

**List of Publications of Bhabha Atomic Research Centre**  
**Measurement of X and  $\gamma$  rays**

**International Journals:**

1. S.R. Nilekani, B.L. Gupta, "Threonine-FX dosimeter for food irradiation", Rad. Phys. Chem., 70, (2004) 697.
2. B.L. Gupta, R.M. Bhat, G.R. Narayan and S.R. Nilekani, 'Chemical dosimetry techniques for various applications under different geometries', Rad. Phys. Chem. 59 (2000) 81-90.
3. B.L. Gupta, G.R. Narayan, S.R. Nilekani and R.M. Bhat, 'Irradiation temperature effect on glutamine (spectrophotometric readout) dosimeter', Rad. Phys. Chem., 59 (2000) 1-6.

**International Conferences:**

4. V.V. Shaha, "Implementation of New Operational Quantity Ambient Dose Equivalent  $H^*(10)$  for the Calibration of Survey-meters for Radiation Protection from External Photon Fields", Workshop and Meeting of the Technical Committee on Ionising Radiation (TCRI) of Asia Pacific Metrology Programme, International NMIJ/AIST, Tsukuba Centre, Japan, 5-6 November 2001.
5. Vijayam, J. B. Shigwan, B.S. Dixit, V.V. Shaha and S.C. Misra, "Technique of Calibration of Special Purpose Monitors in the Low Energy X-ray Range", 10<sup>th</sup> International Congress of the International Radiation Protection Association (IRPA), May 14-19, 2000, Hiroshima Japan.
6. M. Vijayam, J. B. Shigwan, V.V. Shaha and S.C. Misra, "Determination of Back Scatter Factors for Diagnostic X-ray Beams by Experimental and Monte Carlo Methods and Determination of Air Kerma to Dose Equivalent Conversion Factors for the Calibration and Personal Monitors", 10<sup>th</sup> International Congress of the International Radiation Protection Association (IRPA), May 14-19, 2000, Hiroshima Japan.

**National Journals:**

7. R.M. Bhat, "Dosimetry in Electron Beam Processing", NAARRI Special Bulletin on 'Electron Beam Technology and its applications', Vol. XI, No.3, April (2003).
8. R.M. Bhat, "Low, Medium and High Dose Dosimetry in Radiation Processing", Proc. of Workshop on Gamma Radiation Processing of Health care and Food products, Organized by Centre for Science & Technology of Non-Aligned and other Developing countries (NAM S&T Centre, New Delhi) in association with BRIT, DAE, Mumbai, Feb. 4-7 (2002) 31.

9. M. Vijayam, J. B. Shigwan, B.S. Dixit and V.V. Shaha, "Determination of Backscatter Factors and Air Kerma to Dose Equivalent Conversion Factors for Diagnostic X-Ray Beams by Experimental and Monte Carlo Methods", the Radiation Protection and Environment Bulletin vol. 24, No. 4, 2001.
10. M. Vijayam, J. B. Shigwan, B.S. Dixit and V.V. Shaha, "Low Energy Fluorescent X-rays For the Calibration of Special Purpose Monitors", the Radiation Protection and Environment Bulletin vol. 24, No. 4, 2001.
11. A.K. Mahant, Suresh Rao and V.V. Shaha, "At site measurement of neutron sensitivity of ion chambers and start up counters used in the regulation and protection channels of RAPP 3 and 4", Journal of Radiation Protection and Environment, Vol. 23 No. 1, Jan-Mar, 2000.

**National Conferences:**

12. R.M. Bhat, U.R. Kini and B.S. Tomar, "Characterization of 250  $\mu\text{m}$  Polyester film Garfilm-EM for High Dose Applications", NAARRI Annual Conference, Book of Abstracts, (2004).
13. R.M. Bhat, "Role of dosimetry in Radiation Processing", NAARRI Annual Conference, Book of Abstracts, p7 (2004).
14. Gomathy R.N., "Glutamic acid: a high level dosimeter", NAARRI Annual Conference, Book of Abstracts, p19 (2004).
15. S.H. Shinde and T. Mukherjee, "Calibration of specific positions in Panoramic Batch Irradiator using glycine system", NAARRI Annual Conference, Book of Abstracts, p25 (2004).
16. S.H. Shinde and T. Mukherjee, "Dose inter-comparison of glycine (spectrophotometric read-out) system with Fricke dosimeter, in product irradiation box of Food Package Irradiator", NAARRI Annual Conference, Book of Abstracts, p18 (2004).
17. R.M. Bhat and S.H. Shinde, "Dose distribution measurements in irradiation volume of a Gamma chamber-900 - its importance in calibration of dosimeters", 15<sup>th</sup> National Symposium on Radiation Physics (NSRP-15), 12-14 November 2003, Mumbai.
18. R.N. Gomathy, S.H. Shinde, R.M. Bhat and V.V. Shaha, "Low level alanine dosimeter by spectrophotometric read out method", AMPICON 2003, Patna, 7-9 November 2003.
19. G. Ramanathan, V.S. Patki, S.S. Tambe, Vinatha Sumanth and V.V. Shaha, "Calibration of therapy level dosimeters in terms of direct absorbed dose to water at SSDL, BARC, Mumbai", AMPICON 2003, Patna, 7-9 November 2003.
20. G. Ramanathan, V.V. Shaha and S. Chinnaesakki, "Use of Radiophoto-luminescent Glass Dosimeters for the Evaluation of X-ray Quality and Exposure", 26<sup>th</sup> IARP Conference (IARP-NC.2K3), held at IGCAR, Kalpakkam during March 5-7, 2003.

21. J.B. Shigwan, M. Vijayam, V.V. Shaha and M.C. Abani, "Beam Characterization of Philips RT 250 X-ray Machine and Calibrations of Secondary Standard Chambers against National Primary Standard Free-Air Chamber", 23<sup>rd</sup> AMPI Annual Conference on Medical Physics & Radiation Safety (AMPICON-2k2) at Jaipur during 15-17 November 2002.
22. V.S. Patki, G. Ramanathan, S.P. Vinatha, P.S. Jadhavgaonkar, V.V. Shaha and M.C. Abani, "Primary standardisation of Cs-137 source in terms of air kerma strength", 23<sup>rd</sup> AMPI Annual Conference on Medical Physics & Radiation Safety (AMPICON-2k2), Jaipur, 15-17 November 2002.
23. G. Ramanathan, V.D. Kadam, Vinatha Sumanth, A.T. Soman, V.V. Shaha and M.C. Abani, "Studies of deviations beyond the acceptable limit in TLD quality audit of dosimetry in radiotherapy centres in India", 23<sup>rd</sup> AMPI Annual Conference on Medical Physics & Radiation Safety (AMPICON-2k2) at Jaipur during 15-17 November 2002.
24. R. Nathuram, J.B. Shigwan and M. Vijayam, "Low Energy X-ray Attenuation coefficients", 23<sup>rd</sup> AMPI Annual Conference on Medical Physics & Radiation Safety (AMPICON-2k2) at Jaipur during 15-17 November 2002.
25. M. Vijayam, J.B. Shigwan, K.N. Govindarajan, C.P.R. Nair and Shobha Jayaprakash, "Verification of Victoreen 4000 Mammography chamber Calibration Status", 23<sup>rd</sup> AMPI Annual Conference on Medical Physics & Radiation Safety (AMPICON-2k2) at Jaipur during 15-17 November 2002.
26. V.S. Patki, G. Ramanathan, S.P. Vinatha, P.S. Jadhavgaonkar, "On-site calibration of HDR-192 source used in Brachytherapy", 23<sup>rd</sup> AMPI Annual Conference on Medical Physics & Radiation Safety (AMPICON-2k2) at Jaipur during 15-17 November 2002.
27. A.K. Mahant, S.M. Tripathi, Suresh Rao, V.V. Shaha and M.C. Abani, "IAEA TLD Postal Quality Audit of a <sup>137</sup>Cs Collimated Source Used for Radiation Protection Calibration", the National Symposium on Radiation Physics (NSRP-14) held at Guru Nanak Dev University, Amritsar during 1-3, November 2001.
28. A.K. Mahant, S.M. Tripathi, Suresh Rao and V.V. Shaha, "Measurement of Ambient Dose Equivalent H\*(10) Using G.M. Detector based Survey meters", the National Symposium on Radiation Physics (NSRP-14) held at Guru Nanak Dev University, Amritsar during 1-3, November 2001.
29. A.K. Mahant, S.M. Tripathi, Suresh Rao and V.V. Shaha, "Measurement of Ambient Dose Equivalent H\*(10) Using Ionization Chambers", the International Conference on Medical Physics and Radiation Safety (ICMP-2K1), BARC, Mumbai, 24-28 November 2001.
30. V.S. Patki and P.S. Jadhavgaonkar, "Development of Calibration Assurance Dosimeter for on-site output standardisation of the X-ray, Teletherapy and Brachytherapy Sources", the International Conference on Medical Physics and Radiation Safety (ICMP-2K1), BARC, Mumbai, 24-28 November 2001.

31. J.B. Shigwan, A.T. Soman and M. Vijayam, "Beta Surface Dose Standardisation Using Extrapolation Chamber Techniques and Uncertainties", the International Conference on Medical Physics and Radiation Safety (ICMP-2K1), BARC, Mumbai, 24-28 November 2001.
32. R. Nathuram, J.B. Shigwan, M. Vijayam and S. Narayanan, "Photon Attenuation Characteristics of Barium Enriched Cement", the International Conference on Medical Physics and Radiation Safety (ICMP-2K1), BARC, Mumbai, 24-28 November 2001.
33. G. Ramanathan, V.D. Kadam, S.P. Vinatha, A.T. Soman, M. Vijayam, V.V. Shaha and M.C. Abani, "Quality Audit of Dosimetry in Radiotherapy Centres Using Postal Dose TLD Intercomparison in India", the International Conference on Medical Physics and Radiation Safety (ICMP-2K1), BARC, Mumbai, 24-28 November 2001.
34. M. Vijayam, G. Ramanathan, V.S. Patki, A.T. Soman, J.B. Shigwan, Vinatha Sumanth, P.S. Jadhavgaonkar, V.V. Shaha and M.C. Abani, "Intercomparison of Absorbed Dose to Water Calibration Factors under WG5 of APMP Programme", the International Conference on Medical Physics and Radiation Safety (ICMP-2K1), BARC, Mumbai, 24-28 November 2001.
35. J.B. Shigwan, R.M. Bhat, G.R. Narayan, S.R. Nilekani, M. Vijayam and V.V. Shaha, "Intercomparison of ionometric and chemical dosimeter systems at Co-60 Gamma energy post adaptation of IAEA 398 Protocol for Ionization Chamber Dosimetry", the International Conference on Medical Physics and Radiation Safety (ICMP-2K1), BARC, Mumbai, 24-28 November 2001.
36. M. Vijayam, J. B. Shigwan and V.V. Shaha, "Experimental Determination of Air Kerma to Ambient Dose Equivalent Conversion Coefficients For Diagnostic X-Ray Beams", the International Conference on Medical Physics and Radiation Safety (ICMP-2K1), BARC, Mumbai, 24-28 November 2001.
37. G. Ramanathan, P.S. Jadhavgaonkar, S.P. Vinatha, V.S. Patki and V.V. Shaha, "Calibration of LDR Ir-192 Wire Sources Used for Brachy-therapy", the XXI Annual Conference on Medical Physics held at Bangalore, during November 2000.