

Division of Nuclear Medicine Procedure / Protocol University Hospital

BIOASSAY TESTS - THYROID COUNTS
UPDATED: MARCH 2017

According to DHS 157.22(4) and WISREG-1556 Vol. 9, Rev. 2 for purposes of assessing dose used to determine compliance with occupational dose equivalent limits, a licensee or registrant shall take suitable and timely measurements of all of quantities of radionuclides in the body.

Preparation

Any radiopharmacist or radiopharmacy technician who routinely prepares I-131 will perform a bioassay at weekly intervals.

Any radiopharmacy observer will perform a bioassay as described below under I-131 Solution.

Administration

I-131 Capsule

Any Nuclear Medicine staff physician, resident, technologist, or student (and any other personnel involved) who are in the room for the administration(s) of I-131 capsules that total more than 100 mCi in one work day will perform a bioassay not before 6 hours following administration and no longer than 72 hours.

I-131 Solution

Any Nuclear Medicine staff physician, resident, technologist, or student (and any other personnel involved) who administer any I-131 solution will perform a bioassay not before 6 hours following administration and no longer than 72 hours. (This also includes radiopharmacy observers.)

The Capintec system will convert the activity in the thyroid to μCi using the calculated efficiency (efficiency is calculated with a Ba-133 source).

Evaluation Limit: 0.1 μCi Any thyroid bioassay results greater than 0.1 μCi shall be reported to both individuals listed below within the next working day

Investigational Limit: 0.5 μCi Any thyroid bioassay results greater than 0.5 μCi shall be reported to both individuals listed below immediately

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(608) 263-0625

AND

Jason Timm
Radiation Safety Officer
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(608) 890-2039

Include your name, μCi , expected date of contamination/uptake and possible explanation. All bioassay information will be stored on the Capintec system and then archived on compact disc.

References

NUREG/CR-4884 pg. B-103

NRC Reg Guide 8.9 "Acceptable Concepts, Models, Equations, and Assumptions for a Bioassay Program"

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