

**United States Department of Agriculture
Agricultural Marketing Service, Science & Technology
Microbiological Data Program**

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Title: Laboratory Equipment		
Revision: Revision 01	Replaces: 08/15/03	Effective: 05/01/06

1. Purpose

To ensure adequate and proper equipment for the conduct of USDA/AMS Microbiological Data Program (MDP) analytical work.

2. Scope

This standard operating procedure (SOP) shall be followed by all laboratories conducting microbiological studies for MDP, including support laboratories conducting non-routine activities that may impact the program.

3. Outline of Procedure

Equipment Design	5.1
Equipment Maintenance and Calibration	5.2
Equipment Approval and Inventory	5.3

4. References

- 4.1. U.S. EPA, Equipment design, 40 CFR 160.61, July 1, 2005
- 4.2. U.S., EPA, Maintenance and calibration of equipment, 40 CFR 160.63, July 1, 2005

5. Procedures

5.1. Equipment Design

Equipment used in the generation, measurement, or assessment of data for MDP and equipment used for facility environmental control shall be of appropriate design and adequate capacity to function according to the study protocol and SOPs and shall be suitably located for operation, inspection, cleaning, and maintenance.

5.2. Maintenance and Calibration of Equipment.

5.2.1. Equipment shall be adequately inspected, cleaned, and maintained. Equipment used for the generation, measurement, or assessment of data shall be adequately tested, calibrated, and/or standardized.

5.2.2. The written SOPs shall set forth in sufficient detail the methods, materials, and schedules to be used in the routine inspection, cleaning, maintenance, testing, calibration, and/or standardization of equipment, and shall specify, when



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appropriate, remedial action to be taken in the event of failure or malfunction of equipment.

- 5.2.3. Written records shall be maintained of all inspection, maintenance, testing, calibration, and/or standardization operations. These records, containing the dates or the operations, shall describe whether the maintenance operations were routine and followed the written SOPs. Written records shall be kept of non-routine repairs performed on equipment as a result of failure and malfunction. Such records shall document the nature of the defect, how and when the defect was discovered, and any remedial action taken in response to the defect.
- 5.2.4. Raw data packages shall reflect which specific instruments and equipment were used to generate, measure, or assess the data.
- 5.2.5. Data on the calibration and/or standardization of applicable equipment and instruments is to be included in the raw data packages or in the appropriate logbook. Calibration and/or standardization data for balances, refrigerators, and other peripheral equipment does not need to be included in the raw data package.

5.3. Equipment approval and inventory

- 5.3.1. All equipment and/or supplies purchased with MDP funds exceeding \$2,500 per item or \$5,000 for multiples of the same item shall have a written request approved by the MPO Director prior to purchasing.
- 5.3.2. The laboratory shall maintain property records for any piece of equipment purchased with MDP funds costing more than \$2,500.
- 5.3.3. The laboratory shall ensure that equipment purchased with MDP funds costing more than \$2,500 is entered into the MDP Equipment Inventory System. The laboratory shall enter the following information into a spreadsheet provided by MPO.
 - The laboratory code (e.g., CA4, FL4, etc.) shall be entered in the “Lab or State” field.
 - A description of the property (e.g., VITEK[®], BAX[®], freezer, etc.) shall be entered in the “Item” field.
 - The manufacturer or vendor shall be entered in the “Make” field.



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- The model number shall be entered in the “Model” field.
 - The serial number or other identification number shall be entered in the “Serial No.” field.
 - A unique identifier (e.g., Micro - 1) shall be entered in the “Unique Identifier” field.
 - The location (e.g., room number, MDP lab, etc.) shall be entered in the “Room No.” field.
 - The cost shall be entered in the “Cost” field.
 - The date the MPO Director approved the purchase shall be entered in the “MPO Approval Date” field.
 - The purchase date shall be entered in the “Purchase Date” field.
 - Purchase reference information (e.g., purchase order number) shall be entered in the “Purchase Ref” field.
 - The status of the equipment shall be entered in the “Surplus” field (enter “True” if the equipment is designated as surplus, and “False” if the equipment is still active).
 - Any additional comments concerning the item (e.g., more detailed description, asset number, percentage of MDP funds used for purchase, etc.) shall be entered in the “Remarks” field.
- 5.3.4. A physical inventory of property shall be taken and the results reconciled with the MDP Equipment Inventory System at least once per year.
- 5.3.5. All new equipment purchases of more than \$5,000 must be entered into the MDP Equipment Inventory System and submitted to MPO within 30 days of purchase.
- 5.3.6. All equipment purchased with MDP funds shall be identified using a unique identifier according to a laboratory’s internal procedure and the MDP Cooperative Agreements.
- 5.3.7. Damaged or malfunctioning equipment shall be removed or clearly identified to prevent its use.

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4/27/06

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