

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

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Title: MDP Sampling Procedures on Site		
Revision: 1	Replaces: 04/01/01	Effective: 07/01/02

**1. Purpose:**

To standardize the sampling procedures for all States participating in the USDA/AMS Microbiological Data Program (MDP).

**2. Scope:**

This Standard Operating Procedure (SOP) shall be followed by the sample collectors during the sample collection process as required by MDP.

**3. Outline of Procedure:**

- 5.1 Assignment of Sample Collectors
- 5.2 Amount of Sample Collected
- 5.3 Definition of Sample Collected
- 5.4 Sampling Procedures for MDP Commodities
  - Fresh Commodities
- 5.5 Purchasing Samples

**4. References:**

- April 15, 2002, MDP Public Meeting, Washington, DC
- January 10, 2002, MDP Public Meeting, Washington, DC
- Program Plan, July-December 2002
- Program Plan, January-June, 2002
- Program Plan, April-September 2001
- MDP Federal/State Meeting, Tallahassee, Florida, January 10-11, 2001
- PDP SOPs, SAMP PROC-2, Sampling Procedures on Site, June 1, 2000
- Work plan for MDP Pilot Study, August 25, 1999

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**5. Specific Procedures:**

5.1 Assignment of Sample Collectors

- a. Sample collectors shall have the necessary training and information provided to them prior to collecting any samples.
- b. States shall designate the number of commodity samples, with corresponding dates and sites, to be collected by each sample collector per month.
- c. If a sample(s) will not be collected due to personal emergency, plant closure, weather conditions, etc., the sample collector shall report it to the State Sampling Manager for reassignment to a different collector, alternate site, or sampling date.
- d. If a collector does not sample a product on the scheduled day, the collector shall contact the laboratory receiving the sample(s). The collector must notify the State Sampling Manager of such scheduled change.

5.2 Amount of Sample Collected

Information regarding the amount of sample collected will be provided in writing by the USDA/AMS Sampling Manager.

5.3 Definition of Sample Collected

Samples collected by State inspectors from a collection site will be termed "site sample". The three individual sub samples collected will be termed "lab samples".

5.4 Sampling Procedures for MDP Commodities

Fresh Commodities

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Fresh commodities refer to raw, whole produce (i.e., lettuce, tomatoes, stalks of celery, etc.). For MDP, "fresh cut" produce, such as salad mixes, bagged/chopped lettuce, or sliced/chopped celery are not acceptable. Fresh commodities that are merely washed, brushed, or bagged as part of normal packing procedures are acceptable.

a. Procedures for Selecting Fresh Commodity Samples at Collection Sites:

1. Individual vendors include sampling sites such as chain store distribution centers, warehouses, brokers, and terminal markets where each vendor is assigned an individual site code.
2. Once the pallet/group has been chosen, it is permissible to collect the site sample from one container or from a variety of containers.
3. An entire case of product may be taken to a more convenient location before removing the sample portion provided that the case of product is protected from inclement weather or high or sub-freezing temperatures.
4. Personnel at collection sites may randomly select a box or crate of product and have it available for the sampler to pick-up. The sample collector must request that the product remain in a refrigerated area of the collection site until sample pick-up. Collection site personnel cannot collect the lab-samples.
5. Collectors shall be careful to select individual fruits or vegetables that are in good condition without any noticeable bruises, fungus, or other exterior damage.
6. Clustered vendors are all vendors located within a terminal market that have been assigned one site code.
7. Upon arrival at a site, which has clustered vendors, the sample collector should randomly select one vendor from which to sample.

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The vendor should be selected completely at random, with no subjective judgment by the sample collector.

8. The vendor chosen at a clustered site is referred to as the primary site.
  9. If the commodity is not available at the selected primary site within the clustered vendor, the collector shall randomly select an alternate vendor. If the commodity is not available at the alternate site, it is permissible to select another alternate vendor. If it is necessary to collect the following day, the laboratory receiving the sample(s) should be notified.
  10. Additional information regarding sampling of various fresh fruit and vegetables will be provided in writing to State Sampling Managers by the USDA/AMS Sampling Manager.
- b. Special Sampling Techniques for the Collection of MDP Samples
1. All produce must be collected aseptically. Aseptically means samples will be collected in a manner to avoid contact with any foreign objects which may contaminate the sample.
  2. Insulated shipping containers must be pre-cooled to a refrigerated temperature prior to sample collection.
  3. Whenever possible, commodities should be collected in the warehouse facility to avoid exposure to inclement weather or high or sub-freezing temperatures. However, if necessary, an entire case of product may be taken to a more convenient location before removing the sample portion provided sufficient precautions are taken to ensure the sample is not contaminated by external factors.
  4. Sample collectors must use a separate sterile plastic bag for each individual lab-sample. For example, sample collectors will use three (3) sterile bags to collect three (3) lab-samples of a commodity.

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5. The produce boxes or crates, and sterile sampling bags must be opened before the sample collector puts on sterile gloves. The produce being sampled must be handled only while wearing sterile gloves.
6. Prior to collecting the sample, sample collectors must measure the external surface temperature and record the temperature on the MDP Sample Information Form. Thermometers should be calibrated at least on a monthly basis using the procedures provided in MDP SAMP\_PROC 5, Infrared Thermometer Use.
7. If a sample is wrapped or bagged in a plastic or paper bag or other covering that identifies the domestic State of Origin, grower, packer, distributor or lot number, the sample collector must remove and properly discard the covering prior to shipping the sample to the laboratory.
8. Fresh gloves must be worn each time a lab -sample is collected (i.e., three (3) pairs of gloves for three (3) lab-samples).
9. Place the produce carefully into the sterile lab-sample bags so that they are not broken or bruised. Do not permit ungloved arms to enter the sterile bags.
10. If a sterile lab-sample bag is used that does not have a closing mechanism, fold over the top of the bag 2 or 3 times (forcing air out of the bag) and use several binder clips, clothes pin type clips or band-aids to close the bag. Laboratory personnel must be able to open the sterile lab-sample bags without tearing the bag to avoid potential product contamination. Consequently, masking, nylon, or plastic type waterproof tapes cannot be used to seal the sterile bag.

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11. DO NOT place pin holes in the sterile lab-sample bags or larger plastic bag.
12. After each individual lab-sample has been placed in a separate sterile plastic bag, each set of lab-samples must be placed in a larger plastic bag. Paper bags are not acceptable because of potential mold spores or cockroach egg infestation.
13. The larger plastic bag should be sealed in a manner that any attempt to tamper with the contents would be noticed easily. Masking tape, nylon tape, etc., may be used to seal this bag.
14. Each bag, which contains a set of lab-samples, shall be labeled to identify the sample with the date, site code, and sample collector's name/initials.
15. After the large plastic bag containing the site sample(s) has been labeled, it must be placed in a pre-cooled insulated shipping container along with the corresponding MDP Sample Information Form(s) (SIF).
16. Sterile bags and gloves will be purchased from a source(s) provided by the USDA/AMS Sampling Manager to ensure that both products or lots have been certified as sterile. Sterile whirl paks or non-strainer stomacher bags maybe used depending on the size of the sample.
17. When collecting and packaging more than one commodity at the same site (or even on the same day), the sample collector shall prevent potential cross-contamination among the samples.

5.5 Purchasing Samples

- a. The sample collector shall make payment to the appropriate site/vendor(s) as necessary.

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- b. Exact method of payment (e.g., cash or State voucher) is determined by the individual States.
- c. A receipt must be provided by the vendor and retained by the State for all sample payments for a two year period. After two years, State Sampling Managers shall contact the USDA/AMS for further instructions concerning the disposition or transfer of records.
- d. The sample collector may purchase either the required sample amount or the entire case of product as required by the vendor.
- e. If an entire case is purchased, records must be kept by the States as to the disposal of the unused product.
- f. Payment for samples should approximate the local retail price, but an additional amount may be added, as appropriate, for the vendor's time and trouble.
- g. Specific procedures/requirements regarding the purchase of MDP samples shall be explained as part of the State's internal SOP for sampling.

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Revision 1

July 1, 2002

- Spelling and grammatical changes
- Updated signature page position titles and office name and address
- Updated Outline of Procedures
- Updated References
- Added paragraph 5.3, "Definition of Sample Collected".
- Changed "source sample" to "site sample" and "sub-sample" to "lab sample."
- Removed paragraph 5.3(a)(4) from original SOP. Not applicable.
- Added "...provided sufficient precautions are taken to ensure the sample is not contaminated by external factors" to paragraph 5.4(b)(3).
- Added paragraphs 5.4(b)(6) and (7).
- Removed paragraph 5.3(b) (12) and (17) from original SOP regarding freeze indicators.
- Removed sections 5.3(c) and (d) from original SOP regarding Source Sample Collection and Additional Sampling Guidelines. Both sections are no longer applicable because of the removal of State of Origin, grower, packer, etc. information.
- Removed all references from SOP regarding collection of State of Origin, grower, packer, shipper, distributor, lot number and any other identification marks.