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STATE OF WISCONSIN)
DEPARTMENT OF AGRICULTURE,) SS.
TRADE & CONSUMER PROTECTION)

TO ALL TO WHOM THESE PRESENTS SHALL COME, GREETINGS:

I, Norman E. Kirschbaum, Administrator, Food Division, State of Wisconsin Department of Agriculture, Trade and Consumer Protection, and custodian of the official records of said Division, do hereby certify that the annexed order amending rules relating to the sampling and testing of milk and cream, Chapter Ag 107, Wis. Adm. Code, was duly approved and adopted by the Department on August 2, 1982.

I further certify that said copy has been compared by me with the original on file in the Department and that the same is a true copy thereof, and of the whole of such original.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the official seal of the Department at the Department offices in the city of Madison, this 2nd day of August, 1982.

Norman E. Kirschbaum
Norman E. Kirschbaum, Administrator
Food Division

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ORDER OF THE
STATE OF WISCONSIN

DEPARTMENT OF AGRICULTURE, TRADE AND CONSUMER PROTECTION
ADOPTING, AMENDING AND REPEALING RULES

- 1 Relating to rules concerning sampling and testing milk and
2 cream.

Analysis Prepared by the Department of Agriculture,
Trade and Consumer Protection

The major change in the department's proposed revision of chapter Ag 107 authorizes the use of mechanical devices to test milk for milk fat content and components other than milk fat. Other changes recognize the use of potassium dichromate as a milk sample preservative in lieu of bichloride of mercury, which has contributed to some environmental pollution in the state. A requirement for more accurate and complete recordkeeping on the part of bulk weighers and samplers who collect milk from producer farms is also included.

As a result of the approval of mechanical testing devices, additional terms such as "calibration" and "performance check" are included in the definitions section. The sample procedures section is also amended to require all samples taken by a licensed weigher and sampler from farm bulk tanks and intended for bacteriological testing to be collected in a commercially sterile container. Other sampling procedure amendments include taking and recording the temperature of the milk in each farm bulk tank and collecting a second sample at the first farm stop for each bulk tank truck load, which shall be used as the temperature control for all samples subsequently collected on that load. The sampler is also required to make out a collection record at each location and submit it to the dairy plant receiving the milk along with the samples of all milk collected on each run.

Other proposed changes allow transporting samples from the dairy plant purchasing the milk to a second dairy plant, on written approval from the department, and for pre-pipetted samples to be transported to a central testing laboratory. The expanded section on automated test devices includes calibration, daily performance check and reference check requirements. If the automated device test results are used as the basis for payment, a constant voltage regulator is required to ensure proper performance of the test device.

A new section dealing with sampling and testing for components other than milk fat is created in the rule. The section recognizes all of the accepted Association of Official Analytical Chemists

(AOAC) tests for components and allows for the department to approve any other test method prior to AOAC acceptance. Tests for other components are required to be run at the same frequency as tests for milk fat, which is three tests on a 15 or 16 day pay period and four or more tests on a monthly pay period basis. Other amendments to the rule are made in keeping with the changes which were recently made in the revisions to Chapters Ag 30, 31 and 80, Wis. Adm. Code.

Pursuant to authority vested in the State of Wisconsin Department of Agriculture, Trade and Consumer Protection by sections 93.07(1), 97.24(4) and 98.13(5), Wis. Stats., the State of Wisconsin Department of Agriculture, Trade and Consumer Protection repeals, amends and adopts rules interpreting sections 98.13 to 98.15, Wis. Stats., as follows:

Section 1. Ag 107.01(1) is amended to read:

Ag 107.01(1) "Department" means the state of Wisconsin department of agriculture, trade and consumer protection.

Section 2. Ag 107.01(2) to (7) are renumbered Ag 107.01(8), (5), (9), (4), (7) and (3), respectively, and (3), (4), (7) and (8) as renumbered are amended to read:

Ag 107.01(3) "Composite sample" or "composite milk sample" means a milk sample preserved with an approved chemical and built-up as prescribed in this chapter for use in the testing of milk for a given pay period as prescribed in s. 98.13, Stats.

(4) "Fresh milk sample" means an unpreserved milk sample of producer milk collected aseptically.

(7) "Preserved fresh milk sample" means a fresh milk sample preserved with potassium dichromate ~~and-intended-for-use-in-dairy-herd-improvement-association-(DHIA)-or-other-recognized-production~~

22

23

1 ~~record-testing-programs~~ for the purpose of subsequent laboratory
2 analysis in a dairy herd production testing program.

3 (8) "Sample" means a representative sample of milk or cream
4 used for testing to determine ~~butterfat~~ milkfat or protein con-
5 tent, or both-value, quality and any other properties or charac-
6 teristics of the milk or cream from which the sample is taken.

7 Section 3. Ag 107.01(2), (6) and (10) are adopted to read:

8 Ag 107.01(2) "Calibration" means the complete procedure to
9 arrive at the allowable standard deviation for the test method or
10 instruments, as prescribed in "Official Methods of Analysis of the
11 Association of Official Analytical Chemists," 13th Edition
12 (1980).

13 (6) "Performance check" means the daily cross-check pro-
14 cedures used for milkfat test determination and approved by the
15 department.

16 (10) "Test records" mean the original worksheets for equip-
17 ment calibration, performance checks and testing on all samples.

18 Section 4. Ag 107.02(1) and (2) are amended to read:

19 Ag 107.02 LICENSING MILK WEIGHERS AND SAMPLERS. (1) In
20 addition to the initial examination required for the issuance of an
21 original milk weighers and samplers license under s. 98.146,
22 Stats., the applicant may be required to demonstrate competency
23 to perform the weighing and sampling functions, either on the
24 department's premises or in a field examination. The applicant
25 shall, as a condition to the first year's biennial license renewal
26 ~~thereef~~, satisfactorily pass a second and more comprehensive
27 ~~in-depth-written~~ examination as prepared by the department.

(2) Every ~~first~~ sixth year after a milk weighers and samplers license has been in effect, the department may, as a condition of renewal thereof, require re-examination, unless the applicant has satisfactorily completed a training course approved by the department within the ~~immediate-preceding-5-year~~ past 6-year period.

Section 5. Ag 107.02(3) is adopted to read:

Ag 107.02(3) Every milk and cream tester or cheesemaker or buttermaker qualified for testing milk with a mechanical device shall have that qualification clearly indicated on the license. Any licensed milk and cream tester found to exceed accepted tolerances for calibration of the mechanical testing device may have ~~the~~ his or her license suspended by the department.

Section 6. Ag 107.03(1), (2)(a), and (2)(b)1 to 8 and 9 (intro) are amended to read:

Ag 107.03 COLLECTION AND CARE OF SAMPLES. (1) CONTAINER REQUIREMENTS. (a) Sample containers shall be constructed of non-toxic transparent materials, ~~and~~ be in a clean, sanitary and dry condition prior to use, and be commercially sterile for all samples intended for bacteriological testing. ~~Glass~~ All glass or rigid plastic containers used for fresh milk samples sampling shall be equipped with over-the-lip closures, and have an area on the sample container large enough for placing on it the date of collection and the producer number.

(b) 1. Fresh milk sample containers shall ~~be-of~~ have sufficient ~~size-and~~ capacity to hold a sample quantity large enough to permit ~~two~~ 2 tests of the particular test or tests to be applied to the sample and shall be of sufficient size to permit ~~the~~

1 thorough mixing of a the sample prior to its use for ~~testing or the~~
2 ~~building~~ any test, or for the residual to be used to build of a
3 composite sample.

4 2. Fresh milk sample containers shall in no event have a
5 capacity of less than 3 ounces (90 milliliters), without ~~the prior~~
6 written approval ~~of~~ from the department. No approval shall be
7 granted unless the plant can demonstrate to the satisfaction of
8 the department that because of test methods and procedures used, a
9 smaller sample container will suffice to meet requirements under
10 subd. 1.

11 (c) Composite sample containers shall have a minimum capacity
12 of 8 ounces (240 milliliters) and a satisfactory closure perma-
13 mently affixed to the sample container.

14 (d) Composite sample and fresh milk sample containers shall
15 bear legible letters or numbers identifying each patron's sample.
16 Fresh milk sample containers shall also bear ~~such identifying~~
17 ~~letters and numbers and also~~ the date of collection of the sample
18 by the sampler. Identifying letters or numbers, and the date of
19 collection, shall be placed on the container by the sampler at the
20 time a fresh milk sample is taken. When a patron discontinues
21 shipping milk or cream to ~~a particular~~ any dairy plant, the letters
22 or numbers used by the plant to identify ~~samples of such~~ that
23 patron's milk shall not be reused to identify any milk samples of
24 any other plant patron for a period of at least 90 days.

25 (2) SAMPLE PROCEDURES. (a) Weigh tank sampling. If milk is
26 poured into a weigh tank, the weigh tank shall be constructed in
27 such a manner that the pouring of the milk into the tank results in

1 complete mixing of the milk. A fresh milk sample of each weighing
 2 shall be taken immediately after the milk ~~have~~ has been poured ~~in~~
 3 into the weigh tank. ~~Where~~ When multiple weighings of a patron's
 4 milk shipment is required, the number of cans of milk poured
 5 into the weigh tank in any one weighing shall be equalized as
 6 nearly as possible, and the entire contents of each can shall be
 7 included in each separate weighing. ~~Where~~ When multiple weighing
 8 of a single delivery is required, a separate sample shall be taken
 9 of each weighing using a separate sample container.

10 (b) Farm milk tank sampling. 1. Each sampler shall grade
 11 farm milk by appearance and smell prior to accepting it and load-
 12 ing it on the bulk milk truck. The sampler shall reject all off-
 13 flavor or off-odor milk and milk which contains any visible evi-
 14 dence of mastitis ~~garget~~ and extraneous matter. If the quality-
 15 of milk is in doubt, the sampler ~~shall,~~ before accepting the any
 16 milk, shall call the dairy plant and request inspection by a plant
 17 quality control officer or other person ~~experienced-in-the-grading~~
 18 ~~of-milk-by-flavor-and-odor~~ individual designated by the plant, who
 19 shall accept or reject the milk.

20 2. Samplers shall ~~take~~ read and record the temperature of
 21 the milk prior to accepting ~~it~~ and loading it on the bulk milk
 22 truck. When the milk temperature is not ascertainable by reading
 23 the farm bulk tank thermometer, the sampler shall take and read
 24 the temperature by using a pocket type spring dial or other suit-
 25 able portable thermometer, accurate to plus or minus 2° F. with
 26 the smallest gradation not greater than 2° F. Milk ~~in-excess-of~~
 27 50°-Fahrenheit shall be rejected unless collected within 2 hours

1 after milking if it exceeds the applicable temperature requirement
2 for the following grades of milk: manufacturing grade: 50° F.;
3 grade A: 45° F.

4 3. Samplers shall wash their hands ~~after~~ before checking the
5 temperature of the milk by use of a portable thermometer and or
6 before measuring the quantity of milk in the tank.

7 4. Samplers shall take and record an accurate measurement of
8 the amount of milk in the farm bulk tank by the reading of a clean
9 gage gauge rod or other approved measuring device. The gage gauge
10 rod shall be rinsed with warm potable water and wiped dry with a
11 clean single-service disposable towel immediately prior to its
12 use. The milk shall be allowed to become motionless before the
13 gage gauge rod is inserted into the bulk tank for a reading.
14 Immediately after the reading, ~~samplers~~ the sampler shall convert
15 the reading to pounds weight or gallons volume using ~~the conver-~~
16 ~~sion chart of~~ the bulk milk tank ~~manufacturer~~ manufacturer's con-
17 version chart, and record ~~such~~ the reading on a ~~duplicate~~ multiple
18 collection record, one copy of which is ~~to be~~ posted in the milk-
19 house and ~~the other~~ one copy submitted to the dairy plant at the-
20 time of delivery.

21 5. The collection record for each patron shall include the
22 patron's identification letters or numbers number, the time and
23 date of collection and sampling, the ~~temperature and~~ quantity
24 of milk collected, the date of collection and sampling, and the
25 temperature of the milk at the time of collection. The collec-
26 tion record for each patron shall be signed by the sampler and
27 delivered with the load of milk at the time of delivery.

1 6. ~~The sampler shall cause the milk~~ Milk from which a sample
2 is to be taken ~~to~~ shall be agitated by the sampler for at least 5
3 minutes or more prior to ~~the~~ taking ~~of~~ a sample. Milk shall be
4 agitated for at least 10 minutes if the farm bulk tank has a capa-
5 city greater than 1500 gallons, or when the 3A Standard for a tank
6 requires a longer agitation time. The sampler shall take at least
7 a 2 ounce representative fresh milk sample ~~for~~ from each farm bulk
8 tank prior to collection and delivery of a patron's milk. A
9 sampling procedure which prevents contamination of the sample or
10 sample container shall be used. The dipper shall be cleaned and
11 sanitized in a 100 ppm chlorine or equivalent sanitizing solution
12 and dipped in the milk twice before taking the sample. The milk
13 sample shall be transferred from the dipper to the sample con-
14 tainer away from the open port of the farm bulk tank. A sampler
15 shall not commingle fresh milk samples from any other bulk milk
16 tanks on the premises. Patron identification and date of sampling
17 ~~and collection~~ shall be placed on the sample container. The
18 sample shall, ~~immediately after it is taken,~~ be placed in a rack
19 in an ice-water bath or ice bath immediately after it is taken to
20 maintain its temperature between 32-and 40° Fahrenheit. No
21 ~~samples~~ sample of less than 2 ounces may be taken by any sampler
22 without ~~the~~ prior written approval of the department. Such
23 ~~approval~~ Approval may be granted only ~~where-the~~ when a dairy plant
24 can demonstrate to the satisfaction of the department that ~~com-~~
25 ~~parable~~ accurate test results can be achieved by ~~the~~ taking of a
26 smaller sample.

1 7. The sampler shall ensure that the milk truck hose cap is
2 protected from contamination at all times and that the farm bulk
3 tank outlet valve is clean ~~and sanitary~~ before the hose is
4 connected to the bulk tank. A sampler may sanitize the outlet to
5 the farm bulk tank prior to connecting the truck hose. The truck
6 hose shall enter the milkhouse through the hose port provided in
7 the milkhouse wall. Milk may be pumped only into bulk tank trucks
8 meeting the sanitary and equipment standards of Chapters Ag 30, 31,
9 and 80, Wis. Adm. Code Chs. Ag-30-and-80. No milk may be pumped
10 directly or indirectly into bulk tank trucks from containers other
11 than farm bulk tanks.

12 8. After pumping the milk from the farm bulk tank, the milk
13 hose shall be disconnected from the tank, capped and returned to
14 the bulk milk truck cabinet. The farm bulk tank shall be rinsed
15 with cold or ~~warm~~ lukewarm water after it has been emptied, but
16 not until after the milk pump has been shut off and the milk truck
17 hose disconnected from the tank and capped.

18 9. The sampler shall provide the dairy plant purchasing milk
19 from the producer with a representative sample of all-milk
20 ~~delivered to it and~~ each patron's milk comprising the load, and an
21 accurate collection record ~~for each patron's milk at the time of~~
22 ~~delivery of the milk to the plant.~~

23 Section 7. Ag 107.03(2)(b)9.a. to d. and 10. are adopted to
24 read:

25 Ag 107.03(2)(b)9.a. If a sampler delivers milk to a diverted
26 dairy plant other than the one to which the producers are
27

1 routinely assigned, the sampler may, upon receipt of written per-
2 mission from the department, retain the producer samples for 24
3 hours.

4 b. All samples retained by a sampler shall be placed in a
5 separate refrigerator until collected by another agent of
6 the receiving dairy plant or the department. The refrigerator
7 shall be maintained at 40° Fahrenheit or less, used for no other
8 purpose than the storage of samples, and shall be accessible to
9 the department at all times.

10 c. The sampler shall retain dated samples for 24 hours. When
11 a second set of samples is placed in refrigeration, those
12 which exceed the 24 hour time limit must be disposed of and not
13 retained in the same refrigerated storage unit.

14 d. An agent of the dairy plant purchasing the milk may
15 transport the samples on written approval from the department to
16 the purchasing dairy plant or a central testing laboratory.

17 10. A sampler shall collect 2 samples at the first collec-
18 tion point for each bulk tank truck load and identify one sample
19 to be used as the temperature control for all samples subsequently
20 collected for that load and placed in the truck's sample compart-
21 ment. The sample container of the temperature control, shall show
22 the producer number, date, time of collection and temperature of
23 the milk in the farm bulk tank from which the sample was
24 collected.

25 Section 8. Ag 107.03(2)(c) and (d) and (3) are amended to
26 read:

27

1 (c) Fresh milk sample size. The size of the fresh milk
 2 sample shall be large enough to permit a retesting by the dairy
 3 plant ~~or,~~ its testing ~~agency~~ agent or the department, but in no
 4 case shall the sample size be less than 2 ounces (60 milliliters)
 5 without ~~the~~ prior written approval of the department. ~~Such~~
 6 ~~approval~~ Approval may be granted only where the plant can
 7 demonstrate to the satisfaction of the department, that the sample
 8 taken will permit thorough mixing and at least one retest for each
 9 every test ~~to-be-made-of~~ conducted on the milk sample.

10 (d) Composite samples. A composite sample of a patron's
 11 milk shall consist of a representative sample ~~of~~ from each
 12 delivery of milk ~~made~~ by the producer to a dairy plant within a
 13 given pay period. ~~equal-in-amount-to-at-least~~ A minimum of 10
 14 milliliters of milk for each ~~days~~ day's production shall be
 15 included in ~~such-deliveries~~ the composite sample from every
 16 delivery. In no event shall a completed composite sample consist
 17 of less than 150 milliliters for a 15 day milk delivery period.
 18 When milk is frozen or otherwise delivered in ~~such~~ a condition as
 19 ~~to-prevent~~ which prevents adequate mixing, a sample of ~~such~~ the
 20 milk shall not be taken and a notation shall be made on the collec-
 21 tion sheet that a sample was excluded from the composite ~~container~~
 22 sample. The composite sample shall be ~~built-up~~ built up as
 23 follows:

24 1. For bulk milk deliveries, by transferring a minimum of
 25 10 milliliters of milk for each ~~days~~ day's production from each
 26 fresh milk sample to the composite sample container. Such transfer
 27 shall be made on the ~~same day or-by-10-o'clock-a.m.-of-the-day~~

1 ~~following-the-day~~ of receipt or by 12:00 o'clock noon of the
 2 following day on which the fresh milk sample is collected.

3 2. For can milk deliveries, by transferring 10 milliliters
 4 of milk ~~for~~ from each ~~days~~ day's production directly from the milk
 5 weigh tank to the composite sample container immediately after the
 6 milk is poured into the weigh tank.

7 (3) CARE AND STORAGE OF SAMPLES. (a) All milk samples ~~other~~
 8 ~~than-preserved-fresh-milk-samples~~ received directly from the farm
 9 shall be kept tightly covered and maintained at a temperature
 10 between 32 and 40° Fahrenheit at all times ~~including~~ during trans-
 11 portation and ~~storage~~ while held for testing at the dairy plant or
 12 a testing laboratory.

13 (b) ~~Composite-samples~~ No composite sample shall ~~not~~ be kept
 14 out of refrigeration at the dairy plant any for a longer time than
 15 necessary to ~~complete-the~~ continue building of the composite
 16 ~~samples~~ sample from the fresh milk samples of a producer, or the
 17 completion of the weighing and sampling operations for each truck
 18 load ~~can~~ delivery of can milk. ~~The-transporting-of~~ Transporting
 19 composite samples from the dairy plant or laboratory to a dairy
 20 farm is prohibited. A Each dairy plant or laboratory shall use a
 21 preservative approved by the department ~~shall-be-used~~ in the
 22 building of each composite sample. The preservative may consist
 23 of a bichloride of mercury (or corrosive sublimate) tablet
 24 which shall weigh not more than one gram and contain not less than
 25 2.5 nor more than 3.5 grains of bichloride of mercury. Potassium
 26 dichromate or any other chemical preservative preservatives may
 27 be used ~~as-a-preservative-for~~ to preserve composite samples upon

1 written approval ~~of~~ from the department. Not less than 14 grains
 2 nor more than 20 grains of potassium dichromate may be used as a
 3 preservative in building composite samples.

4 [Note: After January 1, 1983, mercuric chloride as a
 5 preservative will be prohibited.]

6 (c) Milk Fresh and composite milk samples may be transported
 7 from ~~dairy-plants~~ a dairy plant to a ~~central~~ certified laboratory
 8 or other department approved laboratory for milkfat and other
 9 component testing only on prior written approval ~~by~~ from the
 10 department.

11 Section 9. Ag 107.03(3)(d) is adopted to read:

12 Ag 107.03(3)(d) Composite samples may be pipetted in dupli-
 13 cate at a dairy plant and transported to a second laboratory for
 14 testing on written approval from the department. Only the 2
 15 pipetted portions may be transported to the testing laboratory, and
 16 the residual of the composite shall be left at the dairy plant.
 17 When any sample is pre-pipetted for testing, all AOAC procedures
 18 for warming, mixing and pipetting the sample shall be followed.
 19 All Babcock test bottles shall be properly sealed and legibly
 20 identified with the patron number.

21 Section 10. Ag 107.04(1) and (2) are amended to read:

22 Ag 107.04 TESTING OF SAMPLES. (1) TEST METHODS. ~~Butterfat~~
 23 Milkfat tests of fresh milk samples may be made by the ~~ether~~
 24 ~~extraction~~ ~~or~~ Babcock test, ether extraction test, the Milko-
 25 Tester, or other AOAC test method approved by the department.

26 (2) ETHER EXTRACTION AND BABCOCK TESTS. (a) All
 27 ether extraction ~~or~~ and Babcock tests shall, ~~except as provided~~

1 ~~under pars. (b) and (c)~~ be conducted as prescribed in ~~the 1970~~
 2 ~~edition of~~ "Official Methods of Analysis of the Association of
 3 Official Analytical Chemists," 1980 edition, except as provided
 4 under pars. (b) and (c). a A copy of ~~which~~ this reference is on
 5 file in the offices of the department ~~of agriculture~~, secretary of
 6 state, and revisor of statutes, and ~~which~~ may be obtained from the
 7 Association of Official Analytical Chemists, Inc., P.O. Box 540,
 8 Benjamin Franklin Station, Washington, D.C. 20044.

9 (b) Each sample ~~to be~~ tested by the Babcock test method shall
 10 be agitated for at least 3 minutes by the use of a mechanical
 11 agitator after ~~the~~ pipetting of the sample and adding sulfuric acid
 12 in accordance with the AOAC procedure. A ~~mechanical~~ reader, such
 13 as a needlepoint divider or other ~~device~~ mechanical divider which
 14 accurately determines milkfat level in a test bottle shall be used
 15 in reading ~~the~~ all Babcock test tests. All Babcock test readings
 16 shall be made against a light-colored surface with adequate natural
 17 or artificial light.

18 (c) The Babcock test may be read to the nearest 0.05% by
 19 weight as provided in "Official Methods of Analysis of the
 20 Association of Official Analytical Chemists," if ~~Babcock~~ the test
 21 bottles are graduated to 0.1% ~~or an automated device graduated to~~
 22 ~~0.1% are used.~~ Results obtained from an automated test device
 23 may be reported with the same accuracy which the device is capable
 24 of reading or reporting.

25 Section 11. Ag 107.04(3) is repealed and recreated to read:

26 Ag 107.04(3) OTHER APPROVED TEST DEVICES. (a) Calibration
 27 requirements. All automated test devices shall be calibrated on

1 initial installation and at least every 12 months thereafter by
2 either the Babcock test or the ether extraction test. The device
3 shall be recalibrated whenever the mean deviation on a daily per-
4 formance check is greater than plus or minus 0.04% or when major
5 repairs are made to the test device.

6 (b) Constant voltage. A constant voltage regulator shall be
7 connected to all automated test devices in line with single phase
8 115 or 220 volt power supply.

9 (c) Calibration procedure. 1. Twenty representative samples
10 ranging from 3.0% to 6.0% milkfat shall be tested in triplicate on
11 the automated test device and by the Babcock method or ether
12 extraction method. The average of the 3 results for each sample
13 tested by each method shall be calculated to the nearest 0.01%
14 milkfat. The standard deviation of the difference between the
15 automated device's results and the reference test results, calcu-
16 lated in accordance with the Association of Official Analytical
17 Chemists Methods, 13th edition (1980), shall not exceed plus or
18 minus 0.04%. The mean deviation of the results from the automated
19 test device and the Babcock or ether extraction reference test
20 method shall not be greater than plus or minus 0.04% for acceptable
21 calibration.

22 2. The calibration record shall be maintained on file in the
23 laboratory.

24 (d) Daily performance check. The device shall be checked on
25 a daily performance basis by the use of at least 5 milk samples
26 ranging from 3.0% to 5.5% milkfat. These must be fresh
27 unhomogenized samples. Triplicate Babcock tests must be made on

1 all of the samples and an average recorded on forms approved by the
2 department. If the device varies more than plus or minus
3 0.04% from the Babcock results and basic adjustment does not bring
4 it to within this tolerance, recalibration of the device is
5 necessary.

6 (e) Reference check. 1. A reference check sample must be
7 tested during the course of the performance check and each hour
8 during testing. The reference sample may be one of the samples
9 used for the daily performance check or may be a homogenized milk
10 sample.

11 2. If a homogenized milk sample is utilized, at least 10
12 tests must be run on the initial reference check sample before the
13 start of producer sample testing. The average of those results and
14 the hourly reference check sample results must agree within
15 plus or minus 0.03%.

16 3. If the reference sample has not repeated within toler-
17 ance, adjustments shall be made to the device to agree with the
18 average of the reference samples and all producer samples tested
19 since the previous complying reference check shall be retested.

20 (f) Test accuracy and recordkeeping. All Babcock test
21 results used in the calibration, daily performance check, or refer-
22 ence check of an automated test device shall be read to the nearest
23 0.05%. Records of all checks, calibration data and daily perform-
24 ance checks shall be maintained on file in the laboratory and be
25 available for department inspection for a period of at least one
26 year.

1 Section 12. Ag 107.04(4) and (5) are amended to read:

2 Ag 107.04(4) FRESH MILK TESTING. Fresh milk samples shall be
 3 tested for milkfat or other components no later than the second
 4 third day following the day the sample was taken, Saturdays,
 5 Sundays and holidays excluded. No fresh milk sample may be tested
 6 for milk quality as defined in section Ag 30.01(7), Wis. Adm. Code,
 7 if the sample is held for longer than 36 hours.

8 (5) COMPOSITE SAMPLE TESTING. (a) ~~Butterfat~~ Milkfat tests
 9 of composite milk samples may be made by the ~~ether-extraction or~~
 10 Babcock test or ether extraction test method methods. No
 11 mechanical device may be used in ~~the test of~~ testing composite
 12 samples without ~~the~~ prior written approval of the department.
 13 Approval, ~~if~~ when granted, ~~may~~ shall be limited ~~for use at~~ to a
 14 specific location for samples from specified producers.

15 (b) Composite samples shall be tested within 3 days,
 16 Saturdays, Sundays and holidays excluded, after the build-up of the
 17 sample has been completed. Time for completion of the tests may
 18 not be extended without prior written approval ~~of~~ from the
 19 department. Replacement of a set of composite samples with fresh
 20 milk samples shall not be done without prior approval from the
 21 department. Composite samples shall be built and run for the
 22 periods specified in s. 98.13, Stats. Loss of an individual
 23 composite sample due to a laboratory accident shall be replaced
 24 with 3 subsequent fresh milk samples.

25 Section 13. Ag 107.05 and 107.06(1) and (2) are amended to
 26 read:

27

1 Ag 107.05 SAMPLE RETENTION AND RETESTING. The ~~residue~~
2 residual of each composite sample shall be removed from the water
3 bath immediately after each sample ~~has-been~~ is pipetted. The
4 ~~residue~~ residual of each composite sample, ~~both-composite-and~~
5 ~~fresh~~, shall be held intact after initial testing and kept refrig-
6 erated at a temperature between 32 and 40° F. on the premises where
7 tested for a period of not less than 5 days ~~for-composite-samples~~
8 ~~and-not-less-than-2-hours-for-fresh-samples~~. After completion of
9 all testing, fresh milk samples shall be retained in the laboratory
10 for at least 4 hours. The department may retest ~~such~~ any composite
11 or fresh milk samples on the premises where they were tested or
12 remove them to ~~another~~ a department laboratory for ~~such~~ this
13 ~~purposes~~ purpose. The department shall, upon ~~the~~ written request
14 of the licensed tester or ~~his~~ the employer, give notice of
15 the time and location for retesting the ~~plant's~~ plant samples, pro-
16 viding ~~such~~ the request is made at the time the samples are ~~taken~~
17 collected by the department for ~~testing~~ retesting. Notice of
18 department retesting of a dairy plant's samples is not required to
19 be given to a marketing association engaged in testing composite or
20 fresh milk samples for its member patrons, unless a written
21 request, signed by the marketing association tester who executed
22 the official test record, is left at the dairy plant. The
23 department may retain ~~such~~ retested samples for investigative or
24 evidentiary purposes or return them in a sealed condition to the
25 dairy plant ~~operator~~ upon written request.

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1 Ag 107.06 TEST RECORDS. (1) Each licensed tester shall,
2 immediately after testing a sample, shall record in duplicate on a
3 form ~~prescribed~~ approved by the department, ~~the results of such~~
4 ~~tests opposite~~ the name or identification letters or number of the
5 patron whose milk or cream was tested, the date of test and the
6 test results. ~~Such~~ The record shall show and all copies thereof
7 shall be signed by the tester. One copy shall be retained at
8 the testing laboratory and one copy made available for examination
9 ~~by the department~~ at the dairy plant. All original test records
10 shall be kept for a period of not less than ~~one year~~ 2 years. No
11 ~~such record of tests~~ test records may be altered except that
12 errors, if made, shall be corrected by striking through the
13 original entry ~~with a line~~ and inserting the correct entry
14 immediately adjacent ~~thereto~~ to the original, along with the
15 initials of the tester ~~making~~ who made the corrective entry.

16 (2) When using fresh milk tests for payment to patrons, the
17 ~~arithmetical~~ arithmetic average of 3 or more ~~butterfat~~ milkfat or
18 other component test results shall be used for each 15 day ~~(or 16~~
19 ~~day)~~ pay period or the ~~arithmetical~~ arithmetic average of 4 or more
20 ~~butterfat~~ milkfat or other component tests for a one month's month
21 pay period. The frequency of conducting milkfat or other component
22 tests shall be evenly distributed throughout a pay period. In
23 averaging milkfat or other component test results, decimal
24 fractions may be rounded to the nearest 0.01%.

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1 Section 14. Ag 107.06(3) is repealed and recreated to read:

2 (3) Calibration records, daily performance checks and routine
3 checks of automated instruments, Milko-tester calibration records,
4 and Babcock test results shall be kept on forms prescribed by the
5 department.

6 Section 15. Ag 107.07 is renumbered 107.08 and as renumbered
7 is amended to read:

8 Ag 107.08 ACCURACY OF SAMPLES AND TESTS. No sampler, tester,
9 cheesemaker, buttermaker or any other person shall falsely identify
10 milk samples, submit false samples of milk to a dairy plant, make
11 any false record or report concerning a milk sample or ~~its~~ the test
12 results, or the quality or quantity of milk, or violate any other
13 provision of these rules.

14 Section 16. Ag 107.07 is adopted to read:

15 Ag 107.07 MILK COMPONENT SAMPLING AND TESTING. (1) All test
16 methods and equipment used in testing milk to determine its value
17 for payment by testing for components other than milkfat, shall
18 conform to test methods and equipment approved by the Official
19 Association of Analytical Chemists, Standard Methods for
20 Examination of Dairy Products, or other test methods and equipment
21 approved by the department. Test methods approved by AOAC for
22 protein analysis include:

23 (a) Keldahl method number 16036 for total nitrogen.

24 (b) Dye binding method number 1637 acid orange 12.

25 (c) Pro-milk method for determination of milk and protein,
26 annato black 10B, first action by AOAC.

1 (d) Infra-red milk analysis method number 16079 and number
2 16080, part 2, protein, first action by AOAC.

3 (2) Devices used for testing milk for components other than
4 milkfat shall be calibrated as outlined in the 13th edition (1980)
5 of the Association of Official Analytical Chemists manual and shall
6 consist of a comparison of 20 representative milk samples ranging
7 from 2.4 to 4.0% protein. One sample shall be present in
8 triplicate and at least two samples shall be in duplicate. The
9 Keldahl results and the instrument results shall have a mean and
10 standard deviation of not more than .02% on components. There
11 shall be no more than .05% difference from any instrument results
12 with the reference method.

13 (a) The calibration record shall be maintained on file in the
14 laboratory and repeated whenever major parts are replaced, rebuilt
15 or adjusted.

16 (b) A daily performance check shall be made and reported
17 before the daily testing of producer samples. Five samples from
18 the previous day's testing shall be held over and repeated the
19 start of the second day. The average mean deviation on the two
20 runs shall not exceed plus or minus .02%.

21 (c) A reference check sample shall be tested during the
22 course of the performance check and each hour during testing. The
23 reference sample may be one of the samples used for the daily
24 performance check.

25 (3) All reagents used in any of these methods shall be used
26 in accordance with the AOAC method and shall be clearly and fully
27 labeled to insure they are the reagents required by the method.

1 All testing equipment shall be calibrated as prescribed in the AOAC
2 methods, and shall be subject to initial calibration with the
3 department's standards and at least annual calibration on split
4 samples provided by the department.

5 (4) When milkfat and milk protein or other component tests
6 are to be conducted from the same sample, the milkfat test may be
7 run on one day and other component tests no more than 24 hours fol-
8 lowing the initial milkfat test. If other components tests will
9 be made within 2 hours after the initial milkfat test, those
10 samples need not be refrigerated. All samples used for multiple
11 testing shall not be less than 3 ounces.

12 (5) If abnormal milk standards or other quality tests are
13 used to deny payment for components of producer milk, only the
14 direct microscopic somatic cell count (DMSCC) or electronic
15 somatic cell count (ESCC) shall be used to confirm the accuracy of
16 the denial of payment for components based on abnormal milk.

17 Section 17. Ag 107.09 is adopted to read:

18 Ag 107.09 AUTHORITY. This chapter is adopted under
19 authority of ss. 93.07(1), 97.24(4) and 98.13(5), Stats.

20 The rules, amendments, and repeals contained in this order
21 shall take effect on the first day of the month following
22 publication in the Wisconsin administrative register, as provided
23 in s. 227.026(1), Stats.

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Dated: August 2, 1982.

STATE OF WISCONSIN
DEPARTMENT OF AGRICULTURE,
TRADE AND CONSUMER PROTECTION

By Norman E. Kirschbaum
Norman E. Kirschbaum
Administrator
Food Division

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