

Industry Plant Sampler Study Guide

Tanker sampling at the milk plant or receiving station is important to the company, to the regulatory agency and to the producer. Samples collected must be representative of all the milk contained in the milk tanker. It is the duty of the licensed Industry Plant Sampler to obtain a sample which will accurately reflect the contents without contaminating the remainder of the milk in the tanker. Industry Plant Samplers shall be evaluated and licensed by the Montana State Department of Livestock.

Standard Methods for the Examination of Dairy Products reference manual outlines procedures to be used in the sampling of over the road milk tankers. The samples are required under Appendix N (Drug Residue Testing and Farm Surveillance) of the Pasteurized Milk Ordinance and your company's quality control program.

Sampling Equipment

1. Thermometer. Must be checked for accuracy against reference thermometer initially and every 6 months (semi-annually) thereafter. Thermometers must be accurate to within $\pm 2^{\circ}\text{F}$ ($\pm 1^{\circ}\text{C}$). Each thermometer must be tagged for identification, the date checked the temperature at which it was checked and any correction factor. Records of thermometer accuracy must be maintained.
2. The sampling instrument is most often a seamless stainless-steel dipper. Other sampling instruments may include spoons, syringes, and tubes. The sampling instrument should be either sterile or easily cleanable then sanitized before use.
3. Sterile sample container.
4. If the sample is not to be tested immediately, a means to maintain the sample at $32^{\circ}\text{-}40^{\circ}\text{F}$ ($0\text{-}4.4^{\circ}\text{C}$) or less must be provided. This includes a sampling container (cooler) or refrigerator. Reusable gel packs (blue ice) or an ice-and-water mixture are sufficient means of keeping samples cooled. Take care not to completely submerge samples below an ice-and-water mixture when using a cooler.
5. A storage container for the sampling instrument tall enough to cover at least the length of the handle which will be inserted into the milk containing a 200 ppm chlorine solution, a 25 ppm iodine solution or other sanitizer approved for food contact. Follow sanitizer label directions for contact time. This solution needs to be tested every 12 hours and replaced with clean solution if it becomes cloudy or the strength drops below acceptable levels. Sanitizer test strips are necessary to verify the strength of the sanitizing solution. Follow company protocol for sampling ports.

Sampling Procedures

When weather and environmental conditions permit, manhole openings and covers of milk tank trucks may be opened outdoors for the short period of time necessary for the collection of samples for animal drug residue screening. Follow company protocol.

1. Protect sampling instruments from exposure to contamination before and during use. Handle sample containers and caps aseptically maintaining sterility. Do not drop, lay down or touch the inside of or otherwise contaminate sterile containers. Do not carry sample containers in your pocket.
2. Wash and dry hands.
3. Check the temperature of the milk.
4. A second sample is required for a temperature control (TC). Temperature control samples are to be collected at each sampling point for raw milk in dairy plants and each over-the-road tanker. Temperature control samples must be labeled with the time, date, temperature at time of collection and the name or initials of the person collecting the sample.
5. Collect tanker samples. Open manhole lid, rinse sample dipper in the milk twice to remove any traces of sanitizer. Dipper should extend 6 to 8 inches into milk to obtain a representative sample. Insert dipper into milk and then holding the sample container away from the manhole, fill the container about 3/4 full. Close the lid of the sample container taking care not to touch the inside of the lid. Identify sample with date, time, temperature, and sampler ID.
6. Rinse the sample dipper with cool water and replace in the sanitizing solution for storage.
7. Follow company's policy on testing the sample for drug residues.

LICENSING

Upon satisfactory completion of an industry training program and the milk inspector's evaluation, all prospective haulers must complete an application for a Plant Sampler License. Upon receipt of the application and required fees, the Department of Livestock will issue the license.