

HEADQUARTERS  
THIRD UNITED STATES ARMY MEDICAL LABORATORY  
Fort McPherson, Georgia

CHANGE NUMBER 1  
STANDING OPERATING PROCEDURES  
RADIOLOGICAL SAFETY PROGRAM

7 September 1965

Standing Operating Procedures, HQ-Da, Radiological Safety Program of the Third US Army Medical Laboratory and US Army Hospital, Fort McPherson, this headquarters, 11 September 1964, is changed as follows:

8. LOGS AND RECORDS:

b. (Superseded) History of exposure and record of exposure to ionizing radiation will be entered on Form DD 1141, in accordance with AR 40-431, and will be maintained by the Chief, Radiology, US Army Hospital, Fort McPherson, Georgia.

10. GAS CHROMATOGRAPHIC APPARATUS: (Added)

a. Gas chromatographic equipment with sealed radiation or ionizing source detectors will come under this S.O.P.

b. All listed safety measures and requirements in the handling of sealed sources will be followed.

c. A wipe test will be conducted every six months on the sealed source, in accordance with standard accepted procedures and prescribed records maintained.

d. Interchangeable detectors containing sealed sources when not in use will be maintained either in the apparatus ready for use, or in the prescribed vault where all other radioactive materials are maintained.

FOR THE COMMANDER:



*John P. Heggars*  
JOHN P. HEGGERS  
Captain MSC  
Asst Adjutant

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HEADQUARTERS  
THIRD UNITED STATES ARMY MEDICAL LABORATORY  
Fort McPherson, Georgia

CHANGE NUMBER 2 10 November 1965  
SOP HQ-Da  
RADIOLOGICAL SAFETY PROGRAM

Standing Operating Procedures, HQ-Da, Radiological Safety Program of the Third US Army Medical Laboratory and US Army Hospital, Fort McPherson, this headquarters, 11 September 1964, is changed as follows:

10. (Superseded) USE OF ELECTRON CAPTURE ACCESSORIES AND/OR ARGON BETA IONIZATION: The following techniques, procedures and personnel protection practices will be followed in conjunction with the possession and use of gas chromatographs utilizing any radioisotope or its emissions to provide analytical chemistry data. This SOP will supplement the present health physics program.

a. Sources. The sources will be treated as controlled items as per AR 40-61 and Title 10, CFR.

(1) The sources will be listed on the monthly isotope inventory report by the designated user and submitted to the Radiation Protection Officer (RPO) for incorporation in the monthly inventory.

(2) Removal, replacement, or handling of the sources or their containers will be under the supervision of the user designated for the chromatograph or in his absence the RPO.

(3) Whenever personnel have reason to believe or suspect that high-temperature-limit devices have malfunctioned or otherwise allowed sources to be heated above their maximum operating temperature, the laboratory will be cleared and the RPO or his alternate will be informed immediately.

(4) Inoperability of the high-temperature-limit device will be cause for "deadlining" the gas chromatograph.

(5) Sources (auxiliary, removed for repair, received but not installed, etc.) will be kept in sealed containers, which are appropriately marked, when not physically installed in a gas chromatograph.

(6) When sources are removed from the machine, care will be taken to avoid damage and storage will be in sealed containers in one of the user's fume hoods. The container will be labeled to identify source and activity.

(7) Personnel will not attempt to repair, dismantle, or otherwise change the integrity of a radioisotope source detector intended for use in or with a gas chromatograph.

*Incl 3*

b. Leak Testing

(1) Sources requiring leak testing will be tested by personnel appointed by the Radioisotope Committee.

(2) When applicable sources are received without documents showing results of leak testing within the prior 6 months, the sources will be leak tested prior to use.

(3) Sources received for gas chromatography use whether through procurement, loan, lateral transfer, etc., will be wipe tested prior to storage, use, or handling.

(4) Sources found to be leaking will be handled in accordance with AR 755-380 or returned to the manufacturer.

(5) Periodic testing of the gas chromatograph exhaust gases will be conducted to determine whether or not sources may have failed. The interval will be determined by the RPO.

c. Instrument Operation

(1) Personnel assigned to operate a gas chromatograph as described herein will receive training in the particular gas chromatograph to be used prior to actual use.

(2) Operators will work under the supervision of a designated "user" appointed by the Radioisotope Committee if they have not been appointed as a "user."

(3) Designated "users" of gas chromatographs are responsible for supervising any untrained personnel who may operate the units whenever radioisotopes are involved.

(4) The gas chromatographs will be checked for complete operability of all safety and control devices:

(a) Periodically, the interval to be at the discretion of the RPO.

(b) After interchanging of sources.

(c) After installing a source.

d. Instrument Location

(1) Locations for subject gas chromatographs will be determined prior to procurement.

(2) Units will not be located in areas subject to corrosive vapors, intense vibrations, or uncontrolled temperature.

(3) Exhaust gases will be vented by suitable means to exterior of buildings rather than working environment.

e. Samples. Due to the delicate nature of the sources, personnel will exercise due caution when processing samples of corrosive materials within the gas chromatographs. Sources will be carefully checked for damage when samples which would react with the sources or encapsulating materials are used.

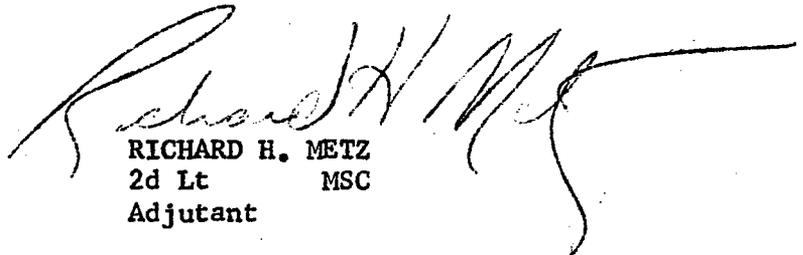
f. Personnel and Area Monitoring

(1) Due to the nature of the radioisotopes used in electron capture and/or Argon Beta ionization techniques, film badges provide monitoring for personnel and are required.

(2) As noted in the present health physics program, weekly monitoring of the using laboratories will be conducted, utilizing wipe test procedures.

(3) In the event of a confirmed or suspected release of radioactive material, urine specimens will be obtained from personnel who have worked in the area for a bioassay analysis.

FOR THE COMMANDER:



RICHARD H. METZ  
2d Lt            MSC  
Adjutant