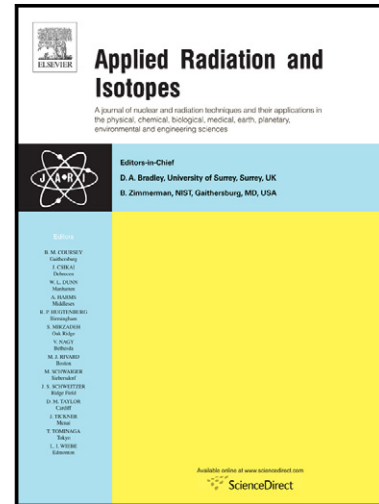


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Assessment of intake and internal dose from iodine-131 for exposed workers handling radiopharmaceutical products

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Abstract

Two methods for determination of internal dose due to ^{131}I intake during the preparation and handling of iodine radiopharmaceutical products have been compared. The first method was based on measurement of ^{131}I in 24-hour urine samples while the second method was based on measurement in vivo of ^{131}I in thyroid. The results have shown that urine analysis method can be used as a screening test but not for internal dose assessment of exposed workers. Thyroid monitoring method was found to be more reliable and accurate method for assessing internal dose from ^{131}I intake. In addition, the assessed internal dose showed that the annual internal effective dose for some workers was below 1 mSv with no risk classification, whereas the results of other group of workers were between 1-6 mSv with low risk classification. Only one worker reached 7.66 mSv with high risk classification; and this worker must be monitored individually.

Keywords: Iodine-131; intake; internal dose; occupational monitoring program, Syria.

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