
EQUIPMENT AND REAGENTS

CHAPTER 7 - EQUIPMENT AND REAGENTS

<u>Guide No.</u>	<u>Subject</u>	<u>TN No.</u>	<u>Date</u>
3007.01	Labeling of Reagents and Solutions	95-1	10/95
3007.02	Equipment/Instrument Maintenance and Calibration	95-1	10/95
3007.03	Disposition of Surplus Instruments and Equipment	95-1	10/95
3007.04	Media Preparation, FB-8 and MOD I	95-1	10/95
3007.05	Laboratory Gases, Solvents and Supplies, FB-8 and MOD I	95-1	10/95
3007.06	Electronic Instrument Modification and Repair	95-1	10/95
3007.07	Equipment Fabrication, Modification and Repair,	95-1	10/95

95-1 (10/95)

TRANSMITTAL NO.
ORIGINATOR:

CFSAN/QAS

PAGE

1

EQUIPMENT AND REAGENTS

LABELING OF REAGENTS AND SOLUTIONS

1. Purpose.
2. Policy.
3. Procedures.

Attachment A - Warning Stickers.

1. PURPOSE This Guide establishes Center for Food Safety and Applied Nutrition procedures designed to assure that reagent and solution containers are identified as to their contents and properties and that deteriorated reagents and solutions are not used.
2. POLICY All reagents and solutions used in Center laboratories must be labeled in accordance with the procedures outlined below. CFSAN Divisions may impose additional requirements as needed for their specific operations.
3. PROCEDURES.
 - A. Commercially purchased reagents/solutions shall be labeled with the date received and dated and initialed when opened. Bench level containers (eg. wash bottles) of undiluted reagents/solutions that have been transferred from the original container need not be labeled with the date opened, however, the contents and concentration must be indicated on the wash bottle label.
 - B. The expiration date shall be written on the label of the container of any commercially purchased reagent/solution that is unstable. The expiration date to be used for peroxide forming compounds shall be either the date printed on the container by the manufacturer or the date from the time in which the container was opened (3 months for isopropyl ether and 12 months for others) whichever occurs first. Neither peroxide forming compounds nor or any other chemical shall be retained beyond its expiration date.
 - C. Reagents/solutions which contain hazardous properties and require special protective measures while handling and storing them (eg. need for protective equipment, use in hood, etc.) shall have an appropriate warning sticker

affixed to each container (See Attachment A for illustrations). Any special protective measures to be used must be fully explained in the laboratory notebook.

- D. Storage requirements (eg. refrigerate at 4⁰C, store in dark, etc.) shall be indicated on the container of the reagent/solution.
- E. Laboratory prepared solutions shall be labeled with the identity, strength (concentration or titer), date prepared, initials of the preparer, date of expiration, storage requirement and if applicable, with the appropriate warning sticker(s).
- F. The study director, principal investigator and/or supervisor are responsible for determining the properties of the reagents/solutions used in studies and for insuring that they are properly labeled.
- G. Outdated and excess reagents/solutions shall be disposed of as chemical waste by the CFSAN Safety Management Branch.

**LABELING OF REAGENTS AND SOLUTIONS
WARNING STICKERS**

The image displays a variety of warning stickers used for labeling reagents and solutions. The stickers are arranged in a grid-like fashion within a rectangular frame. The labels include:

- CAUTION RADIOACTIVE MATERIAL** (top left, rectangular)
- CAUTION RADIOACTIVE MATERIAL** (top middle, rounded rectangle) with fields for **ISOTOPE**, **AMOUNT**, and **DATE**.
- EXPLOSIVE** (top right, rounded rectangle)
- MAY FORM PEROXIDES** (middle right, rounded rectangle)
- FLAMMABLE SOLID** (middle left, diamond)
- FLAMMABLE LIQUID** (middle left, diamond)
- FLAMMABLE SOLID** (middle center, diamond)
- BASE** (middle right, rounded rectangle)
- ACID** (middle right, rounded rectangle)
- KEEP IN REFRIGERATOR** (middle right, rounded rectangle)
- POISON** (bottom left, diamond)
- CAUTION CANCER SUSPECT AGENT** (bottom middle, rounded rectangle)
- CANCER HAZARD** (bottom left, rectangular) with a hazard symbol.
- BIOHAZARD** (bottom middle, rectangular) with a biohazard symbol and a blank space for text.
- RADIOACTIVE MATERIAL** (bottom right, rectangular) with a radiation symbol.

EQUIPMENT AND REAGENTS

EQUIPMENT/INSTRUMENT MAINTENANCE AND CALIBRATION

1. Purpose
2. Policy
3. Procedures

1. **PURPOSE** The Guide describes the policy and procedures associated with equipment/instrument maintenance and calibration.
2. **POLICY** All equipment/instruments used in the Center for Food Safety and Applied Nutrition (CFSAN) laboratories shall be maintained in a manner to insure their proper function. All equipment/instruments used as measuring devices shall, in addition, be calibrated and/or standardized as required to assure the accuracy and reliability of the measurement(s).
3. **PROCEDURES**
 - A. All laboratory equipment/instruments must be routinely maintained. Calibration and/or standardization of equipment/instruments shall be performed prior to use and as necessary during use.
 - B. A log shall be maintained for all equipment/instruments (including those in common purpose rooms) in which the result of calibration, use and maintenance may be recorded.
 - C. Balances must be checked prior to use with a set of standard weights in the weight range of the items to be weighed. Balances shall be calibrated annually by a service contractor and record of this maintained.
 - D. Refrigerators, freezers and incubators are to be monitored daily. A temperature monitoring log shall be maintained that identifies the unit by FDA or serial number and that indicates the acceptable temperature range at which the unit is to be maintained.
 - E. All major equipment/instruments shall be labeled with the name of the principal user, his room and telephone numbers. This is the individual to whom problems with the instrument can be reported.

- F. Each laboratory involved in research particularly those involved with studies subject to the Good Laboratory Practice Regulations must have standard operating procedures (SOP's) that describe or reference procedures associated with maintenance, calibration, standardization, performance checks and routine adjustments that assure proper function of the equipment/instrument. The procedure shall also include maintenance and calibration record keeping requirements.
- G. All SOP's shall be readily available to personnel using the equipment.

EQUIPMENT AND REAGENTS

DISPOSITION OF SURPLUS INSTRUMENTS AND EQUIPMENT

1. Purpose.
2. Policy.
3. Procedures.

Attachment A - Form HSS-22, Property, Action Request

1. Purpose This Guide references procedures for the disposition of surplus instruments and equipment.
2. Policy All laboratory instruments and equipment that are no longer required shall be surplusd according to the procedures identified below.
3. Procedures
 - A. Surplusing Equipment
 1. Laboratory personnel and supervisors should periodically inspect their laboratories for old, excess or broken instruments and equipment that are no longer needed or economical to have repaired. They should notify their Custodial Officer of their decision to surplus unwanted items.
 2. The Custodial Officer shall prepare form HHS form 22, Property Action Request in quadruplicate (Attachment A). The FDA number, serial number, a brief description of the item, the condition code and the room where the property is located shall be recorded on HSS-22.
 - A. At FB-8, the Custodial Officer shall sign in Block 13, maintain onecopy of the form for his/her records and forward the original and two copies to the General Services Branch, HFS-657 where staff will forward the original of form HSS-22 to the Personal Property Management Section, HFA-225 for pick-up of surplus equipment.

- B. At MOD-I, the Custodial Officer shall sign block 13, keep one copy for his/her records and submit the original form to the clerical assistant of the Beltsville Technical Operation Staff who will coordinate pick-up of the surplus equipment with the Personal Property Management Section, HFA-225.
3. All items that have been designated as surplus shall be clearly labeled as such and stored in the laboratory until removal can be effected. At no time shall the surplus items be placed in the hallway.
 4. The Personal Property Management Section will arrange for the removal of surplus equipment. The employee will not be notified of the pick-up date. When the equipment is picked up, one copy of form HSS-22 shall be signed by the person performing the pick-up service (block 14). This copy shall be forwarded to Custodial Officer for his/her records. At MOD-I the clerical assistant of the Beltsville Technical Operation Staff will also retain a copy of the signed form.
 5. The Personal Property Management Section HFA-225 will make the necessary adjustment in the inventory. This adjustment will be reflected in the monthly updates that are sent to the Custodial Officer. The Custodial Officer shall verify the inventory update within ten days of receipt. If an error is found or if there are any questions, the General Service Branch, HFS-657, shall be contacted for clarification.

DEPARTMENT OF
HEALTH AND HUMAN SERVICES
REQUEST FOR PROPERTY ACTION

REQUESTING OFFICE, ROOM NUMBER & TELEPHONE NUMBER		(1) CUSTODIAL LOCATION	(4) DATE OF REQUEST
			(5) CAL. NO. & ADMIN. CODE
ACTION REQUESTED (Here in, receipt, transfer, disposition instructions) EXPLAIN IN DETAIL.			

SERIAL NO. OR DECAL NO. (6)	DESCRIPTION AND STOCK NUMBER (7)	QUAN- TITY (8)	UNIT (9)	CONDI- TION (10)	UNIT COST (11)	TOTAL COST (12)
(13) SIGNATURE OF INITIATOR		DATE	(15) CUSTODIAL FILE UPDATED INITIALS OF ACCOUNTABLE OFFICER		DATE	
(14) SIGNATURE OF RECEIVING OFFICIAL		DATE	(17) CUSTODIAL FILE UPDATED INITIALS OF ACCOUNTABLE OFFICER		DATE	
(16) SIGNATURE OF ACCOUNTABLE OFFICER		DATE	(18) VOUCHER NO.			

HS 27 (REV. 10/83)

EQUIPMENT AND REAGENTS

MEDIA PREPARATION SERVICES

1. Purpose
2. Background
3. Procedures

Attachment A - Form FDA 1979, Media Request

1. PURPOSE This Guide establishes instructions for requesting media.
2. BACKGROUND Media preparation services are provided by contract at both the FB-8 and the MOD I facilities (See Guide 3002.09, Quality Assurance Responsibilities - Glassware and Media Prep Services Contractor).
3. PROCEDURES
 - A. All common or standard request shall be made using FDA form 1979, Media Request (Attachment A) and delivered to the Media Preparation Section, Room B670 at FB-8 or to the Laboratory Support Service office room 3208 at the MOD I facility. The requester should complete the upper portion of the form indicating:
 - * Type of Media
 - * Size Container
 - * Vol/Unit
 - * No. of Containers
 - * pH
 - * Method of Sterilization (autoclave, steam, side-arm filtered, carbon filtered)
 - B. All request for special media shall be indicated in the "Special Instructions" area of the media request form and discussed with Media Preparation Contract personnel.
 - C. Contract personnel will order the necessary ingredients, prepare and deliver media as requested.
 - D. Dirty media glassware (except agar plates and disposable ware) shall be returned for cleaning using the same procedure as used for other dirty glassware explained in Guide 3002.09.

MEDIA REQUEST				DATE	REQUEST NUMBER				
NAME				ROOM NUMBER					
SECTION I - THIS SECTION TO BE COMPLETED BY REQUESTING OFFICE									
LINE NO.	TYPE MEDIA	SIZE CONTAINER	VOLUME	NO. OF CONT.	PH	METHOD OF STERILIZATION			
1									
2									
3									
4									
5									
6									
7									
SPECIAL INSTRUCTIONS									
SECTION II - REQUESTING OFFICE SHOULD NOT WRITE BELOW THIS LINE									
LINE NO.	METHOD OF PREPARATION						DATE	INITIAL	
1									
2									
3									
4									
5									
6									
7									
LINE NO.	TYPE MEDIA	PH BEFORE CONTACT	PH AFTER CONTACT	REAGENT USED	TYPE-TEMPERATURE STERILIZATION	PH AFTER STERIL.	TIME	RUN	INITIAL
1									
2									
3									
4									
5									
6									
7									
STARTED			COMPLETED		NUMBER OF CONTAINERS				
SIGNATURE					DATE				

FORM FDA 1779 (2/67)

EQUIPMENT AND REAGENTS

LABORATORY GASES, SOLVENTS AND SUPPLIES

1. Purpose
2. Background
3. Procedures

Attachment A - Form FDH 1780 Storeroom
Delivery Requisition Form

1. PURPOSE This Guide describes the procedures associated with the procurement of laboratory gases, solvents and supplies from the Scientific Supply Storeroom at FB-8 and MOD I.
2. BACKGROUND The Scientific Supply Storeroom at the FB-8 and MOD I are under the management of the Warehouse/Storeroom Contractor (See Guide 3002.11 for Quality Assurance Responsibilities of the Warehouse/Storeroom Contractor). The Scientific Supply Storeroom hours of operation are 8:00 am. to 4:30 pm. on weekdays.
3. PROCEDURES
 - A. The FDA Scientific Supply Catalog identifies all standard stock items available from the supply room. Copies of the catalog are obtained through laboratory management. Additional copies are available from the Scientific Supply Storeroom.
 - B. All request for storeroom supplies must be made on the Storeroom Delivery Requisition, Form FDH 1780. The requestor shall provide the following information in the appropriate block on the form:
 1. Requisition Number
 2. Allotment Number
 3. Individual to receive item
 4. Building (FB-8, MOD I)
 5. Requestor's name
 6. Stock Number (supply catalog)
 7. Description (supply catalog)
 8. Quantity
 9. Unit of issue (bag, box, each)
 10. Unit Cost (supply catalog)
 11. Total cost

EQUIPMENT AND REAGENTS

ELECTRONIC INSTRUMENT MODIFICATION AND REPAIR

1. Purpose
2. Background
3. Procedures

Attachment A - Form FDA 3251, Electronic Shop
Work Request

1. PURPOSE This Guide describes the procedures used to acquire the services of the Electronics Shop, located at 200 C Street, S.W., Washington, DC. (FB-8)
2. BACKGROUND The Electronic Shop is located in room B-050 and provides a centralized facility for the repair of instruments and equipment. Electronic Shop personnel also have the capability to provide some minor modifications to instruments and equipment. The hours of operation are 8:00 am. - 4:00 pm. Monday thru Friday.
3. PROCEDURES
 - A. Consult with Electronic Shop personnel to assure that repair or modification needs can be accommodated.
 - B. The Electronic Shop Work Request (Attachment A) is to be completed for all modifications and repair. A description of the required modification or the nature of equipment malfunction must be indicated on the form. Laboratory personnel must arrange for the transport of equipment and instruments to the shop for modification and repair when possible or schedule repair/modification for those instruments that cannot be transported.
 - C. Standardized electronic parts are available from the Electronics Shop.

ELECTRONIC SHOP WORK REQUEST		DATE RECEIVED
NAME		PHONE
BUREAU	DIVISION	ROOM
DESCRIPTION OF EQUIPMENT		
REMARKS		
WORK ACCEPTED BY		APPROX. TIME ON JOB
WORK PERFORMED BY		
THIS SECTION FOR PARTS NEEDED ALSO ANY SKETCHES NEEDED		DATE COMPLETED

FORM FDA 3251 (6/82)

EQUIPMENT AND REAGENTS

EQUIPMENT FABRICATION, MODIFICATION AND REPAIR, FB-8

1. Purpose
2. Background
3. Procedures

Attachment A - Form FDA 3252, Instrument Shop
Work Request.

1. PURPOSE This Guide describes the procedures associated with the Instrument shop located at 200 C Street, S.W., Washington, DC. (FB-8).
2. BACKGROUND The instrument shop is located in room B-066 and provides for centralized equipment fabrication (not commercially available), modification, and repair. The hours of operation are 8:00 am. - 4:00 pm, Monday thru Friday.
3. PROCEDURES
 - A. For fabrication, modification or repair of instruments or equipment, complete Instrument Shop Work Request (see attachment A). For fabrication or modification, the materials, dimensions and other necessary information should be indicated. For repair, indicate nature of the malfunctions.
 - B. All request should be discussed with instrument shop personnel, prior to completing the Instrument Shop Work Request Form.
 - C. Materials will be provided by the instrument shop, if available. Specialized materials may need to be provide by the scientist.

INSTRUMENT SHOP WORK REQUEST		NUMBER
NAME		ROOM
DIVISION		PHONE
DESCRIPTION		
SKETCH		
RECEIVED		DATE
DELIVERED		DATE

FORM PDA 3252 (6/82)