

PTB Recent Dosimetry Publications

1. Dosimetry for Radiation Therapy and Diagnostic Radiology

Anton, M., Kapsch, R.-P., Hackel, T.: Is there an influence of the surrounding material on the response of the alanine dosimetry system? *Phys. Med. Biol.* **54** (2009) p 2029-2035

Anton, M., Krauss, A., Kapsch, R.-P., Hackel, T.: Response of alanine dosimeters in small photon fields, IAEA International Symposium on Standards, Applications and Quality Assurance in Medical Radiation Dosimetry (IDOS), Wien, 9.11.-12.11.2010, Poster IAEA-CN-182-/058

Anton, M., Lelie, S: Alanine Dosimetry – Uncertainty Components. PTB-Bericht PTB-Dos-55 (2010), ISBN 978-3-86918-009-0

Anton, M., Wagner, D., Selbach, H.-J., Hackel, T., Hermann, R. M., Hess, C.-F., Vorwerk, H.: In vivo dosimetry in the urethra using alanine/ESR during ^{192}Ir HDR brachytherapy of prostate cancer - a phantom study. *Phys. Med. Biol.* **54** (2009) p 2915-2931

Anton, M.: Alanine Dosimetry at PTB, Vortrag an der Xios Hogeschool in Limburg (Belgien), 22. April 2009

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Bambynek, M.; Krauss, A.; Selbach, H.-J.: „Calorimetric determination of absorbed dose to water for a ^{192}Ir HDR brachytherapy source in near-field geometry“. 11th World Congress on Medical Physics and Biomedical Engineering, Munich, Sept 7-12, IFMBE Proceedings 25/1, p. 89 ff. (2009)

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Büermann, L., Oborin, A.V., Dobrovosky, J., Milevsky, V.S., Walwyn Salas G. and Lapenas, A.: *COOMET.RI(I)-K1 comparison of national measurement standards of air kerma for Co-60 radiation*, *Metrologia* **46**, Technical Supplement 06015 (2009)

Chofor, N., Harder, D., Looe, H. K., Kapsch, R.-P., Kollhoff, R., Willborn, K., Rühmann, A., Poppe, B.: *Mapping radiation quality inside photon-irradiated absorbers by means of a twin-chamber method*. *Z. Med. Phys.* **19** (2009), 252-263

Csete, I., Leiton, A.G., Sochor, V., Lapenas, A., Grindborg, J.-E., Jokelainen, I., Bjerke, H., Dobrovodsky, J., Megzifene, A., Hourdakis, C.J., Ivanov, R., Vekic, B., Kokocinski, J., Cardoso, J., Buermann, L., Tiefenboeck, W., Stucki, G., van Dijk, E., Toni, M.P., Minniti, R., McCaffrey, J.P., Silva, C.N.M., Kharitonov, I., Webb, D.,

Saravi, M. and Delaunay, F.: *Report on EUROMET.RI(I)-K1 and EUROMET.RI(I)-K4 (EUROMET project no. 813): Comparison of air kerma and absorbed dose to water measurements of Co-60 radiation beams for radiotherapy*, Metrologia **47**, Technical Supplement 06012 (2010)

González-Castaño, D. M., Hartmann, G. H., Sánchez-Doblado, F., Gómez, F., Kapsch, R.-P., Pena, J., Capote, R.: *The determination of beam quality correction factors: Monte Carlo simulations and measurements*. Phys. Med. Biol. **54** (2009), 4723-4741

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Kapsch, R.-P., Gomola, I.: *Beam quality correction factors for plane parallel chambers in photon beams*. In: Proceedings of the International Symposium on Standards, Applications and Quality Assurance in Medical Radiation Dosimetry, Wien, 9.-12. November 2010

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M. Bovi, M. P. Toni, I. Aubineau-Lanièce, J.-M. Bordy, J. Cardoso, B. Chauvenet, F. Gabris, J.-E. Grindborg, A. S. Gierra, A. Kosunen, C. Oliveira, M. Pimpinella, T. Sander, H.-J. Selbach, V. Sochor, J. Šolc, J. de Pooter, and E. van Dijk, "Traceability to absorbed-dose-to-water primary standards in dosimetry of brachytherapy sources used for radiotherapy", Report from the EMRP Project T2-J06 Brachytherapy, "Increasing cancer treatment efficacy using 3D brachytherapy," European Metrology Research Programm, at <http://www.EMRPonline.EU>, in Proceedings XIX IMEKO World Congress, "Fundamental and applied metrology" (Lisbon, PT, 2009) p.p. 1674-1679, ISBN 976-963-88410-0-1

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2. Radiation Protection Dosimetry

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3. Ion Accelerators and Reference Radiation Fields

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Giesen, U., Langner, F., Mielke, C., Mosconi, M. and Dirks, W.G.: Online Imaging of Initial DNA Damages at the PTB Microbeam, *Radiat Prot Dosimetry* (2011) 143: 349-352.

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4. Fundamentals of Dosimetry

Bantsar, A.; Großwendt, B.; Pszona, S.; Kula, J.; *Single track nanodosimetry of low energy electrons*, *Nucl. Instrum. Meth. A* **599** (2009), 270-274.

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