

Tritium Bioassay Program

1. This procedure applies to those personnel handling 10mCi or more of H-3 in any given month.
2. Personnel must submit a urine sample for analysis to the Radiation Safety Officer (RSO) or his representative within ten days after reaching the 10mCi threshold.
3. Bioassays will continue every two weeks thereafter as long as the personnel is working with tritium.
4. If after three months of sampling the three conditions below are met, bioassays will be performed quarterly (every 3 months):
 - a. The average urinary tritium concentration in specimens obtained from the Personnel during the initial three-month period does not exceed 3uCi/L.
 - b. If measurements of the concentration of tritium in air are required per a condition of the license, the quarterly average concentration ($\mu\text{Ci/mL}$) to which personnel are exposed multiplied by the factor 6.3×10^8 ml, does not exceed 0.8mCi.
 - c. The working conditions during the three month period, with respect to the potential for H-3 exposure, are representative of working conditions during the period in which a quarterly urinalysis frequency is employed, and there is no reasonable expectation that the criteria given in items a and b above will be exceeded.
5. If urinary excretion concentrations exceed 5uCi/L an investigation of the operations involved, including surveys and monitoring of air and surface contamination will be carried out to determine the causes of H-3 intake. Corrective actions that may lower the potential for further exposures will be implemented.
6. A bioassay will be performed within one month after personnel has terminated H-3 activities.