiological protection, preparing them to fulfill the responsibilities related to safety in handling radioactive material in their work activities. In such training, all national requirements and international recommendations must be taken into account. However, due to the large volume of information distributed in a variety of national and international documents, the process of building a training course, especially for a complex scenario as a hospital radiopharmacy, that passes, in a clear way to the professionals, all safety and radiological protection requirements, is difficult. In such a way that, in some cases, relevant information ends up not being passed or even passed in the wrong way. Therefore, the main objective of this study was the unification of the parameters of radiological protection referring to the physical installation and activities of radiopharmacies, aiming at synthesizing the content to support and facilitate the organization and planning of the crucial radiological protection training of the professionals occupationally exposed in this environment. For this study, a myriad of national and international documents related to the current Brazilian

legislation requirements [1-2] and international recommendations [3] about safety aspects of the activities and the facility, were analyzed. Moreover, to have a real account of how a good training program could really improve the process, the work routine of the professionals of one of the leading Brazilian hospitals in nuclear medicine was observed on-site. As a result, as is illustrated by Figure 1, the main parameters of radiological protection were unified in a single structured document.

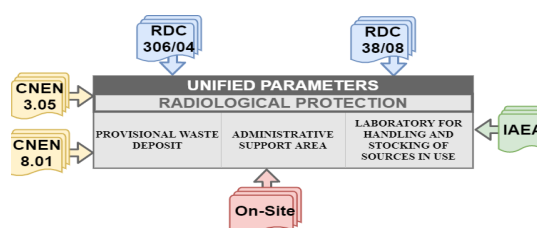


Figure 1. Parameters Unification Process

The unified document produced constitutes an important source of consultation for the development radiopharmacies training methodologies, and has the potential to become a guideline. In such a way that, the use of this unified document, that presents the information in a simplified way, made possible the development of an innovative tool, based on virtual reality techniques, for radiopharmacies professionals training, that follows all national rules and regulations, and international recommendations, related to nuclear medicine service [4].

## References

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