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Fevereiro 2008

IAEA.org International Atomic Energy Agency

Novidades...

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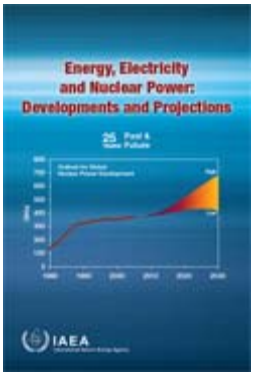


Energy, Electricity and Nuclear Power: Developments and Projections
This publication describes, for Member States, energy experts, the media and the general public, the global and regional history of nuclear power between 1980 and 2005 as reflected in the data collected by the IAEA of the power reactor information system (PRIS) and the reference data series 1 and 2 (RDS-1, RDS-2) on the construction and operation of nuclear power plants. In this publication history is compared with IAEA projections during the same period, and the latest IAEA projections are presented to cover both the past and the future quarter centuries.

STI/PUB/1304, 77 pp.; 33 figures; 2007,ISBN 978-92-0-107407-2, English.

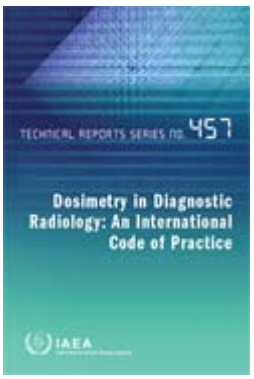
http://www-pub.iaea.org/MTCD/publications/PDF/Pub1304_web.pdf

Radiation Sterilization of Tissue Allografts: Requirements for Validation and Routine Control - A Code of Practice

Recommendations and guidelines for the safe use of ionizing radiation as a sterilization procedure for tissue allografts. The recommendations were produced by the IAEA with the help and approval of the main professional associations of tissue banks in Europe, Latin America and the USA and by experts in all aspects of radiosterilization and transplantation procedures. The code of practice covers the recommended qualifications of the tissue bank facilities, the tissue donors, the tissue processing and preservation procedures, and the maintenance of validation of the pre-sterilization and sterilization processes. Also covered are the quality, safety and clinical application of the tissue allografts, documentation and certification procedures, management and control issues, establishing a sterilization dose and worked examples.

STI/PUB/1307, 55 pp.; 0 figures; 2007, ISBN 978-92-0-109007-2, English.

http://www-pub.iaea.org/MTCD/publications/PDF/Pub1307_web.pdf



Dosimetry in Diagnostic Radiology: An International Code of Practice

Technical Reports Series No. 457

This publication is intended to support those working in the field of diagnostic radiology dosimetry, both in standards laboratories involved in the calibration of dosimeters and those in clinical centres and hospitals where patient dosimetry and quality assurance measurements are of vital concern. This code of practice covers diverse dosimetric situations corresponding to the range of examinations found clinically, and includes guidance on dosimetry for general radiography, fluoroscopy, mammography, computed tomography and dental radiography. The material is presented in a practical way with guidance worksheets and examples of calculations. A set of appendices is also included with background and detailed discussion of important aspects of diagnostic radiology dosimetry. STI/DOC/010/457, 359 pp.; 37 figures; 2007, ISBN 92-0-115406-2, English.

http://www-pub.iaea.org/MTCD/publications/PDF/TRS457_web.pdf

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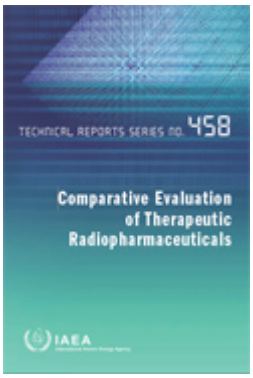

Comparative Evaluation of Therapeutic Radiopharmaceuticals

Technical Reports Series No. 458

Radionuclide therapy employing unsealed radiotherapeutic agents has emerged as an important tool for cancer management. A number of therapeutic radiopharmaceuticals based on different types of carrier molecule and a variety of radioisotopes are currently being developed, and reliable, efficient laboratory analytical methods are needed to compare their relative effectiveness and to establish their stability and chemical, radiochemical and pharmaceutical purity. To address these issues, the IAEA organized a Coordinated Research Project on the comparative evaluation of therapeutic radiopharmaceuticals. This report summarizes the results obtained over the course of that investigation and describes, in detail, the analytical techniques, biological assays, animal tumour models and protocols for the evaluation of therapeutic radiopharmaceuticals that were established as a result. The information contained in this book will be of interest to those working in radiopharmaceutical chemistry and development, pharmacology, dosimetry and preclinical studies.

STI/DOC/010/458, 312 pp.; 2007, ISBN 92-0-115106-3, English.

Subject Classification: 0101 - Nuclear medicine (including radiopharmaceuticals).

http://www-pub.iaea.org/MTCD/publications/PDF/trs458_web.pdf

Labelling of Small Biomolecules Using Novel Technetium-99m Cores

Technical Reports Series No. 459

Technetium-99m radiopharmaceuticals account for nearly 80% of all diagnostic studies done in nuclear medicine. The ability to determine the exact molecular structure of the coordination compounds by using modern powerful analytical tools such as NMR, mass spectroscopy and X ray diffraction has contributed to the understanding of the structure–activity relationships underlying the biological behaviour of Tc-99m agents. Consequently, careful design of new ligands and their Tc-99m complexes led to the discovery of imaging agents for perfusion in the myocardium and brain, thereby extending the scope of diagnostic imaging using Tc-99m radiopharmaceuticals. Based on the new developments in Tc chemistry, there is good scope for the development of new radiopharmaceuticals for imaging cancer as well as certain specific disease conditions. The IAEA organized a Coordinated Research Project (CRP) with the specific objective to develop labelled biomolecules with the novel Tc-99m metal cores such as the Tc-99m-Carbonyl, Tc-99m-Nitrido, Tc-99m (4+1) and Tc-99m-HYNIC cores. The preparation, quality assessment and biological evaluations of a large number of Tc-99m complexes with biomolecules such as RGD peptides, annexin derived peptides, fatty acid derivatives, quinazoline derivatives and glucose analogues were achieved by the participants during the CRP. The results obtained from the participating laboratories are summarized in this publication. STI/DOC/010/459, 311 pp.; 144 figures; 2007, ISBN 92-0-101607-7, English.

Subject Classification: 0101 - Nuclear medicine (including radiopharmaceuticals).

http://www-pub.iaea.org/MTCD/publications/PDF/trs459_web.pdf

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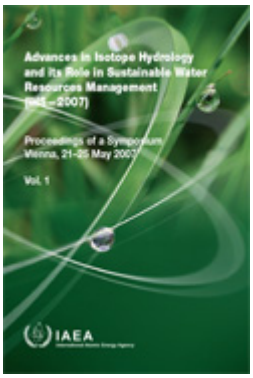

Advances in Isotope Hydrology and its Role in Sustainable Water Resources Management (IHS-2007) Proceedings of a Symposium held in Vienna, 21-25 May 2007(2 Volumes)

Proceedings Series

Historically, the IAEA has played a key role in advancing isotope techniques and in promoting the use of isotopes to address water resource sustainability issues worldwide. The quadrennial IAEA symposia continue to be an important component of the IAEA's mission in water resources management. The 12th symposium in the series was convened with the objectives of: reviewing the state of the art in isotope hydrology; outlining recent developments in the application of isotope techniques to water resources management; and identifying future trends and developments for research and applications. The breadth of topics addressed was extensive and included analytical developments, the use of isotopes to understand land–atmosphere–biosphere interactions, rivers and surface water, development of deep groundwater resources, ecohydrology, urbanization and water resources management, carbon sequestration, waste management, artificial recharge, contamination problems, coastal zone hydrology, geothermal systems, agriculture and water resources management, and research frontiers. These proceedings are intended for those using isotopes for applied problems in hydrology as well as for the research community. It is also hoped that these proceedings will promote increased use of isotopes for water resource sustainability problems and greater utilization of these techniques by hydrologists in general.

STI/PUB/1310, 687 pp.; 348 figures; 2007, ISBN 978-92-0-110207-2, English

Vol. 1 ***http://www-pub.iaea.org/MTCD/publications/PDF/Pub1310_web.pdf***

Vol. 2. ***http://www-pub.iaea.org/MTCD/publications/PDF/Pub1310Vol2_web.pdf***

Atlas of Isotope Hydrology - Africa

Naturally occurring isotopes in water provide unique hydrological information, and the associated techniques are highly cost effective. The applications of isotopes in hydrology are part of the IAEA's programmes related to the peaceful applications of nuclear energy and have the goal of developing appropriate methods for use in water resources management and to assist IAEA Member States in using those methods. This atlas focuses on projects in the IAEA's African Member States, where environmental isotopes were used to assess water resources in terms of quantity or quality. It presents location maps of study areas, summary statistics and relevant data plots. For each project, a higher resolution map of the study area is provided, together with data tables and plots for median and mean values of d18O and d2H, average annual precipitation, air temperature, and tritium and radiocarbon values. STI/PUB/1302, 120 pp.; 0 figures; 2007, ISBN 978-92-0-107207-8, English.

Subject Classification: 0402 - Hydrology.

http://www-pub.iaea.org/MTCD/publications/PDF/P1302_web.pdf

AEN NEA NUCLEAR ENERGY AGENCY

Evolution of the System of Radiation Protection

Third Asian Regional Conference, Tokyo, Japan, 5-6 July 2006

The OECD Nuclear Energy Agency (NEA) has actively participated in discussions with the International Commission on Radiological Protection (ICRP) regarding the development of new recommendations that will replace those in ICRP Publication 60, which has long served as the international standard in this field. Part of this development process has involved the organisation of seven international workshops, including the First and Second Asian Regional Conferences on the Evolution of the System of Radiological Protection which took place in Tokyo, Japan in October 2002 and July 2004. The Third Asian Regional Conference was held on 5-6 July 2006, also in Tokyo.

The main objective of these conferences was to ensure that the views and concerns of relevant Asian stakeholders, such as regulatory authorities, industry, professional societies and NGOs, could be expressed and discussed with the ICRP. The three conferences provided the ICRP with specific views on how new recommendations could best be developed to address regulatory and implementation needs in the Asian context. These proceedings summarise the results and key discussions of the Third Asian Regional Conference.

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TESES

Doutoramento

Versão em papel disponível para consulta na Biblioteca

MARIA AUGUSTA QUARESMA ANTUNES

Síntese e Reactividade de Compostos de Urânio (III)

Faculdade de Ciências, Universidade de Lisboa, 2006

Orientadores: Drª Noémia Marques
Dr. João Paulo Leal