

G. Surveys and Contamination Control

1. Authorized radiation programs must document the performance of a contamination survey **at least once a month** regardless of the quantities of radioactive material utilized within the month. All authorized use areas within the radiation program must be included in the survey.
2. It is good practice to monitor for radioactive contamination whenever radioactive materials are used or whenever there is reason to suspect contamination. It is suggested that contamination surveys be conducted each time a radioactive isotope is manipulated.
3. Surveys are normally performed by wiping a surface of the known area with Parafilm M and then determining the activity on the film with a liquid scintillation counter (LSC). A GM counter may aid in performing the survey for high-energy beta emitters such as P-32 or CR-51. Radioactive contamination must be cleaned to ALARA levels. After decontamination, the area should be re-swiped, and the re-swipe data should be documented with initial survey results. The decontamination action level for NCI-Frederick is 500 dpm/100 cm² removable contamination for beta/gamma and 10 dpm/100 cm² for alphas.
4. All documented surveys must include:
 - a. A way of indicating swipes/survey points (such as a diagram/map showing the location of benches, desks, sinks, and hoods) within all authorized use areas belonging to the program. Each swipe/survey point taken should be numbered on the diagram/map so that any contaminated areas in need of decontamination can be readily identified. Areas tested should be representative of areas where contamination might be expected as well as some areas where contamination would not be expected.
 - b. A positive (sealed source H-3 and/or C-14 standards) and negative (background standard) control shall be run along with the swipes to determine efficiency for counts per minute (cpm) to dpm conversion. The positive and negative controls must be included on the LSC survey printout each month.
 - c. Records are to be kept on both positive and negative results. All positive contamination must be properly cleaned, re-

swiped, and re-read on the LSC with a printout attached to the original results.

- d. Diagrams/maps and swipe results are to be properly dated and kept on file in the laboratory for review by RSO/RSS. It is recommended that all authorized radiation workers know where this file is kept.
5. Radioisotope laboratories will be equipped with radiation monitors and/or survey instruments suitable to detect the type of radioactive materials being used in the laboratory. The RSO will determine the type and number of such instruments.