

Publications of the PTB department „Radioactivity“ 2009 - 2011

2009

1. *Kossert, K.; Jörg, G. ; Lierse von Gostomski, C.*: Activity standardization of ^{41}Ca by means of liquid scintillation counting. In: *Radiochimica Acta* 97 (2009), Nr. 1, S. 1 - 8. - URL: dx.doi.org/10.1524/ract.2009.1571
2. *Vidmar, T.; Kossert, K.; Nähle, O.; Ott, O.*: Application of the sum-peak method to activity standardizations of extended ^{60}Co sources. In: *Applied Radiation and Isotopes* 67 (2009), Nr. 1, S. 160 - 163. - URL: dx.doi.org/10.1016/j.apradiso.2008.08.007
3. *Neumaier, S.; Wojcik, M.; Dombrowski, H.; Arnold, D.*: Improvements of a low-level gamma-ray spectrometry system at the underground laboratory "UDO". In: *Applied Radiation and Isotopes* 67 (5), 2009, S. 726 - 730. - URL: dx.doi.org/10.1016/j.apradiso.2009.01.025
4. *Grau Carles, A. ; Kossert, K.*: Monte Carlo simulation of Auger-electron spectra. In: *Applied Radiation and Isotopes* 67 (2009), Nr. 1, S. 192 - 196. - URL: dx.doi.org/10.1016/j.apradiso.2008.09.008
5. *Oropesa Verdecia, P. ; Kossert, K.*: Activity standardization of ^{131}I at CENTIS-DMR and PTB within the scope of a bilateral comparison. In: *Applied Radiation and Isotopes* 67 (2009), Nr. 6, S. 1099 - 1103. - URL: dx.doi.org/10.1016/j.apradiso.2009.01.018
6. *Röttger, A.; Honig, A.; Arnold, D.*: The German thoron progeny chamber - Concept and application. In: *Applied Radiation and Isotopes* 67 (5), (2009), S. 839 - 842. - URL: dx.doi.org/10.1016/j.apradiso.2009.01.043
7. *Sima, O.; Arnold, D.*: On the Monte Carlo simulation of HPGe gamma spectrometry systems. In: *Applied Radiation and Isotopes* 67 (5), 2009, S. 701 - 705. - URL: dx.doi.org/10.1016/j.apradiso.2009.01.014
8. *Köhler, M. ; Degering, D. ; Laubenstein, M. ; Quirin, P. ; Lampert, M.-O. ; Hult, M. ; Arnold, D.; Neumaier, S.; Reyss, J.-L.*: A new low-level γ -ray spectrometry system for environmental radioactivity at the underground laboratory *Felsenkeller* In: *Applied Radiation and Isotopes* 67 (5), (2009), S. 736 - 740. - URL: dx.doi.org/10.1016/j.apradiso.2009.01.027
9. *Michotte, C.; Courte, S. ; Ratel, G.; Kossert, K.; Nähle, O.*: BIPM comparison BIPM.RI(II)-K1.Cu-64 of the activity measurements of the radionuclide ^{64}Cu . In: *Metrologia* 46 (2009), Tech. Suppl., 06010 [Online only]. - URL: dx.doi.org/10.1088/0026-1394/46/1A/06010
10. *Kossert, K.; Jörg, G.; Nähle, O.; Lierse von Gostomski, C.*: High-precision measurement of the half-life of ^{147}Sm . In: *Applied Radiation and Isotopes* 67 (2009), Nr. 9, S. 1702 - 1706. - URL: dx.doi.org/10.1016/j.apradiso.2009.03.013
11. *Pommé, S. ; Altzizoglou, T. ; van Ammel, R. ; Sibbens, G. ; Eykens, R. ; Richter, S. ; Camps, J. ; Kossert, K.; Janßen, H.; García-Torano, E. ; Durán, T. ; Jaubert, F.*: Experimental determination of the ^{233}U half-life. In: *Metrologia* 46 (2009), S. 439 - 449. - URL: doi:10.1088/0026-1394/46/5/007; stacks.iop.org/Met/46/439
12. *Bé, M.-M.; Chauvenet, B.; Amiot, M.-N.; Bobin, C.; Lépy, M.-C.; Branger, T.; Lanièce, I.; Luca, A.; Sahagia, M.; Wätjen, A.-M.; Kossert, K.; Ott, O.; Nähle, O.; Dryak, P.; Sochorová, J.; Kovar, P.; Auerbach, P.; Alzigoglou, T.; Pommé, S.; Sibbens, G.; van Ammel, R.; Paepen, J.; Iwahara, A.; Delgado, J.U.; Poledna, R.; Johansson, L.; Stroak, A.; Bailat, C.; Nedjadi, Y.; String, P.*: ^{124}Sb – Activity measurements determination of photon emission intensities. Rapport CEA-R-6222, Commissariat à l'Énergie Atomique, (CEA), Saclay, Gif-Sur-Yvette, France, ISSN 0429-3460, (2009), 105 pages.

13. Chmeleff, J.; von Blanckenburg, F.; Kossert, K.; Jakob, D.: Determination of the Be-10 half-life by multicollector ICP-MS and liquid scintillation counting. In: *Nuclear Instruments and Methods B*, Vol. B 268 (2010), S. 192 – 199. URL: <http://dx.doi.org/10.1016/j.nimb.2009.09.012>
14. Michotte, C.; Ratel, G.; Courte, S.; Garcia-Torano, E.; Kossert, K.; Nähle, O.; van Wyngaardt, W. M.; Simpson, B. R. S.: Update report of the BIPM comparison BIPM.RI(II)-K1.Na-22 of activity measurements of the radionuclide Na-22 to include the CIEMAT, PTB and the NMISA. In: *Metrologia* 47 (2010), Tech. Suppl., 06001 [Online only], 18 S. URL: dx.doi.org/10.1088/0026-1394/47/1A/06001
15. Kossert, K.: Activity standardization by means of a new TDCR-Čerenkov counting technique. In: *Applied Radiation and isotopes*, 68 (2010), 6, S. 1116-1120. URL: dx.doi.org/10.1016/j.apradiso.2009.12.038
16. Röttger, A.; Honig, A.; Dersch, R.; Ott, O.; Arnold, D.: A primary standard for activity concentration of Rn-220 (thoron) in air. In: *Applied Radiation Isotopes* 68, (2010), 7/8, S. 1292 – 1296. URL: dx.doi.org/10.1016/j.apradiso.2010.01.004
17. Wanke, C.; Kossert, K.; Nähle, O.; Ott, O.: Activity standardization and decay data of Cu-64. In: *Applied Radiation Isotopes* 68, (2010), 7/8, S. 1297 – 1302. URL: dx.doi.org/10.1016/j.apradiso.2010.01.005
18. Schrader, H.: Half-life measurements of long-lived radionuclides – new data analysis and systematic effects. In: *Applied Radiation Isotopes* 68, (2010), 7/8, S. 1583 – 1590. URL: dx.doi.org/10.1016/j.apradiso.2009.11.033
19. Lépy, M.-C.; Altitzoglou, T.; Anagnostakis, M. J.; D. Arnold; Capogni, M.; Ceccatelli, A.; de Felice, P.; Dersch, R.; Dryak, P.; Fazio, A.; Ferreuc, L.; Guardati, M.; Han, J. B.; Hurtado, S.; Karfopoulos, K. L.; Klemola, S.; Kovar, P.; Lee, K. B.; Ocone, R.; Ott, O.; Sima, O.; Sudar, S.; Svec, S.; Chau Van Tao; Tran Thien Thanh; Vidmar, T.: Intercomparison of methods for coincidence summing corrections in gamma-ray spectrometry. In: *Applied Radiation Isotopes* 68, (2010), 7/8, S. 1407 – 1412. URL: dx.doi.org/10.1016/j.apradiso.2010.01.012
20. Chauvenet, B.; Bé M.-M.; Amiot, M.-N.; Bobin, C.; Lépy, M.-C.; Branger, T.; Lanièce, I.; Luca, a.; Sahagia, A.; Wätjen, A.-M.; Kossert, K.; Ott, O.; Nähle, O.; Dryak, P.; Sochorová, J.; Kovar, P.; Auerbach, P.; Altitzoglou, T.; Pommé, S.; Sibbens, G.; van Ammel, R.; Paepen, J.; Iwahara, A.; Delgado, J.U.; Poledna, R.; Johansson, L.; Stroak, A.; Bailat, c.; Nedjadi, Y.; Spring, P.: International exercise on ¹²⁴Sb activity measurements. In: *Applied Radiation Isotopes* 68, (2010), 7/8, S. 1207 – 1210. URL: dx.doi.org/10.1016/j.apradiso.2010.01.037
21. Sibbens, G.; Pommé, S.; Altitzoglou, T.; García-Torano, E.; Janssen, H., Dersch, R.; Ott, O.; Martín-Sánchez, A.; Rubio Montero, M. P.; Loidl, M.; Coron, N.; de Marcillac, P.; Semkow, T. M.: Alpha-particle emission probabilities in the decay of Pu-240. In: *Applied Radiation Isotopes* 68, (2010), 7/8, S. 1459 – 1466. URL: dx.doi.org/10.1016/j.apradiso.2009.12.006
22. Nähle, O.; Kossert, K.; Cassette, P.: Activity standardization of H-3 with new TDCR system at PTB. In: *Applied Radiation Isotopes* 68, (2010), 7/8, S. 1534 – 1536. URL: dx.doi.org/10.1016/j.apradiso.2009.11.057
23. Kossert, K.; Grau-Carles, A.: Improved method for the calculation of the counting efficiency of electron-capture nuclides in liquid scintillation samples. In: *Applied Radiation Isotopes* 68, (2010), 7/8, S. 1482 – 1488. URL: dx.doi.org/10.1016/j.apradiso.2009.11.048
24. Gonzalez de Orduna, R.; Hult, M.; Bonheure, G.; Arnold, D.; Dombrowski, H.; Laubenstein, M.; Wieslander, J.S.E.; Vidmar, T.; Vermaercke, P.: Angular distribution of proton leakage from a fusion plasma using ultra low-level γ -ray spectrometry. In: *Applied Radiation Isotopes* 68, (2010), 7/8, S. 1226 – 1230. URL: dx.doi.org/10.1016/j.apradiso.2009.11.019

25. Bé M.-M.; Chauvenet, B.; Amiot, M.-N.; Bobin, C.; Lépy, M.-C.; Branger, T.; Lanièce, I.; Luca, a.; Sahagia, A.; Wätjen, A.-M.; Kossert, K.; Ott, O.; Nähle, O.; Dryak, P.; Sochorová, J.; Kovar, P.; Auerbach, P.; Altitzoglou, T.; Pommé, S.; Sibbens, G.; van Ammel, R.; Paepen, J.; Iwahara, A.; Delgado, J.U.; Poledna, R.: International exercise on ¹²⁴Sb photon emission intensities determination. In: Applied Radiation Isotopes 68, (2010), 7/8, S. 2026 – 2030. URL: [dx.doi.org/10.1016/j.apradiso.2010.01.038](https://doi.org/10.1016/j.apradiso.2010.01.038)
26. Jörg, G.; Bühnemann, R., Hollas, S.; Kivel, N.; Kossert, K.; v. Winckel, S., Lierse v. Gostomski, C.: Preparation of radiochemically pure Se-79 and highly precise determination of its half-life. In: Applied Radiation and isotopes 68, (2010), 12, S. 2339-2351. URL: [dx.doi.org/10.1016/j.apradiso.2010.05.006](https://doi.org/10.1016/j.apradiso.2010.05.006)
27. Bonheure, Georges; Hult, M.; Gonzalez de Orduna, R.; Arnold, Dirk; Dombrowski, Harald; Laubenstein, M.; Wieslander, E.; Vermaercke, Vidmar, T.; Murari, A.; Popovichev, S.; Mlynar, J.; JET-EFDA Contributors.: Charged fusion product loss measurements using nuclear activation. In: Review of Scientific Instruments: 81 (2010), 10D331. URL: [dx.doi.org/10.1063/1.3502321](https://doi.org/10.1063/1.3502321)

2011

28. Shakhashiro, A.; Sansone, U., Wershofen, H.; Bollhöfer, A.; Kim, C.K., Kim, C.S, Kis-Benedek, G., Korun, M., Moune, M., Lee, S.H., Tarjan, S., Al-Masri, M.S.: The new IAEA reference material: IAEA-434 technologically enhanced naturally occurring materials (TENORM) in phosphogypsum. In: Applied Radiation and isotopes 69, (2011), 1, S. 231-236. URL: [dx.doi.org/10.1016/j.apradiso.2010.09.002](https://doi.org/10.1016/j.apradiso.2010.09.002)
29. Kossert, K.; Nähle, O.; Warwick, P.E.; Wershofen, H.; Croudace, I.W.: Activity determination and nuclear decay data of Cd-113m. In: Applied Radiation and Isotopes 69, (2011), 2 S. 500-505. URL: [doi:10.1016/j.apradiso.2010.10.006](https://doi.org/10.1016/j.apradiso.2010.10.006)
30. Michotte, C.; Courte, S.; Ratel, G.; Kossert, K.; Nähle, O.: Update of the ongoing comparison BIPM.RI(II)-K1.Y-88 to include recent activity measurements of the radionuclide ⁸⁸Y by the PTB, Germany. In: Metrologia (2011), 48, Tech. Suppl., 06006 (Online only), URL: [doi:10.1088/0026-1394/48/1A/06006](https://doi.org/10.1088/0026-1394/48/1A/06006)
31. Kossert, K.; Nähle, O. J.; Grau Carles, A.: Beta shape-factor function and activity determination of Pu-241. In: Applied Radiation and Isotopes 69, 2011, 9, S. 1246-1250. URL: [doi:10.1016/j.apradiso.2011.03.046](https://doi.org/10.1016/j.apradiso.2011.03.046)