PROPOSED NEW ELECTRONIC TESTING REGULATIONS

CHAPTER 144. ELECTRONIC METHODS FOR TESTING MILK FOR FAT AND COMPONENT CONTENT

§ 144.1. Electronic methods—general.

(a) *Definitions.* The following words and terms, when used in this chapter, shall have the following meanings, unless the context clearly indicates otherwise:

(1) *Accuracy check* – A test made at the beginning of each testing session and once per hour thereafter to determine the continued accuracy of the electronic testing apparatus.

(2) *Calibration* – The adjustment of an electronic instrument so that the results for a given payment component meet the comparison criteria results of an Association of Official Analytical Chemists (AOAC) or Intersociety Council on Standard Methods for the Examination of Dairy Products (ICSMEDP) approved reference method.

(3) *Certified tester* – A Milk Marketing Board certified technician as referenced in §144.2 (relating to certification requirements) operating electronic instruments and/or a person certified to perform specific reference methods for determining the components in raw milk.

(4) *Control milk/Control sample* – Samples produced by a commercial laboratory or by the United States Department of Agriculture (USDA) Market Administrator's Office or its successor agency, used for determining the calibration of an electronic instrument and also used to set the calibration of an electronic instrument.

(5) *Electronic method* – A method for determining the components in raw milk using an electronic testing instrument.

(6) *Milk component/Component* – Unique compound within milk whose relative mass within the milk may be used to determine the payment to producers. Component parts of milk include, but are not limited to, butterfat, protein, lactose, solids non-fat, other solids, and total solids.

(7) *Reference method* – Standard method using analytical chemistry or other approved techniques by which all other electronic methods of testing milk are compared for determining the components in milk.

(8) *Repeatability check* – A test run at the beginning of each testing session in order to demonstrate the ability of a given electronic testing instrument or piece of equipment to meet the requirements for repeatability in § 144.4(b)(2) (relating to repeatability check).

(b) Reference methods used to determine the component content of milk for payment purposes shall be those recognized or approved and set forth either by the ICSMEDP in the latest edition of Standard Methods for the Examination of Dairy Products, published by American Public Health Association, Washington, D.C., or by the AOAC in Official Methods of Analysis,

published by AOAC International, Gaithersburg, Maryland. Only electronic instruments recognized by the USDA Dairy Division for the analysis of milk and milk components and capable of performance standards as referenced in §144.4 (relating to routine inspection and control) shall be used to test milk for payment purposes in Pennsylvania.

(c) A manufacturer of an electronic testing instrument shall make available upon request to the Board a complete instrument operation and maintenance manual and further information as required.

§ 144.2. Certification and approval requirements.

(a) No person may use an electronic instrument or method to test milk for component content for payment purposes unless the instrument and method have been approved by the Board, ICSMEDP, AOAC, or USDA Dairy Division, or their successor organizations.

(b) No person may use or employ an electronic instrument or method to test milk for component content for payment purposes unless certified by the Board under section 602 of the act (31 P. S. § 700j-602).

§ 144.3. Laboratory facilities and supplies.

Laboratories and other facilities using an electronic instrument or method to test milk for component content for payment purposes shall have the following supplies and facilities available and in proper working order:

(1) An approved electronic testing instrument, required accessories and reagents and an instruction manual for operation of the instrument.

(2) A thermostatically controlled water (or other manufacturer-prescribed medium) bath with recording thermometer having proper temperature distribution, set to maintain samples at the temperature specified by the manufacturer of the electronic testing instrument, or other methods of obtaining the required temperature as specified by the instrument manufacturer and acceptable to the Board.

§ 144.4. Routine inspection and control.

(a) Control samples shall be prepared in accordance with methods established by the Board through Official General Order.

(b) *Daily performance.*

(1) *Accuracy check.* Each day before routine testing begins, at least once each hour during the course of the testing session, and when the testing session ends, at least one subsample of control milk shall be tested using the electronic instrument. The certified tester shall read the test to 0.01%. The result difference obtained by the reference method must be 0.05 or less than the known reference test sample result. If the difference of the samples exceeds 0.05 the certified

tester shall discontinue operation of the instrument, determine the reason for the difference and correct the deficiencies before resuming operation.

(2) *Repeatability check.* Each day before routine testing begins, ten consecutive readings on a single well-mixed sample of milk that has not been homogenized shall be made and recorded as a permanent record. If more than ten consecutive readings are taken the certified tester shall use the last ten results. The repeatability check may be assumed to be acceptable if the range of the ten readings is 0.04 or less.

§ 144.5. Instrument calibration.

(a) *Calculation of calibration results.* An instrument shall be considered to be calibrated properly when the average difference between the instrument results for butterfat and protein and the reference method results for at least ten different control samples, called mean average, is +/- 0.04 and the standard deviation of the difference between the instrument and reference methods, called standard deviation, are 0.04 or less. For all solids the mean average is +/-0.09 and the standard deviation of the differences between the instrument and reference methods are 0.12 or less for those same ten samples.

(b) *Conditions requiring calibration.*

(1) The instrument shall be calibrated when initially installed.

(2) The instrument shall be calibrated when the accuracy check is confirmed to have failed.

(3) The instrument shall be calibrated if a part which may affect proper operation of the instrument is replaced, rebuilt or adjusted.

(4) The instrument shall be calibrated upon the occurrence of the specific circumstances which require calibration for that instrument, as determined by the manufacturer.

§ 144.6. Required records.

(a) The certified tester(s) and testing facilities or laboratories shall maintain all records required by this section for a period of at least one year. Records may be maintained in paper or electronic formats. In all cases records must denote the record date and the name and license number of the Certified Tester who created or maintained the record(s).

(b) Records of calibrations, accuracy checks, mean average and standard deviation computations and other instrument use.

(c) Records of the operation and maintenance of each electronic testing instrument and records of all test results by electronic method.

(d) Certified testers shall record standard deviation of the calibration verification as follows:

(i) The results of individual samples by reference method (average only for reference method) and electronic method.

(ii) The date of computation, name and license number of certified tester.

(e) Certified testers operating all electronic testing equipment shall perform a daily accuracy check and record the following:

(i) Reference method used, sample identification, individual test results and average test.

(ii) Electronic method used, time, sample identification, individual test results and average test results.

§ 144.7. Summary record required.

(a) The certified tester and the testing facility or laboratory shall compile summary records of all component tests performed for all producers for the first and second half of each month containing results for at least two evenly spaced representative samples in each half month for each producer. The record shall contain the farm sampling date, the laboratory testing date, the laboratory or testing site, the tester identification, the producer identification and the test result for each sample. The record shall be known as the original record or laboratory record and shall be maintained by the tester for at least one year. If the tests are performed by a milk dealer licensed by the Board, the milk dealer shall maintain the records of the component content of producers' milk samples for at least one year.

(b) If tests are performed in a commercial laboratory which is not an integral part of the milk plant where the samples were delivered, that licensed dealer or plant must make available to the Board a copy of the final laboratory records of the component tests in computerized or written form for at least one year.

§ 144.8. [Reserved].

§ 144.9. [Reserved].

§ 144.10. [Reserved].

§ 144.11. [Reserved].

§ 144.12. Credit producers with actual component test.

(a) No individual producers delivering milk or cream, or both, to a milk or cream-receiving or purchasing plant, where the milk or cream is purchased on the basis of the milk components

contained therein, may be credited with a greater or lesser percentage or average percentage of milk components than is actually contained in the milk or cream delivered.

(b) No report on a test to determine the milk component content of milk or cream may be of a greater or lesser percentage of milk components than is actually contained in the milk or cream from which the sample was taken. In order to be a basis of payment to an individual producer, a recheck of a producer's milk component test shall be made from the next available sample taken after the original test. Rechecks of a producer's milk component test shall be made when the butterfat varies 0.5% or more or the protein varies 0.3% or more from the most recent test.

§ 144.13. Availability of records.

Laboratory, cooperative, or plant records shall be open to examination by the Board or its authorized representative. Upon request of a producer, the purchaser or receiver of milk or cream, or both, shall permit the producer to examine the part of the record containing information concerning the samples of milk or cream representing the milk or cream delivered by the producer. A purchaser or receiver of milk or cream from the producer thereof shall, on written request, at least once each month mail or deliver to the producer a written statement, unless the producer agrees to accept a verbal statement, of the percentage of milk components found to have been contained in the sample or samples representing the milk or cream delivered by the producer.

§ 144.14. Responsibility for violations.

A certified tester at a laboratory or plant shall be responsible for a violation of the act or this chapter, including the keeping of the reports and records required by the act and this chapter. Additionally, the purchaser or receiver, or both, of the milk or cream, or both, or the licensed manager of a milk-gathering station, manufactory or plant receiving or purchasing milk or cream from producers for sale or resale or for manufacture, where the payment or settlement for the milk or cream is based in whole or in part on the milk component content thereof, shall be responsible for a violation of the act or this chapter by a person working under his direction or subject to his orders or the act or this chapter, including the keeping of the reports and records required by the act and this chapter.