



---

# COMMONWEALTH OF PENNSYLVANIA

## MILK MARKETING BOARD

### Weigher/Sampler Guide to Picking up Milk at the Farm and Study Materials for Certification



**COMMONWEALTH OF PENNSYLVANIA  
MILK MARKETING BOARD  
2301 NORTH CAMERON STREET  
HARRISBURG, PA 17110-9408**

**WEIGHER/SAMPLER TEST STUDY MATERIAL**

**I****ntroduction** - The Pennsylvania Milk Marketing Board sets minimum prices for milk purchased by Milk Dealers or Handlers from Pennsylvania producers. How much those producers are paid depends heavily on care that the Weigher/Sampler takes when picking up the milk at the farm. It is the responsibility of the Weigher/Sampler to observe the quality of the milk he is picking up, accurately measure how much milk he is picking up, and obtain a sample of the milk that is representative of all the milk in the tank and to maintain strict adherence to sanitary procedures. For this purpose, Pennsylvania law requires all such persons to undergo an examination of proficiency in weighing and sampling milk. If successful in completing such an examination (80% minimum score is required), they are eligible to apply for a Weigher/Sampler license, (renewable annually), which will qualify them to act as a Weigher/Sampler.

The Milk Marketing Law states, "It shall be unlawful for any Milk Dealer to buy or receive milk from producers...unless the samples taken for testing purposes are made by a... certified Weigher and Sampler."

To become a licensed Weigher and Sampler, a person is required to pass an examination administered by the Pennsylvania Milk Marketing Board. The cost of the examination is twenty-five dollars (\$25.00) plus an annual Weigher and Sampler license costing twenty dollars (\$20.00). The Weigher and Sampler license is issued from January 1<sup>st</sup> through December 31<sup>st</sup> and must be renewed annually. The Milk Marketing Board mails renewal applications to current license holders. Weigher/Samplers must mail the completed applications back to the Board along with the twenty dollar (\$20.00) annual license fee by **December 1<sup>st</sup>** for the following year. Weigher/Samplers must have their current valid Weigher and Sampler license available for inspection when performing their duties.

New Weigher/Samplers should spend a few days with an experienced Weigher/Sampler to observe and practice the routine. This on the job training is an essential element in the certification and licensing of Weigher/Samplers.

The following information will assist the applicant to complete the examination for proficiency in weighing and sampling milk and milk products. Any Weigher/Sampler found to mishandle milk samples or falsify or change records may be subject to license revocation. The employees of the Milk Marketing Board check the handling of samples and verify the accuracy of records created by Weigher/Samplers.

## **DEFINITIONS**

**Agitation** – A stirring or mixing action while milk is in a Bulk Tank. Agitation prevents the lighter fat or cream components of milk from rising to the top. To ensure the uniformity of milk prior to sampling, the Weigher/Sampler should observe the agitation of the milk for at least five minutes prior to sampling. For tanks holding 1,000 gallons (8,600 pounds) you must agitate 10 minutes or according to the manufacturers' specifications found on the tank nameplate.

**Board** – Refers to the state agency known as the Pennsylvania Milk Marketing Board.

**Bulk Tank** – Storage tank at a dairy farm where milk may be cooled, agitated, and measured prior to transfer to a milk tank truck for transport to a handler or processor.

**Calibration Chart** – This chart shows the amount of milk in the Bulk Tank that corresponds with the reading on the measuring stick or dipstick. The calibration chart and dipstick can only be used on the Bulk Tank they were made for regardless of whether another tank is the same make and model. A calibration chart will show the serial numbers of the corresponding tank and measuring stick.

**Hauler** – Entity licensed by the Board to haul milk in Pennsylvania – usually the employer of the Weigher/Sampler.

**Milk** – Includes milk and cream, fresh, sour or storage, skimmed milk, lowfat milk, flavored milk or milk drink, buttermilk, ice cream mix, and condensed or concentrated whole or skimmed milk except when contained in hermetically sealed containers.

**Milk Sample** – Sample of milk taken after adequate agitation of the Bulk Tank. This sample must be representative of all the milk in the Bulk Tank. Milk Samples must be examined at the laboratory within **48 hours** after collection.

**Milk Tank Truck** – Tank truck specially designed to transport milk from a dairy farm to a handler or processor or from a handler or receiving station to another handler or processor.



**Milk Tank Truck Cleaning Facility** – An establishment where a milk tank truck is cleaned and sanitized.

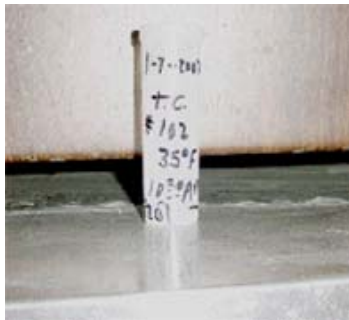
**Producer** – A person producing milk or an individual operating a dairy farm producing milk from cows for sale to milk handlers or processors.

**Producer Receipt** – Document completed in triplicate by the Weigher/Sampler when picking milk up at a dairy farm showing:

1. Date and time of pickup
2. Name or number of producer
3. Stick reading and pounds or gallons of milk
4. Milk Hauler's license number assigned by the Board
5. Signature and license number of the Weigher/Sampler picking up the milk
6. Temperature of milk in the tank

(One copy for producer, one copy for Hauler and one copy for purchasing handler or processor)

**Temperature Control Sample** – This is an extra sample of milk taken at first stop and used to ascertain the temperature of all samples in the case. The Temperature Control Sample should be marked with the letters TC along with the date and time of pickup, the temperature of the sample, the producer number and the Weigher/Sampler license number. **If the Temperature Control Sample is not taken, the laboratory may reject the samples. If for any reason the Temperature Control Sample is not taken, use the first sample taken at the beginning of the route as the Temperature Control Sample.**



**Weigher/Sampler** – An individual who has successfully completed an evaluation of their competency to accurately weigh, sample, measure and pick up milk at a dairy farm.

**Wash Tag** – This tag on the milk tank truck shows the facility where the tank was washed along with the date and time when the milk tank truck and transfer equipment was last washed and sanitized. A Wash Tag is valid for 96 hours before the truck must be rewashed.

### **Bulk Milk Pickup Procedure**

#### **Equipment Check**

The Weigher/Sampler should thoroughly inspect their truck, equipment and supplies at the beginning of each day. The following items are necessary to perform proper weighing and sampling.

1. **Calibrated Pocket Thermometer** – You must carry an approved metal stem analog or digital thermometer. The thermometer should have a range of between 25 - 125° F. Thermometers must be checked for accuracy within  $\pm 1^\circ$  F at least every 6 months. The accuracy check must be documented with the date and checker's initials, either on the thermometer itself or on the thermometer case, or documented separately.



2. **Milk Tank Truck** – Ensure that tank and transfer equipment have been washed and sanitized with a current wash tag. Wash tags are valid for not more than **96 hours**.

3. **Pen**

4. **Producer Receipts** – Make sure you have an adequate supply of Producer Receipts for all Bulk Tanks on the route that day.

5. **Sample Bottles, Sterile Bags or Tubes** – Make sure that sample containers are protected from dust, dirt and the elements. These food grade containers should be stored in a clean container with a lid or in a plastic bag tied at the top. Do not carry sample containers in pockets. Only these approved containers may be used for milk sampling.



6. **Sample Case** – This insulated container is large enough to hold all the samples that will be collected on the route along with sufficient ice. The sample case must contain a sample rack or flotation rack to prevent the sample lids from being submerged in the ice water. The sample case is designed to maintain the sample temperature between 32° F and 40°F.



7. **Sample Dipper and Dipper Container or Dipper Well** – The long-handled sample dipper should be stored in a sanitizer solution in the dipper container or dipper well. You must sanitize the sample dipper for not less than one (1) minute.



8. **Sanitizing Agent** – You will need an approved sanitizing agent for sanitizing sample dipper and other surfaces that may come into contact with milk. When chlorine is used as a sanitizer, it should be at 200 parts per million. When iodine is used, the strength should be at 25 parts per million.

9. **Sanitizer Test Kit** – You must have a sanitizer test kit designed for the type of sanitizer you are using. The sanitizer test kit will allow you to test the strength of your sanitizer and adjust it if necessary.



10. **Spray Bottle** – You will need a spray bottle filled with sanitizer to sanitize the bulk tank outlet valve if the valve is leaking or uncapped.
11. **Watch or Timing Device** – You will need a watch or timing device to monitor the agitation time in the bulk tank.
12. **Waterproof Permanent Marker** – You will be using this to label and identify samples.

### Pick-up Procedures

1. Remove milk hose and electrical cord from truck compartment and put through hose port in milk house wall.
2. Turn on lights in milk house, if needed.



3. Turn off agitator switch and refrigeration control if necessary. If agitator is running, wait for milk to come to complete rest.



4. Plug electrical cord into wall socket. Remove cap from bulk tank valve and set aside taking care not to expose the end cap to the floor or other surfaces that could contaminate it. If there is any visible milk residue, rinse and sanitize outlet valve prior to connecting the hose. After ensuring the integrity of the outlet valve on the bulk tank, connect the hose.

5. Wash hands with soap and warm water, and dry with a single service paper towel. Keep hands clean and dry through entire sampling procedure.

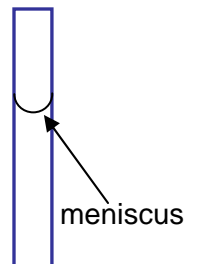
6. Remove porthole cover on bulk tank and check for off odors. Raise tank lid and check for fat particles, flakes, or extraneous matter.



7. **Note:** Do not pick up milk in any container other than the bulk tank. Picking up milk in containers other than the bulk tank may be unsanitary. The only way to accurately weigh and sample milk is in the bulk tank.

8. Remove calibration or measuring stick if stored in the bulk tank. Wipe dry with a single service towel. If the measuring stick is stored outside the bulk tank, wash it in warm water, sanitize and dry.

9. When the milk is completely calm, insert measuring stick into the bulk tank. The stick should seat into a bracket in the bulk tank. Read the measuring stick to the closest line. If the level is between two graduations, read to the even-numbered graduation. If milk line is not straight, make another reading. Make at least two readings or more if readings are not identical. If the stick is stored outside the tank, wash with detergent and warm water. For tanks equipped with external gauge or "site tube," read from the bottom of the meniscus.



10. Record the stick reading on the producer's receipt. The measuring stick is marked in units of 1/32 of an inch or metric equivalent. You must also record the corresponding number of pounds of milk from the calibration chart.

11. Turn on the agitator switch for at least 5 minutes. Tanks containing 1000 gallons (8600 pounds) of milk or more shall be agitated at least 10 minutes, or according to tank manufacturers' specification which are usually found on the nameplate.

12. Wash hands with soap and warm water, and dry with a single service paper towel. Keep hands clean and dry through entire sampling procedure.

13. Check milk temperature and reject any bulk tank in excess of 40° F. You must verify the accuracy of bulk tank thermometer at least monthly with your pocket dial-type or digital thermometer. Be sure to sanitize the thermometer at least 60 seconds prior to checking the temperature of the milk.



14. Take sampling equipment into the milkhouse. You should not carry pre-sterilized plastic bags or sample vials in clothing pocket. Do not lay sample vials on their side on top of tank before using.
15. Fill out producer's receipt with the number of pounds of milk by referring to the calibration chart. Also, include producer's number, milk temperature, date, time, sampler's signature and license number, and hauler's license number.
16. Label sample container with the bar code or producer identification and date. If identification is in writing, use waterproof marker.
17. Remove dipper from sanitizer and empty. Collect sample through porthole by filling and emptying twice with milk before taking sample. Extend dipper 6 to 8 inches into the milk to obtain the sample. Transfer to sample container while holding the container away from bulk tank opening. Do not fill the sample container over the porthole.
18. Fill container only 3/4 full to permit proper mixing. Close vial-type containers tightly. When using plastic bag type containers, you should whirl the bag to close so that air is entrapped inside. The air in the sample containers allows the milk to be mixed prior to testing.
19. If this is the first stop, you must also obtain a Temperature Control Sample.
20. If a producer is using two tanks, use a separate sample container for each tank with each sample container labeled as to the producer identification, tank and date.
21. If you reject a tank of milk, notify the producer and the dairy or the approved inspector. Take a sample for laboratory evaluations. This sample is not to be used for official testing.
22. After samples are collected, open bulk tank valve and start pumping.
23. Rinse sampling dipper and replace in sanitizer.
24. Immediately put sample in rack in insulated case. Provide sufficient ice to keep samples between 32° F - 40° F. Water level should be as high as milk in sample containers. Prevent submersion of sample containers in ice water.
25. When the bulk tank is empty, turn off the pump. Replace cap on hose and unplug electrical cord.
26. Check the bulk tank for sediment, frozen milk, or churning and report unusual situations to both the producer and the dairy field man. Thoroughly rinse all inside surfaces of the bulk tank with lukewarm water.
27. Replace tank covers, rinse floor, turn off lights, and close milk house door.
28. Return milk hose and electrical cord to compartment of truck. Close and latch compartment doors.
29. Deliver milk to the dairy. Milk must be delivered to the dairy within 72 hours after the first milking that is in the bulk tank.

**Notes:** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_