

CHAPTER 1

GENERAL INFORMATION

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1.1 POLICY

Dependable, well-maintained, precision equipment is essential to the accurate inspection of all commodities¹. Poorly designed or manufactured equipment and equipment that is excessively worn or misadjusted may cause incorrect factor determinations.

- a. Moisture. Moisture is the water content of grain or related commodities ascertained by the USDA air-oven method or by any method which gives equivalent results.
- b. Official Equipment. To ensure the accuracy and integrity of official inspections, moisture meters used for official purposes must be:
 - (1) A model and type² approved for use by GIPSA which gives results equivalent to the USDA air-oven method;
 - (2) Installed and operated according to the manufacturer's recommendations and the guidelines established by this handbook and the appropriate Occupational Safety and Health Administration (OSHA) Standards, 29 CFR 1910;
 - (3) Operated properly, utilizing officially approved calibration constants;
 - (4) Maintained in good repair;
 - (5) Tested at periodic intervals, in the prescribed manner, and found to be within tolerance; and
 - (6) Protected from unauthorized adjustments.
- c. Defective Equipment. Moisture meters which have serious operating deficiencies, do not operate within tolerance limitations, or have not been tested when required, shall be considered to be not approved for official use and shall be removed from service until a subsequent test establishes their accuracy.

¹ The term "commodities," as used throughout the handbook, means grain, rice, beans, peas, lentils, oilseeds, and processed grain products.

² The mention of firm names or trade products does not imply that they are endorsed or recommended by the U.S. Department of Agriculture over other firms or similar products.

- d. Elevator-Owned Equipment. Elevator-owned moisture meters may be used by official agencies for official purposes provided that the above criteria are met. The Field Office Manager should also consider the following guidelines before approving the use of elevator-owned moisture meters by official agencies:
 - (1) Review each situation, especially the methods that will be used to protect the meter from misuse or unauthorized adjustments.
 - (2) Seals and other appropriate security measures shall be used on moisture meters.
 - (3) If precautions are not adequate, do not approve the arrangement.
- e. Commercial Equipment. Commercial moisture meters are devices that are approved or allowed by local or State weights and measures jurisdictions as “legal for trade.” GIPSA official meters may meet stricter tolerances or design requirements than commercial meters; however, commercial meters may be considered for *Official Commercial Inspection Services*.
- f. Government-Owned Equipment Loans.
 - (1) Government-owned moisture meters may be loaned to official agencies during legitimate emergencies for short time periods. These temporary loan provisions must be documented.
 - (2) No open-ended loans are to be approved.

1.2 RESPONSIBILITIES

- a. GIPSA Headquarters:
 - (1) Field Management Division shall:
 - (a) Maintain a List of Approved Equipment;
 - (b) Advise the GIPSA field offices on the selection and purchase of equipment;
 - (c) Assist in the purchase of inspection equipment;
 - (d) Assist APHIS Business Services (ABS) on joint purchase orders, blanket purchase arrangements, and purchases of new types of equipment;

- (e) Assist ABS in the negotiation of maintenance contracts with applicable manufacturers; and
 - (f) Develop and publish policies and procedures pertaining to the maintenance, repair, use, and testing of moisture meters.
- (2) Technology and Science Division (TSD) shall:
- (a) Evaluate new models and/or types of meters;
 - (b) Develop and maintain moisture meter calibrations;
 - (c) Maintain the Headquarters Standard meters in good repair;
 - (d) Test the Headquarters Standard meters;
 - (e) Provide samples for testing all GIPSA and official agency moisture meters;
 - (f) Evaluate test results and approve or reject all GIPSA and official agency moisture meters;
 - (g) Maintain test records for all GIPSA and official agency moisture meters;
 - (h) Evaluate alternate testing methods;
 - (i) Develop policies, procedures, work forms, and schedules for the testing of equipment;
 - (j) Administer the equipment testing program; and
 - (k) Train field personnel, in cooperation with the Digital Media group and other appropriate staff.
- b. GIPSA Field Offices, Sub-Offices, and Official Agencies. Each office shall be responsible for all equipment that is used officially by their office. This includes moisture meters that are provided for official use by a facility.
- (1) Maintain official meters in good repair and ensure compliance with OSHA Standards.
 - (2) Designate an equipment specialist who will serve as the primary contact responsible for moisture meter testing.

- (3) Test their official moisture meters.
- (4) Maintain test and audit trail records for all moisture meters that are used officially by their office.
- (5) Field offices shall assist TSD in resolving moisture meter performance problems at official agencies.

1.3 RECORDKEEPING REQUIREMENTS

FGIS developed the Equipment Capability Testing (ECT) online application to automate its nationwide program for testing and verifying the accuracy of equipment used to officially determine the quality and quantity of grain and related products. The program stores electronic data on the performance and location of each moisture meter in the official system. (Full implementation of ECT for UGMA meters is in process.)

- a. GIPSA Headquarters will provide maintenance of the online system and provide storage of equipment test records.
- b. Each official service point will enter equipment serial number and location data into ECT.
- c. Technology and Science Division will initiate check testing data records for the official moisture.
- d. Field offices and official agencies will enter their equipment testing results.

NOTE: Maintaining printed copies of the test forms is not necessary due to electronic data storage. However, it is up to the discretion of the Official Service Provider on whether they choose to maintain printed copies in addition to the electronic records.

1.4 EQUIPMENT IDENTIFICATION

- a. Serial Number. All moisture meters shall be identified by a serial number.
- b. Test Decal. The GIPSA test label (form FGIS-931, "Approved Label for Inspected Machinery,") shall not be required.

1.5 EQUIPMENT CHECK TESTING

Unless there is a need to know, sample results or target values should be withheld from the test unit operator until after test completion (blind testing).

- a. Initial Tests. New meters shall be tested prior to being put into service.

b. Periodic Tests.

- (1) Headquarters Standards shall be tested in accordance with Chapter 3 of this handbook. All other meters shall be tested periodically in accordance with the testing schedule below.
- (2) All Moisture Meters.
 - (a) All moisture meters, other than those which are in storage or used only at seasonal points, shall be tested periodically in accordance with the testing schedule, whenever practical.
 - (b) Meters held in storage are not required to be tested unless they are “back-up meters.”
 - (c) “Back-up meters” must be tested on schedule. Untested equipment may not be placed into service under any circumstances.
 - (d) At seasonal inspection offices (those that are open less than 6 months a year), meters shall be tested once a year just prior to reactivation of the office.

c. Supplemental Tests. Moisture meters shall be tested as soon as practicable whenever:

- (1) GIPSA Headquarters, a GIPSA field office, or an official agency has comparative inspection results or other information that shows the meter to be of questionable accuracy;
- (2) It becomes apparent that the meter has not been tested in accordance with the established testing schedule;
- (3) After any repairs or alterations (replacement of a minor part will not require the meter to be retested); or
- (4) After movement or shipping. If a meter is hand-carried with care, the field office or official agency manager may elect to omit the grain moisture test and perform only the weighing test.

1.6 TESTING SCHEDULE

Moisture meters shall be tested each February and August. TSD may extend the periodic testing to January through March and July through September, depending on resources.

1.7 REPAIRS

- a. Repair of official moisture meters shall be performed by factory-approved repair facilities only. Equipment Specialists are not authorized to repair meters.
- b. Safety. Before working on any equipment, read the instructions in the appropriate handbook section. Unplug equipment before beginning adjustments.