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Dosimetry Standards and Dissemination Systems for Radiation Processing in China

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In order to adapt the development of radiation processing and ensure that the product has been treated with an acceptable range of absorbed doses in China, a program of high dose standardization was initiated in 1983. The high-dose standards and dissemination system has been established at NIM. The ferrous sulfate (Fricke) dosimeter is accepted as national reference standards, the ceric-cerous sulfate and potassium/silver dichromate liquid chemical dosimeters and alanine/EPR dosimeter are selected as transfer standards at NIM. The Fricke, potassium/silver dichromate, several kinds of radiochromic films (RCD), cellulose triacetate (CTA) and polymethylmethacrylate (PMMA) dosimeters have been recommended as routine dosimeters for radiation processing in China. A series of national standards, verifications and technical norms have been enacted and issued on the dosimetry for radiation processing and on the approval of irradiation facilities. This program plays an important role in the dose measurement standardization and product quality assurance for radiation processing. This paper presents a brief overview of dosimetry activities for radiation processing carried out at NIM during the last 10 years. Calibration of systems with the Fricke reference standard and comparison of absorbed dose results obtained from NDAS program with potassium/silver dichromate dosimeter and alanine/EPR dosimeter for radiation processing in China are also discussed.

Country/Organization invited to participate

China

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