

CR 85-1

STATE OF WISCONSIN )  
 ) SS.  
DEPARTMENT OF AGRICULTURE, )  
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 sampling and testing of milk and cream, Chapter Ag 107, Wis. Adm. Code, was duly approved and adopted by the Department on May 10, 1985.

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 10th day of May, 1985.

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

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9-1-85

1 ORDER  
2 OF THE  
3 STATE OF WISCONSIN  
4 DEPARTMENT OF AGRICULTURE, TRADE AND CONSUMER PROTECTION  
5 ADOPTING, AMENDING OR REPEALING RULES  
6

7 To repeal Ag 107.01(2) and (10), Ag 107.03(1)(b)(2), Ag 107.04,  
8 Ag 107.06(3), and Ag 107.07; to renumber Ag 107.01(1), (4), (5) and  
9 (9), Ag 107.08 and Ag 107.09; to renumber and amend Ag 107.01(3), (6),  
10 (7) and (8), Ag 107.03(1)(b)1, Ag 107.05 and Ag 107.06; to amend  
11 Ag 107.01(intro.), Ag 107.02(3), Ag 107.03(1)(a), Ag 107.03(2)(b)1,  
12 (b)2, (b)5, (b)6, and (b)10, Ag 107.03(2)(c), Ag 107.03(3)(a), and  
13 Ag 107.03(3)(b) Note; and to create Ag 107.01(1), (4), (7), (8), (9),  
14 (11), (12), (14), (15), (18) and (19); Ag 107.04 through Ag 107.07; and  
15 Ag 107.11; relating to sampling and testing of milk and cream.

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

The department's amendments to Ch. Ag 107, Wis. Adm. Code (Sampling and Testing Milk and Cream) will make a number of significant changes in the existing rule. The changes are in response to a number of changes in the dairy industry. These include an increased use of automated testing devices to test for milkfat and protein content of milk; an increased use of protein test results as a basis for milk payments to producers; and an increased use of fresh milk samples in testing.

In order to ensure the accuracy of milkfat and protein tests used to determine payments to producers, the amendments will establish specific requirements for the calibration of milkfat or protein testing devices. Testing devices are to be calibrated on a quarterly basis, using a set of 12 or more calibration samples. The calibration samples must meet certain specific requirements, and contain known amounts of

milkfat and protein. The known amounts of milkfat and protein are to be pre-determined by a reference method (the Roesse-Gottlieb method for milkfat, and the Kjeldahl method or the Kel-Foss automated modification of the Kjeldahl method for protein). Testing devices are to be calibrated in relation to the calibration samples, so as to minimize performance errors, and keep them within legal tolerances. Results may deviate no more than 0.04%, on average, from the known values for the calibration samples. The standard deviation may not exceed 0.04.

Testing devices must be subjected to a daily performance check prior to each day's testing. The daily performance check must be made using a set of 5 or more daily performance check samples. Like calibration samples, these samples must meet several requirements, and contain known amounts of milkfat and protein determined by the reference method. If, for any daily performance check, the milkfat or protein results deviate from the known amounts by more than 0.04% on average, the testing device must be recalibrated.

Testing devices must also be subjected to hourly reference checks, to assure that the device continues to give accurate results throughout each day's testing. If an hourly reference check deviates by more than 0.03% from the the initial reference check, the condition causing the deviation must be found and corrected. No producer samples tested between the last conforming reference check and the time of correction may be used for payment purposes.

Licensed testers must keep complete records of all calibrations, daily performance checks, and reference checks, and make the records available for inspection and copying by the department. The department may also conduct periodic enforcement checks, using samples prepared by the department.

The amendments will add or modify certain requirements pertaining to the collection and handling of milk samples, and will make a substantial number of drafting and organizational changes to the existing rules.

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1 Pursuant to the authority vested in the state of Wisconsin  
2 department of agriculture, trade and consumer protection by  
3 ss. 93.07(1), 97.24(4) and 98.13(5), Stats., the department repeals,  
4 amends and creates rules interpreting ss. 97.24(4) and 98.13(5),  
5 Stats., as follows:

6 SECTION 1. Ag 107.01(intro.) is amended to read:  
7 (intro.) As used ~~herein~~ in this chapter:

1 SECTION 2. Ag 107.01(2) and (10) are repealed.

2 SECTION 3. Ag 107.01(1), (4), (5) and (9) are renumbered  
3 Ag 107.01(5), (6), (10) and (17).

4 SECTION. 4. Ag 107.01(3) (6), (7) and (8) are renumbered  
5 Ag 107.01(2), (3), (13) and (16), and as renumbered are amended to  
6 read:

7 (2) "Composite sample" ~~or "composite milk sample"~~ means a milk  
8 sample preserved with ~~an~~ potassium dichromate or another approved  
9 chemical preservative and ~~built-up~~ compiled as prescribed in this  
10 chapter for use in the testing of milk for a given pay period as  
11 prescribed in s. 98.13, Stats.

12 (3) "~~Performance~~ Daily performance check" means the daily  
13 ~~cross-check procedures used for milkfat test determination and~~  
14 ~~approved by the department~~ procedure under s. Ag 107.06(2) which is  
15 used to determine the accuracy of a testing device.

16 (13) "Preserved fresh milk sample" means a fresh milk sample  
17 preserved with potassium dichromate ~~for the purpose of subsequent~~  
18 ~~laboratory analysis in a dairy herd production testing program~~  
19 , bronopol (2-bromo-2-nitropropane-1, 3 dial), or another chemical  
20 preservative approved by the department.

21 (16) "Sample" means a representative sample of milk or cream  
22 used for testing to determine the milkfat or protein content  
23 of milk or cream, or both, the quality and of milk or cream, or any  
24 other properties or characteristics of the milk or cream from which  
25 the sample is taken.

26 SECTION 5. Ag 107.01(1), (4), (7), (8), (9), (11), (12), (14),  
27 (15), (18) and (19) are created to read:

1 (1) "Calibration sample" means one of a set of 12 or more  
2 samples which conform to the requirements of s. Ag 107.06(1)(c), and  
3 are used to calibrate a testing device under s. Ag 107.06(1).

4 (4) "Daily performance check sample" means one of a set of 5  
5 or more samples which conform to the requirements of s.  
6 Ag 107.06(2)(c), and are used in conducting a daily performance  
7 check on a testing device under s. Ag 107.06(2).

8 (7) "Mean difference" means the algebraic sum of the  
9 performance errors for the individual samples in a set of  
10 calibration samples or daily performance check samples, divided by  
11 the number of samples in the set.

12 (8) "Milk component" means milkfat or milk protein.

13 (9) "Modified Roese-Gottlieb method" means the Roese-Gottlieb  
14 method, modified as follows:

15 (a) The Mojonnier vacuum oven may be used for drying the fat  
16 at a temperature of 135° C with a vacuum of not less than 20 mm of  
17 mercury for 5 minutes.

18 (b) Previously weighed fat tins or dishes may be used so that  
19 the rinsing of the fat tins or dishes required by the Roese-Gottlieb  
20 method can be eliminated.

21 (11) "Payment record" means a written or retrievable  
22 electronic record showing, for each producer whose milk is tested  
23 for payment purposes, the producer letters or number and the daily  
24 test result for each milk component or milk quality test on which  
25 payment may be based.

26 (12) "Performance error" means:

27 (a) With reference to a calibration sample, the known

1 percentage content of a milk component in the calibration sample  
2 minus the percentage content as measured by the testing device being  
3 calibrated.

4 (b) With reference to a daily performance check sample, the  
5 known percentage content of a milk component in the sample minus the  
6 percentage content as measured by the testing device on which a  
7 daily performance check is being conducted.

8 (14) "Reference method" means the Roese-Gottleib method or the  
9 modified Roese-Gottleib method for milkfat, and the Kjeldahl method  
10 or the Kel-Foss automated modification of the Kjeldahl method for  
11 protein.

12 (15) "Reference sample" means a sample conforming to the  
13 requirements of s. Ag 107.06(3)(c) which is used in conducting the  
14 initial and hourly reference checks under s. Ag 107.06(3).

15 (18) "Standard deviation" means standard deviation calculated  
16 according to the formula set forth in the "Official Methods of  
17 Analysis of the Association of Official Analytical Chemists," 14th  
18 edition, section 16.071.

19 NOTE: The "Official Methods of Analysis of the  
20 Association of Official Analytical Chemists," 14th  
21 edition, is on file in the offices of the department,  
22 the secretary of state, and the revisor of statutes, and  
23 may be obtained from the Association of Official  
24 Analytical Chemists, Inc., 1111 North 19th Street, Suite  
25 210, Arlington, VA 22209.

26 (19) "Testing device" means an automated testing device used  
27 to test milk samples for milkfat or protein, or both, using a test  
method authorized under s. Ag 107.04(1) or s. Ag 107.05(1).

SECTION 6. Ag 107.02(3) is amended to read:

1 (3) Every milk and cream tester ~~or~~, cheesemaker or buttermaker  
2 qualified for testing milk with a ~~mechanical~~ testing device shall  
3 have that qualification clearly indicated on ~~the~~ his or her license.  
4 Any licensed milk and cream tester found ~~to exceed accepted~~  
5 ~~tolerances for calibration of the mechanical~~ operating a testing  
6 device which is not calibrated and adjusted as required by  
7 s. Ag 107.06(1) may have his or her license suspended by the  
8 department.

9 SECTION 7. Ag 107.03(1)(a) is amended to read:

10 (a) Sample containers shall be constructed of non-toxic  
11 transparent materials, and be in a clean, sanitary and dry  
12 condition prior to use, ~~and be commercially sterile for all~~  
13 ~~samples intended for bacteriological testing.~~ All glass or rigid  
14 plastic containers used for fresh milk sampling shall be equipped  
15 with over-the-lip closures, and have an area on the sample  
16 container large enough for placing on it the date of collection and  
17 the producer number.

18 SECTION 8. Ag 107.03(1)(b)2 is repealed.

19 SECTION 9. Ag 107.03(1)(b)1 is renumbered Ag 107.03(1)(b), and  
20 as renumbered is amended to read:

21 (b) Fresh milk sample containers shall ~~have:~~

22 1. Be commercially sterile;

23 2. Have sufficient capacity to hold a quantity large enough  
24 to permit 2 tests of the particular test or tests to be applied to  
25 the sample; ~~and shall be~~

26 3. Be of sufficient size to permit thorough mixing of the  
27 sample prior to its use for any test, or for the residual to be

1 used to ~~build~~ compile a composite sample.

2 SECTION 10. Ag 107.03(2)(b)1, (b)2, (b)5, (b)6 and (b)10 are  
3 amended to read:

4 (b)1. Each sampler shall grade farm milk by appearance and  
5 smell prior to accepting it and loading it on the bulk milk truck.  
6 The sampler shall reject all ~~off-flavor or~~ off-odor milk and milk  
7 which contains any visible evidence of mastitis and extraneous  
8 matter. If the quality of milk is in doubt, the sampler, before  
9 accepting any milk, shall call the dairy plant and request  
10 inspection by a plant quality control officer or other individual  
11 designated by the plant, who shall accept or reject the milk.

12 (b)2. Samplers shall read and record the temperature of the  
13 milk prior to accepting and loading it on the bulk milk truck.  
14 When the milk temperature is not ascertainable by reading the farm  
15 bulk tank thermometer, the sampler shall take and read the  
16 temperature by using a pocket type spring dial or other suitable  
17 portable thermometer, accurate to plus or minus 2°F. with the  
18 smallest gradation not greater than 2°F. Milk Manufacturing grade  
19 milk shall be rejected unless collected within 2 hours after  
20 milking if ~~it exceeds the applicable temperature requirement for~~  
21 ~~the following grades of milk: manufacturing grade: 50°F.; grade~~  
22 ~~A: 45°F~~ its temperature exceeds 50°F. Grade A milk shall be  
23 rejected unless collected within 2 hours after milking if its  
24 temperature exceeds 45°F.

25 (b)5. The collection record for each ~~patron~~ producer shall  
26 include the ~~patron's~~ producer's identification letters or number,  
27 the sampler's license number and license expiration date, the time



1 and date of collection and sampling, the quantity of milk collected  
2 and the temperature of the milk at the time of collection. The  
3 collection record for each ~~patron~~ producer shall be signed by the  
4 sampler and delivered with the load of milk at the time of  
5 delivery.

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

1 ~~that accurate test results can be achieved by taking a smaller~~  
2 ~~sample.~~

3 (b)10. A sampler shall collect 2 samples at the first  
4 collection point for each bulk tank truck load and identify one  
5 sample to be used as the temperature control sample for all samples  
6 which are subsequently collected for that load and placed in the  
7 truck's sample compartment. The ~~sample~~ container of the  
8 temperature control, sample shall show the producer letters or  
9 number, date, time of collection and temperature of the milk in the  
10 farm bulk tank from which the sample was collected.

11 SECTION 11. Ag 107.03(2)(c) is amended to read:

12 (c) Fresh milk sample size. ~~The size of the~~ Every fresh milk  
13 sample shall be large enough to permit retesting by the dairy  
14 plant, ~~its~~ the dairy plant's testing agent, the producer's agent or  
15 the department, ~~but in no case shall the sample size be less than~~  
16 ~~2 ounces (60 milliliters) without prior written approval of the~~  
17 ~~department. Approval may be granted only where the plant can~~  
18 ~~demonstrate to the satisfaction of the department that the sample~~  
19 ~~taken will permit thorough mixing and at least one retest for~~  
20 ~~every test conducted on the milk sample.~~

21 SECTION 12. Ag 107.03(3)(a) is amended to read:

22 (a) All milk samples received directly from the farm shall be  
23 kept tightly covered and maintained at a temperature between 32°  
24 and 40° Fahrenheit at all times during transportation and while held  
25 for testing at the dairy plant or a testing laboratory.

26 SECTION 13. Ag 107.03(3)(b)Note is amended to read:

27

1 Note: Potassium dichromate for use as a milk sample  
2 preservative is commonly available in tablet form  
3 containing 40 milligrams of active ingredient per tablet.  
4 The use of these tablets at the rate of one tablet per 2  
5 fluid ounces of milk in a completed composite sample is  
6 equivalent to the concentration required in par. (b)  
7 above. ~~S. Section~~ Ag 29.05(1)(c) contains labeling  
8 requirements and limitations on disposal of milk samples  
9 preserved with potassium dichromate. ~~After January 1,~~  
10 ~~1983, the~~ The use of mercuric chloride as a preservative for  
11 composite milk samples is prohibited.

12 SECTION 14. Ag 107.04, Ag 107.06(3), and Ag 107.07 are  
13 repealed.

14 SECTION 15. Ag 107.04 is created to read:

15 Ag 107.04 TESTING OF SAMPLES FOR MILKFAT.

16 (1) MILKFAT TEST METHODS.

17 (a) Milkfat tests may be made by the Babcock test, ether  
18 extraction test, or other test method approved by the department.  
19 All Babcock and ether extraction tests shall be conducted as  
20 prescribed in the "Official Methods of Analysis of the Association  
21 of Official Analytical Chemists," 14th edition, except as provided  
22 under par. (b).

23 (b) Each milk sample tested by the Babcock method shall be  
24 agitated for at least 3 minutes by the use of a mechanical agitator  
25 after pipetting the sample and adding sulfuric acid in accordance  
26 with the procedure prescribed under par. (a). A reader, such as a  
27 needlepoint divider or other mechanical divider, which accurately  
determines milkfat level in a test bottle shall be used in reading  
all Babcock tests. All Babcock test readings shall be made against  
a light-colored surface with adequate natural or artificial light.  
The Babcock test shall be read to the nearest 0.05% by weight.

1 NOTE: The "Official Methods of Analysis of the  
2 Association of Official Analytical Chemists," 14th  
3 edition, is on file in the offices of the department, the  
4 secretary of state, and the revisor of statutes, and may  
5 be obtained from the Association of Official Analytical  
6 Chemists, Inc., 1111 North 19th Street, Suite 210,  
7 Arlington, VA 22209.

8 (2) MILKFAT TESTING DEVICES. Testing devices used to test  
9 samples for milkfat content shall be calibrated as provided in s.  
10 Ag 107.06(1). Testing devices shall be subjected to a daily  
11 performance check prior to each day's use, as provided in s.  
12 Ag 107.06(2), and to hourly reference checks as provided in s.  
13 Ag 107.06(3).

14 (3) TIME PERIODS FOR COMPLETION OF TESTING. Testing of  
15 samples for milkfat content shall be completed within the time  
16 periods specified under s. Ag 107.07.

17 SECTION 16. Ag 107.05 is renumbered Ag 107.08, and as  
18 renumbered is amended to read:

19 Ag 107.08 SAMPLE RETENTION AND RETESTING. The residual of each  
20 composite sample shall be removed from the water bath immediately  
21 after each sample is pipetted. The residual of each composite  
22 sample shall be held intact after initial testing and kept  
23 refrigerated at a temperature between 32° and 40°F. on the premises  
24 where tested for a period of not less than 5 days. ~~After completion~~  
25 ~~of all testing, fresh milk samples shall be retained in the~~  
26 ~~laboratory for at least 4 hours.~~ Except as provided in s.  
27 Ag 107.06(3)(b), fresh milk samples may be disposed of after testing  
unless the department gives notice by telephone or in writing that  
the samples are to be retained for department retesting. The  
department may, by written or telephone notice, require that

1 samples be retained for up to 24 hours. The department may require  
2 that retained samples be refrigerated to between 32° and 40°F. The  
3 department may retest any composite or fresh milk samples on the  
4 premises where they were tested or remove them to a department  
5 laboratory for this purpose. The department shall, upon written  
6 request of the licensed tester or the employer give notice of the  
7 time and location for retesting the plant samples, providing the  
8 request is made at the time the samples are collected by the  
9 department for retesting. Notice of department retesting of a dairy  
10 plant's samples is not required to be given to a marketing  
11 association engaged in testing composite or fresh milk samples for  
12 its member patrons, unless a written request, signed by the marketing  
13 association tester who executed the official test record, is left at  
14 the dairy plant. The department may retain retested samples for  
15 investigative or evidentiary purposes, or return them in a sealed  
16 condition to the dairy plant upon written request.

17 SECTION 17. Ag 107.06 is renumbered Ag 107.09, and as  
18 renumbered is amended to read:

19 Ag 107.09 TEST RECORDS. (1) Each licensed tester, immediately  
20 after testing a sample, shall record in duplicate, ~~on a form~~ a manner  
21 approved by the department, the name or identification letters or  
22 number of the patron whose milk or cream was tested, the date of the  
23 test, and the test results. The record ~~and all copies~~ or log shall  
24 be signed by the tester and be kept on file at the testing  
25 laboratory. ~~One copy shall be retained at the testing laboratory~~  
26 ~~and one copy made available at the dairy plant.~~ All original test  
27 records shall be kept for a period of not less than ~~2 years~~ one year.

1 No test records may be altered except that errors, if made, shall be  
2 corrected by striking through the original entry and inserting the  
3 correct entry immediately adjacent to the original, along with the  
4 initials of the tester who made the corrective entry.

5 (2) When using fresh milk component tests for payment to  
6 patrons, the arithmetic average of 3 or more milkfat or other  
7 component test results shall be used for each 15 or 16 day pay  
8 period, or the arithmetic average of ~~4 or more~~ all milkfat or other  
9 component tests but no less than 4 tests results shall be used for a  
10 one month pay period. The frequency of ~~conducting~~ milkfat or other  
11 component tests shall be evenly distributed throughout a pay period.  
12 ~~In averaging milkfat or other component test results, decimal~~  
13 ~~fractions may be rounded to the nearest 0.01%.~~

14 SECTION 18: Ag 107.05 through Ag 107.07 are created to read:  
15 Ag 107.05 TESTING OF SAMPLES FOR PROTEIN CONTENT OR MILK QUALITY.

16 (1) TEST METHODS. Test methods and equipment used in  
17 testing samples for protein content or milk quality shall, if the  
18 test results may affect the amount paid for milk, be limited to:

19 (a) Test methods and equipment cited in the American Public  
20 Health Association, Inc., "Standard Methods for the Examination of  
21 Dairy Products," 14th edition;

22 (b) Test methods and equipment prescribed in the "Official  
23 Methods of Analysis of the Association of Official Analytical  
24 Chemists," 14th edition; or

25 (c) Other test methods and equipment approved in writing by  
26 the department.

1 NOTE: The American Public Health Association, Inc.,  
2 "Standard Methods for the Examination of Dairy Products,"  
3 14th edition, is on file in the offices of the department,  
4 the secretary of state, and the revision of statutes, and  
5 may be obtained from the American Public Health  
6 Association, Inc., 1015 Eighteenth Street, N.W.,  
7 Washington, D.C. 20036.

8 The "Official Methods of Analysis of the Association of  
9 Official Analytical Chemists," 14th edition, is on file in  
10 the offices of the department, the secretary of state and  
11 the revisor of statutes, and may be obtained from the  
12 Association of Official Analytical Chemists, Inc., 1111  
13 North 19th Street, Suite 210, Arlington, VA 22209.

14 (2) REAGENTS. Every reagent used in a test method authorized  
15 under sub. (1) shall be used in accordance with the authorized test  
16 method, and be fully and clearly labeled to ensure that it is the  
17 proper reagent to be used with the authorized test method.

18 (3) ABNORMAL MILK; TEST RESULTS AFFECTING PAYMENT. (a) The  
19 denial of milk component premiums or payments, based on test results  
20 obtained on abnormal milk standards tests or other authorized milk  
21 quality tests, may be based on individual test results or on a monthly  
22 average test result.

23 (b) Results obtained from the Wisconsin Mastitis Test  
24 (WMT) may not be used to deny milk component premiums or payments to  
25 producers unless the test results are confirmed by the direct  
26 microscopic somatic cell count (DMSCC) method, or by the electronic  
27 somatic cell count (ESCC) method. This paragraph shall take effect on  
28 March 1, 1986.

29 (4) PROTEIN TESTING DEVICES. Testing devices used to test  
30 samples for protein content shall be calibrated as provided in s.  
31 Ag 107.06(1). Testing devices shall be subjected to a daily perfor-  
32 mance check prior to each day's use, as provided in s. Ag 107.06(2),

1 and to hourly reference checks as provided in s. Ag 107.06(3).

2 (5) TIME PERIODS FOR COMPLETION OF TESTING. Testing of  
3 samples for protein content or other milk quality characteristics  
4 shall be completed within the time periods specified under s.  
5 Ag 107.07.

6 Ag 107.06 MILK COMPONENT TESTING DEVICES; CALIBRATION; DAILY  
7 PERFORMANCE CHECKS; REFERENCE CHECKS. (1) CALIBRATION.

8 (a) Calibration requirement; frequency of calibration. Every  
9 testing device used to test samples for milkfat or protein content  
10 shall be calibrated as provided in this subsection. The testing  
11 device shall be calibrated for each milk component for which samples  
12 are tested by the testing device. For each milk component, the  
13 testing device shall be calibrated:

- 14 1. Upon installation;
- 15 2. At regular 3 month intervals after installation;
- 16 3. Immediately after every significant repair or alteration to  
17 the testing device; and
- 18 4. Whenever the mean difference obtained on a daily  
19 performance check of the testing device under sub. (2) exceeds plus  
20 or minus 0.04%.

21 (b) Calibration procedure. To calibrate a testing device, a  
22 set of 12 or more calibration samples, each having a known  
23 percentage content of milkfat and protein, shall be tested using the  
24 testing device. If, for any calibration sample, the performance  
25 error of the testing device is not equal to zero, the testing device  
26 shall be adjusted to bring the performance error as near as  
27 practicable to zero. Upon adjustment, the mean difference for the



1 entire set of calibration samples shall be brought as near as  
2 practicable to zero, and may not exceed plus or minus 0.04%. The  
3 standard deviation, as defined in s. Ag 107.01(18), may not exceed  
4 0.04.

5 (c) Calibration samples. 1. The calibration procedure under  
6 this subsection shall be performed using a set of calibration  
7 samples. Each calibration sample shall be a preserved herd sample  
8 not more than 14 days old, and shall have a known percentage content  
9 of milkfat and protein. The known percentage content of milkfat or  
10 protein in each calibration sample shall be determined by averaging  
11 the test results obtained for the milkfat or protein component in 3  
12 tests of the sample using the reference method. If, for either the  
13 milkfat or the protein component, the test results on any sample  
14 using the reference method vary by more than 0.03%, the sample may  
15 not be used as a calibration sample.

16 2. The known milkfat content of a calibration sample shall be  
17 not less than 2.5%. The range of the known milkfat content within a  
18 set of calibration samples shall be at least 2.5 percentage points.

19 3. The known protein content of a calibration sample shall be  
20 not less than 2.7%. The range of the known protein content within a  
21 set of calibration samples shall be at least 0.8 percentage points.

22 (2) DAILY PERFORMANCE CHECK.

23 (a) Requirement; procedure. A daily performance check shall  
24 be conducted on every testing device prior to each day's testing, as  
25 provided in this subsection. A daily performance check shall be  
26 conducted for each milk component for which samples are tested by  
27 the testing device. To conduct a daily performance check on a

1 each having a known percentage content of milkfat and protein, shall  
2 be tested using the testing device. The daily performance check  
3 samples shall conform to the requirements under par. (c). For each  
4 milk component being tested, the performance error of the testing  
5 device shall be determined with respect to each daily performance  
6 check sample. The mean difference for the entire set of samples  
7 shall then be computed for each milk component being tested.

8 (b) Adjustment or calibration based on daily performance  
9 check. Based on the daily performance check, the testing device  
10 shall be adjusted as necessary to eliminate significant performance  
11 errors. Adjustments, if made, shall bring performance errors as  
12 near as practicable to zero. If the mean difference obtained on a  
13 daily performance check of a testing device exceeds plus or minus  
14 0.04%, the testing device shall be recalibrated as provided in sub.  
15 (1) prior to any further use.

16 (c) Daily performance check samples.

17 1. The daily performance check under this subsection shall be  
18 performed using a set of daily performance check samples. Each  
19 daily performance check sample shall be a fresh or preserved  
20 unhomogenized sample, having a known percentage content of milkfat  
21 and protein. The known percentage content of milkfat or protein in  
22 each daily performance check sample shall be determined by averaging  
23 the test results obtained for the milkfat or protein component in 3  
24 tests of the sample using the reference method. If, for either the  
25 milkfat or the protein component, any 2 of the 3 test results using  
26 the reference method vary by more than 0.03%, the sample does not  
27 qualify as a daily performance check sample.

1 testing device, a set of 5 or more daily performance check samples,

2 2. The known milkfat content of a daily performance check  
3 sample shall be not less than 2.8%. Within a set of daily  
4 performance check samples, the known milkfat content shall vary  
5 by at least 1.5%.

6 3. The known protein content of a daily performance check  
7 sample shall be not less than 2.7%. Within a set of daily  
8 performance check samples, the known protein content shall vary  
9 by at least 0.5%.

10 (3) REFERENCE CHECKS; INITIAL AND HOURLY.

11 (a) Initial reference check. An initial reference check shall  
12 be conducted on each testing device prior to each day's testing, at  
13 the time of the daily performance check under sub. (2). An initial  
14 reference check shall be conducted for each milk component for which  
15 samples are tested by the testing device. An initial reference  
16 check shall consist of 10 tests on a reference sample, using the  
17 testing device. The reference sample shall conform to the  
18 requirements under par. (c). For each milk component, the 10 test  
19 results shall be averaged, and the average result used as a  
20 comparison value for purposes of the hourly reference checks under  
21 par. (b).

22 (b) Hourly reference checks; comparison to initial reference  
23 check; adjustments. An hourly reference check shall be conducted on  
24 every testing device during each day of testing. An hourly  
25 reference check shall be conducted for each milk component for which  
26 samples are tested by the testing device. The hourly reference  
27 check shall be conducted by testing the reference sample with the

1 testing device. The reference sample shall be the same sample tested  
2 in that day's initial reference check under par. (a). For each milk  
3 component being tested, the hourly reference check result shall be  
4 compared to the initial reference check average. If the hourly  
5 reference check result differs from the initial reference check  
6 average by more than 0.03%, the condition causing the difference  
7 shall be found and corrected. No results from producer samples  
8 tested between the last previous conforming reference check and the  
9 time of correction may be used for payment purposes.

10 (c) Reference sample. A reference sample may be one of the  
11 daily performance check samples under sub. (2), or it may be a  
12 homogenized milk sample which is not a daily performance check  
13 sample. For any given day, the same reference sample shall be used  
14 for the initial reference check under par. (a) and the hourly  
15 reference checks under par. (b).

16 (4) TESTING DEVICES; CONSTANT VOLTAGE. A constant voltage  
17 regulator shall be connected to, or form a part of all testing  
18 devices in line with a single phase 115 or 220 volt power supply.

19 (5) RECORDS. Records of all calibrations, daily performance  
20 checks, initial reference checks and hourly reference checks shall  
21 be made and kept in a manner approved by the department. Records  
22 shall be signed by the licensed tester who performed the  
23 calibration, daily performance check or reference check, and be  
24 maintained on file at the testing laboratory for at least one year.  
25 Calibration records shall be kept separate from daily performance  
26 check or reference check records. Records shall be made available  
27 for inspection and copying by the department upon request.

1 Ag 107.07 TIME PERIODS FOR COMPLETION OF TESTING.

2 (1) COMPOSITE SAMPLES. Testing of a composite sample for milk  
3 component contents or milk quality shall be completed within 3 days,  
4 excluding Saturdays, Sundays and holidays, after compilation of the  
5 composite sample has been completed pursuant to s. 98.13, Stats. and  
6 s. Ag 107.03(2)(d). The time period for the completion of testing  
7 may not be extended except with the prior written approval of the  
8 department. A composite sample may not be replaced for testing  
9 purposes by fresh or preserved fresh milk samples except with the  
10 prior written approval of the department. If a composite sample is  
11 lost or spilled due to a laboratory accident, the lost or spilled  
12 sample shall be replaced with 3 subsequent fresh milk samples. The  
13 unused portion of a tested composite sample shall be retained for at  
14 least 5 days after testing to permit retesting by the department.

15 (2) FRESH OR PRESERVED FRESH MILK SAMPLES. Testing of a fresh  
16 or preserved fresh milk sample for milk component contents shall be  
17 completed within 3 days after the sample is taken. No fresh or  
18 preserved fresh milk sample may be tested for milk quality, as  
19 defined in s. Ag 30.01(7), more than 36 hours after the sample is  
20 taken.

21 (3) MILKFAT AND PROTEIN TESTS; SEQUENCE. If milkfat and  
22 protein tests are to be conducted on the same sample, the milkfat  
23 test shall be conducted first, and the protein test shall be  
24 conducted within 24 hours after the milkfat test. Unless the  
25 protein test is conducted within 2 hours after the milkfat test, the  
26 sample shall be refrigerated between tests.

27 SECTION 19. Ag 107.08 and Ag 107.09 are renumbered Ag 107.10

1 and Ag 107.12.

2 SECTION 20. Ag 107.11 is created to read:

3 Ag 107.11 ENFORCEMENT. The department may make periodic  
4 enforcement checks of all testing devices used to test samples for  
5 purposes of payment or official records. Enforcement checks shall  
6 be made using samples pre-tested by the department using the  
7 reference method.

8 SECTION 21. The rules contained in this order shall take  
9 effect on the first day of the month following publication in the  
10 Wisconsin administrative register, as provided in  
11 s. 227.026(1)(intro.), Stats., except that s. Ag 107.05(3)(b) shall  
12 take effect on March 1, 1986.

13 Dated this 10<sup>th</sup> day of May, 1985.

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STATE OF WISCONSIN  
DEPARTMENT OF AGRICULTURE,  
TRADE AND CONSUMER PROTECTION

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

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