

人員生物劑量評估研究

Evaluation of Human Biodosimetry

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摘要

人員生物劑量評估技術建立目的，是為了當發生輻射意外曝露事件時，因民眾或工作人員若未配戴劑量佩章，無法確認劑量時，可經由此技術評估人員所接受之劑量，可作為人員健康安全的第二道防線。本計畫建立人員生物劑量(Biodosimetry)評估相關技術，並發展出具有國際水準的生物劑量實驗室。今年度研究成果為：1.統計 108 年度國人本土染色體雙中節背景值。2.合併 101 至 108 年度生物劑量反應曲線，作為我國之劑量標準曲線。3. 輔導建立南部衛星實驗室，訓練該醫療院所同仁具備染色體變異分析能力。4.完成人員生物劑量實驗室 ISO17025 新版及改版認證，精進實驗室品質。

本計畫為協助建立輻射意外曝露應變作業程序及法規，持續推動人員生物劑量評估技術之研發，藉由建置及維持國家級輻射生物劑量實驗室，並透過建立國人生物樣本，將有助於重建輻射意外事故中受影響人員之輻射曝露。

關鍵詞：生物劑量、染色體雙中節

Abstract

The purpose to build the human biodosimetry technology is using when assess doses received by personnel in the event of accidental radiation exposure. If the population or the staff didn't wear the dose badge and cannot confirm the dose, the technology cloud be the second line of defense for health and safety. This project is to setup world-class level of the techniques for evaluation of personal biodosimetry. It could be helpful to set up accidental exposure procedures and develop an international biodosimetry laboratory. The results of this year's research are as follow: 1. Count the dicentric chromosomes background value of native in 108 year. 2. Aggregate the response curve data of 101-108 years into a dose standard curve to form a standard curve. 3. Tutoring the southern satellite laboratory and training members the capacity of dicentric chromosomes analysis. 4. Completed the ISO17025 biodosimetry laboratory new version certification work, for improve the quality to our laboratory.

In the object, we want to assist establishment the radiation exposure procedures and regulations, and continue to promote the research of biodosimetry techniques. Through the

establishment of biological samples and dose-response curve, we establishing and maintaining national level radiation biodosimetry laboratory. Wish the biodosimetry laboratory could reconstruct the radiation exposure level of people which in radiation accidents.

Keywords : Biodosimetry, Dicentric chromosome assay.