



# *QUALITY COMPLIANCE PROGRAM*

*JULY 2019 TO JUNE 2020*

*REVISED 8/15/2019*





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The **QUALITY CHEKD COMPLIANCE PROGRAM** is a means to monitor product quality against the rigid standards established by the Quality Chekd Quality and Food Safety Committee. Quality Chekd members producing Quality Chekd labeled products are required to submit samples on a monthly basis as outlined in this Sampling Program. Samples are analyzed at the Merieux NutriSciences/Quality Chekd laboratory in Crete, Illinois. Non-trademark user members are also required to submit samples each month to be eligible for the awards program.

**STANDARDS** have been established for each product and member plants are expected to comply with these standards regardless of whether products are submitted for testing. These standards also apply to any product co-packer used by the plant (see Quality Chekd Product Standards).

**COMPLIANCE LEVELS** have been established against these standards detailed in this manual. At a minimum, members are required to perform at the Organization compliance levels. Compliance is determined by dividing the number of results in standard by the number of samples tested for each category tested per product. For example, if 3 of 4 milk samples met the 7-day standard for a given month, then the compliance level for that month would be 75% for shelf life. A year-to-date compliance percentage is maintained for each product test by adding the compliance percentages of all months and dividing this sum by the number of months (see Organization and Merit Compliance Levels).

**MEMBER PLANTS** are encouraged to track performance on a monthly basis for compliance. Each plant is assigned a lab number and each plant's current compliance levels can be viewed and benchmarked with other program members. Compliance results are posted under the Quality & Food Safety Section of the members' only website at [www.qchedk.com](http://www.qchedk.com). To obtain your plant lab number, contact Amanda Moore or Chuck Yarris at Quality Chekd (630) 717-1110.

**BENEFIT:** Three major benefits of the sampling and testing program are:

- 1) Product analysis by a certified independent laboratory (verifies internally derived results)
- 2) Quality recognition as described in the Merit Award Rules
- 3) Benchmarking and ranking against participating member dairies in the same product categories.



## QUALITY CHEKD AWARDS & RECOGNITION PROGRAMS

### THE IRVING B. WEBER AWARD FOR QUALITY EXCELLENCE

This award recognizes the Trademark User Member plant that excels in customer satisfaction, leadership, product quality performance, employee safety, food safety audit performance, and employee satisfaction and knowledge.

#### Eligibility & Prerequisites:

- Open to Quality Chekd Dairies Member plants that are Trademark Users and participants in the QC Compliance Program
- Member plant's 12-month cumulative average for all test parameters on all products in the Quality Check Compliance Program must be above 90%
- No 12-month cumulative average test parameter can be below Organization compliance level (80% for milk and cultured and 85% for ice cream)
- Plant 3<sup>rd</sup> Party Food Safety Audit score must be 96% or higher and based on an approved 3<sup>rd</sup> Party auditing scheme (SQF, BRC, FSSC, Quality Chekd, etc.)

#### Awards Selection Process:

- The three plants with the highest Total Scores based on performance in the QC Compliance Program and 3<sup>rd</sup> Party Food Safety Audit scores will be selected as Weber Award Finalists. This Total Score is calculated as follows:
  - Total Quality Score is obtained by averaging the program year-end quality compliance scores for the applicable product categories
  - Audit Score is derived from approved Third Party Audit
  - Total Quality score is weighted at 65% and the Audit Score is weighted 35% to arrive at the Total Score used to determine Finalist ranking
- Finalist plants complete a survey designed to demonstrate excellence in the areas listed below. Finalists will have an opportunity to present materials and exhibit the plant during a visit by Quality Chekd Staff to focus on:
  - Customer Satisfaction
  - Leadership
  - Personnel Satisfaction and Knowledge
  - Safety
- The Weber Award Winner is calculated using the following formula. Scoring is on a 1500 maximum point basis:

ELEMENT	Maximum Points
Total Quality Score	300 Points
Plant Audit Score	300 Points
Customer Satisfaction (Survey/Visit)	200 Points
Leadership (Survey/Visit)	300 Points
Personnel (Survey/Visit)	200 Points
Safety Score (200 minus 1.5 x DART Score)*	200 Points

\*Safety Score is derived from a DART calculation, based on the number of cases of days away from work plus the number of cases of days of restricted work times 200,000 and that total divided by the total number of man hours reported on the OSHA 300A form.

**The winner of the Irving B. Weber Award is announced at the annual Quality Chekd Leadership Conference and will be accompanied by photos and press releases.**



**THE PRODUCTION EXCELLENCE AWARD (PEA)**

This award recognizes the best single plant in *each* of three product categories: Fluid Milk, Cultured Products and Ice Cream. Scores are based on QC Compliance Program performance, plant facility audit score and employee safety performance as indicated by the DART score. At the end of the program year, the top 3 facilities in each product category are selected as finalists. Achieving Merit Award status is a requirement to qualify for the award.

**Eligibility & Prerequisites:**

- Open to Quality Chekd Dairies Member plants that participate in the Quality Check Compliance Program and have achieved Merit Award status in the respective product category.
- Plant must be audited against an approved 3<sup>rd</sup> Party Food Safety Auditing scheme (SQF, BRC, FSSC, Quality Chekd, etc.) and provide score
- Plants must provide a plant safety DART calculation

**Awards Selection Process:**

- The three plants with the highest Total Scores based on performance in the QC Compliance Program and 3<sup>rd</sup> party Food Safety Audit score will be selected as PEA Finalists. This Total Score is calculated as follows:
  - Total Quality Score is obtained by averaging the program year-end quality compliance scores for the applicable product categories
  - Audit Score is derived from approved Third Party Audit
  - Total Quality score is weighted at 65% and the Audit Score is weighted 35% to arrive at the Total Score used to determine Finalist ranking
- The PEA Award Winner is calculated using the following formula on a 5000 point maximum basis.
  - Total Quality Score is obtained by averaging the program year-end quality compliance scores for the associated product categories
    - Fluid Milk
    - Cultured
    - Ice Cream
  - Audit Score is derived from approved Third Party Audit
  - Safety Score is derived from a DART calculation, based on the number of cases of days away from work plus the number of cases of days of restricted work times 200,000 and that total divided by the total number of man hours reported on the OSHA 300A form.
  - Total Quality score is weighted at 45%, the Audit Score is weighted 45% and Safety Score is weighed at 10% to arrive at the Total Score used to determine PEA Finalist ranking

<b>ELEMENT</b>	<b>%</b>	<b>Maximum Points</b>
Total Quality Score	45%	2250 Points
Plant Audit Score	45%	2250 Points
Safety Score (500 minus 1.5 x DART Score)	10%	500 Points

The winners of the Production Excellence Awards are announced at the Quality Chekd Annual Leadership Conference and will be accompanied by photos and press releases.



## **MERIT AWARD PROGRAM**

This program recognizes plants which have achieved outstanding quality performance based on product test results derived from the Quality Chekd Compliance Program throughout the program year. Merit Award compliance levels have been established well above Organization compliance levels, creating a significant but rewarding challenge.

### **Eligibility & Prerequisites:**

- Open to Quality Chekd Dairies Member plants that participate in the Quality Check Compliance Program
- The Plant 3<sup>rd</sup> Party Food Safety Audit score must be 93% or higher and based on an approved 3<sup>rd</sup> Party auditing scheme (SQF, BRC, FSSC, Quality Chekd, etc.)

### **Awards Selection Process:**

- Merit awards are granted for each of three product categories
  - Fluid Milk
  - Ice Cream
  - Cultured Products
- ALL TEST CATEGORIES for the product must be at or above the Merit Award compliance level of **90%** to qualify for the Merit Award
  - Fluid Milk: fat, shelf life, coliform and 17-day flavor attributes
  - Ice Cream: fat, solids, stress coliform and organoleptic attributes
  - Cultured: fat, solids, coliform, 7-day EB, and organoleptic attributes
  - UHT-ESL: 48-hr coliform, 48-hr shelf life and 30-day flavor attributes
  - UHT-Aseptic: 5-day mesophilic; 30-day separation, sedimentation and flavor attributes

**The Merit Award winners are recognized at the annual Quality Chekd Annual Leadership Conference and the awards are shipped to the winners' locations.**

## **QUALITY ASSESSMENT AWARD**

An award is granted to plants that have achieved 3<sup>rd</sup> Party Food Safety Audit scores 96% or higher and based on an approved 3<sup>rd</sup> Party auditing scheme (SQF, BRC, FSSC, Quality Chekd, etc.)

### **Eligibility:**

- Open to Quality Chekd Dairies Member plants that participate in the Quality Check Compliance Program.
- The plant must provide a 3<sup>rd</sup> Party Food Safety Audit score that is 96% or higher and based on an approved 3<sup>rd</sup> Party auditing scheme (SQF, BRC, FSSC, Quality Chekd, etc.)

### **Awards Selection Process:**

- An award is granted to The Plant 3<sup>rd</sup> Party Food Safety Audit score must be 96% or higher and based on an approved 3<sup>rd</sup> Party auditing scheme (SQF, BRC, FSSC, Quality Chekd, etc.)

**Quality Assessment Award winners are recognized at the annual Quality Chekd Leadership Conference and awards are shipped to the winners' locations.**



**NOG-OFF CONTEST AWARD**

Eggnog and Light Eggnog products are submitted by participants and presented to panelists from both Merieux NutriSciences Laboratory and Quality Chekd/QCSPurchasing staff for evaluation. Scoring of the eggnog products is based strictly on sensory perception of flavor, body and appearance.

**Eligibility:**

- QCS/Allied and QCD members are invited to participate in this event
- Quality Chekd Dairies Compliance Program participants provide Eggnog samples with the routine November sample set.
- QCS/Allied participants send samples directly to the Lisle office for evaluation

**Awards Selection Process:**

- An award is granted to the plant producing the highest scored product in each of two categories: Traditional Eggnog and Low Fat Eggnog
- Eggnog products attributes are evaluated using the following scale:
  - Flavor: 10 = ideal; 7 = acceptable; 5 = less than acceptable
  - Body: 9 = creamy body; 7 = fair body; 5 = weak, runny or thin body
  - Appearance: 9 = proper color range/ spice presence, 7 = meets some color/spice criteria; 5 = out of color range and appearance.
- Each eggnog score is calculated as follows with a maximum of 28 points.

<b>ATTRIBUTE</b>	<b>Maximum Points</b>
Appearance	9
Body	9
Flavor	10

**First place winners of the Nog-Off Contest are recognized at the annual Quality Chekd Leadership Conference.**

**ORANGE JUICE (FROM CONCENTRATE) CONTEST**

Orange Juice samples are submitted by participants and are judged by a panel of USDA lab personnel skilled in the sensory evaluation of juice products. Scoring is based on the USDA’s Standards for Grades of Orange Juice, “from concentrate” (per USDA Orange Juice Table VIII, Page 14 of standard). Only the top three samples are ranked based on the average flavor point score (between 36 and 40 points) and by the panel consensus. Reference available at [https://www.ams.usda.gov/sites/default/files/media/Canned\\_Orange\\_Juice\\_Standard\[1\].pdf](https://www.ams.usda.gov/sites/default/files/media/Canned_Orange_Juice_Standard[1].pdf)

**The top three winners are recognized at the annual Quality Chekd Leadership Conference.**



## **WORLD DAIRY EXPO PARTICIPATION AND RECOGNITION**

Quality Chekd/QCSPurchasing members are encouraged to participate in the annual World Dairy Expo (WDE) Product Judging. This event provides members with the opportunity to submit products from a number of categories and to be benchmarked against not only peers within the Quality Chekd organization, but also against dairy competitors nationwide. The WDE winners are notified and awards are issued by the Wisconsin Dairy Products Association.

Those Quality Chekd/QCSPurchasing members who rank amongst the top three awards in each product category are recognized for this achievement at the annual Quality Chekd Leadership Conference.

The World Dairy Expo judging **has no bearing** on the determination of finalists or winners of the Weber or Production Excellence Awards.

### **Eligibility & Prerequisites:**

- The WDE judging is open to all dairy producers nationwide. Quality Chekd/QCSPurchasing members are eligible for recognition at the annual Quality Chekd Leadership Conference if they place within the top three selected by the WDE judges.

### **WDE Product Judging and Member Recognition Process:**

- Samples submitted to judging location two days before judging begins
- Judges are selected based on product knowledge and industry experience
- Products are based on Appearance, Body/Texture and Flavor
- Score sheets list any specific defects identified by the judging team
- Scoring is based on the number of defect points deducted from 100
  - Minor defects: 0.5 to 1.0
  - Pronounce defects: 1.1 to 1.5
  - Serious defects: > 1.51
- Product with the highest scoring number (100 minus deducts) is the winner
- Wisconsin Dairy Products Association contacts the winners and presents the awards at the annual World Dairy Expo Conference if winners are in attendance otherwise the awards are shipped directly to the winning locations.
- Quality Chekd is notified of those members who are ranked amongst the top three awards for each category

**The members who are ranked amongst the top three awards in the World Dairy Expo are recognized at the annual Quality Chekd Leadership Conference.**





## HTST Fluid Products Standards

Product	Volume	7-Day @ 7°C Coliform	7-Day @ 7°C SPC	17-Day @ 7°C Flavor
Milk (whole)	X	<1	≤10,000	>7
2% Reduced Fat Milk	X	<1	≤10,000	>7
1% Low Fat Milk	X	<1	≤10,000	>7
Skim Milk (non-fat)	X	<1	≤10,000	>7
Chocolate Milk (whole)	X	<1	≤10,000	>7
Non-fat Chocolate Milk	X	<1	≤10,000	>7
Low-fat Chocolate Milk	X	<1	≤10,000	>7

## Cultured Products Standards

Product	Weight	% Fat	% Total Solids	Fresh Coliform	EB Enterobacteriaceae 7-Day @ 7°C	Y&M 7-Day @ 7°C	pH	7-Day Organoleptic Flavor, Body, Texture and Appearance @ 7°C
4% Cottage Cheese	X	≥4.0	≥20.0	<1/g	≤100/g	<10/g	≤5.1	>7
2% Low-fat Cottage Cheese	X	1.8% - 2.2%	≥18.0	<1/g	≤100/g	<10/g	≤5.1	>7
1.5% Low-fat Cottage Cheese	X	1.3% - 1.7%	≥18.0	<1/g	≤100/g	<10/g	≤5.1	>7
1% Cottage Cheese	X	0.8% - 1.2%	≥18.0	<1/g	≤100/g	<10/g	≤5.1	>7
Nonfat Cottage Cheese	X	<0.50	≥18.0	<1/g	≤100/g	<10/g	≤5.1	>7
Sour Cream	X	≥18.0	≥26.0	<1/g		<10/g	≤4.7 Cultured ≤4.6 Acidified	>7
Lite Sour Cream	X	>6.0 <9.0	≥20.0	<1/g		<10/g	≤4.7 Cultured ≤4.6 Acidified	>7
Low-fat Sour Cream	X	>1.67 <6.0*	≥18.0	<1/g		<10/g	≤4.7 Cultured ≤4.6 Acidified	>7
Flavored Low-fat Yogurt	X	≤1.33	≥15.0	<1/g		<10/g	≤4.8	>7
Plain Non-fat Yogurt	X	<0.22	≥8.5	<1/g		<10/g	≤4.8	>7
Flavored Non-fat Yogurt	X	<0.22	≥15.0	<1/g		<10/g	≤4.8	>7
Yogurt Smoothie	X	1.5-1.8	≥15.0	<1/g		<10/g	N/A	>7

X - Labeled weight    % - Labeled fat content    \* Must be within ± 0.2% of fat claim as labeled on product



### Frozen Products Standards

Product	% Fat	% Solids	Stress Coliform	Flavor, Body, Texture, Color, Appearance
Vanilla Ice Cream	≥10%	≥35.6%	<10	>7 total score >80
Chocolate Ice Cream	≥9.25%	≥36%	<10	>7 total score >80
Lite Ice Cream	<5%	N/A	<10	>7 total score >80
Low-fat Ice Cream	per label	N/A	<10	>7 total score >80
Strawberry Ice Cream	N/A	N/A	<10	>7 total score >80

### Ultra-Pasteurized – ESL (Refrigerated) Standards

Product	Volume	SPC 48-Hour @ 30°C	Coli 48-Hour @ 30°C	30-Day @ 7°C Flavor, Appearance
Ultra-Pasteurized Whole Milk	X	<100	<1	>7
Ultra-pasteurized Milks (all other fat levels)	X	<100	<1	>7

### UHT – Aseptic Standards

Product	Volume (X= Labeled Amount)	% Fat	Mesophilic Aerobic Streak Count 5 days @ 35°C	Fat Separation 30 days @ 25°C	Sediment 30 Days @ 25°C	Flavor & Color 30 Days @ 25°C
Whole Milk	X	% Declared	Negative	Pass	Pass	>7
Milk – (all other fat levels)	X	% Declared	Negative	Pass	Pass	>7

### Miscellaneous Standards

Product	Volume	Brix/Solids	7-Day @ 7°C Aerobic Count	7-Day @ 7°C Y & M	17 Days @ 7°C Flavor
Orange Juice from Concentrate	X	>11.8	<1000	<10	>7
Orange Juice not from Concentrate	X	>10.5	<1000	<10	>7
Egg Nog	X	≥6.26%	<1	≤10,000	>7

X - Labeled amount



## ORGANIZATION AND MERIT COMPLIANCE LEVELS

Product Category	Test Category	Standard	Compliance Level Organization	Compliance Level Merit Award
<b>Fluid Milks*</b>	7-Day shelf life @ 7°C SPC	≤10,000/mL	80%	90%
	7-Day coliform @ 7°C	<1/mL	80%	90%
	17-Day flavor @ 7°C	>7	80%	90%
<b>Ice Cream</b>				
	Stress Coliform	<10/g	85%	95%
	Fat	Per spec	85%	95%
	Solids	Per spec	85%	95%
	Organoleptic (includes flavor, body, texture, appearance)	>7	85%	95%
<b>Cultured Products</b>				
	Fresh coliform	<1/g	80%	90%
	7-Day @ 7°C EB Enterobacteriaceae	≤100/g	80%	90%
	7-Day @ 7°C Yeast and Mold	<10/g	80%	90%
	Fat	Per spec	80%	90%
	Solids	Per spec	80%	90%
	Organoleptic @ 7°C 7-Day Flavor, body, texture, appearance)	>7	80%	90%
<b>Ultra-Pasteurized Milks</b>				
	48 hrs. Shelf life count @ 30°C	<100/mL	80%	90%
	48 hrs. Coliform count @ 30°C	<1/mL	80%	90%
	30-Day flavor @ 7°C	>7	80%	90%
<b>UHT-Aseptic Milks</b>				
	5 day Mesophilic Aerobic Streak Count @ 35°C	Negative	80%	90%
	30 day Fat Separation @ 25°C	Pass	80%	90%
	30 day Sediment @ 25°C	Pass	80%	90%
	30 day Flavor and Color @ 25°C	>7	80%	90%

\* Chocolate Milk 7-Day shelf life @ 7°C SPC will not be reflected in the Compliance Level score and is tested for informational purposes only.

Note: Facility must also achieve a plant assessment/audit score of >93% in order to qualify for a Merit Award.



## Representative Sampling Guidelines

Participation in the Quality Chekd Compliance Program provides a venue in which each member may demonstrate expertise in the manufacture of dairy products that are of superior quality. Accredited third party testing of member dairy products confirms that each meets the organization's elevated standards and enables members to benchmark with peers. To assure the integrity of the program and the test results, samples provided must truly reflect the day-to-day quality of products manufactured and be representative of that which a consumer will experience. Though the importance of high performance in benchmarking schemes is recognized, the benefit of the program is lost if samples are not sufficiently random to identify areas in need of improvement. To this end, participants must adhere to the following sampling guidelines.

- **Sample Selection Timing** - sample selection must be random in regards to day of the week and time of day.
  - **Container and Line Representation** - all container sizes and/or fill lines present in the facility must be sampled and submitted over the course of the program year (with the exception of bulk products or products exceeding one gallon capacity)
  - **Sanitizing Guidelines** – because samples will be shipped and subsequently stressed, it is acknowledged that sanitizing prior to pulling samples is a common practice. However, it is critical that products contain no residual sanitizer that would pose a food safety hazard, confound test results or create an unfair advantage in terms of benchmarking microbiological test results.
    - **Fillers General** - Samples must be pulled off filler only when a minimum of a half hour running time has elapsed after sanitizing the lines, bowls/hoppers and interior surfaces
    - **Rotary Fillers** – After the hourly/routine sanitizing of the exterior surfaces of filler bowls and fill valves, the filler must run a minimum of 5 rotations prior to pulling samples.
    - **Packaging** - Sanitizing interior carton surfaces is prohibited unless the process is integral to the packaging operation (i.e. Aseptic and ESL PET pre-rinses, etc...)
- Note:** Compliance Program samples are randomly tested for the presence of sanitizer. Products testing positive will be disqualified from the testing round with no option to resubmit. Repeat violations may result in removal from the program and denial of member-owned trademark use rights.
- **Pre-Shipping Storage** – samples that show evidence of having been frozen will not be tested. Though freezing samples and pre-testing prior to submission may enable a plant to avoid the shipment of an inferior sample set, it will also lead to *older* samples arriving at the Merieux lab. Because the samples will be stressed for 7 days prior to microbiological testing and 17 days prior to sensory evaluation regardless of code date, sending samples fresh off the line is the most advantageous policy.



## **SAMPLE SUBMISSIONS**

### **Instructions for Sample Selection and Preparation**

1. For Members identifying with the Quality Chekd trademark, samples packaged in containers bearing the trademark are preferred.
2. All samples should be submitted during the assigned week. (See Member Sample Submission Schedules).
3. Samples are required every month. If a month is missed, it must be filled (see Late Sample Procedures).
4. Sample selection should be **random** by day of the week, time of day, and **container size**. A plant's quality level should not require a need to 'pick and choose'. However, as some samples are stressed, selecting fresh product produced on the day of shipment is recommended. Plants that have multiple production lines and only submit samples from one production line (ie. fluid quart line only) may not be eligible for a quality award consideration (see Representative Sampling Guidelines).
5. It is recommended the plant retain duplicate samples and test for comparison. In the case of shelf life samples, *incubation time starts when the Merieux NutriSciences/Quality Chekd laboratory receives them and places into the incubators*. **Day one** is then counted 24 hours after that time.
6. Make sure all containers are properly sealed or have properly sealed enclosures. A detailed sample preparation protocol and a training presentation are available in the Quality & Food Safety Section of the members' only website at [www.qchedk.com](http://www.qchedk.com).
7. A plant-specific Sample Analysis Request Form (SARF) is provided to each participating lab. This SARF has your assigned plant lab code and must be included with each container shipped. The SARF **MUST BE COMPLETED ELECTRONICALLY** using the drop down lists provided in Excel in order to standardize product nomenclature. Clearly identify on the SARF what products are included in each container, and what sample month is being submitted. This step is very important to assure proper log-in and reporting of your samples. Shipments that are not accompanied by the proper SARF are subject to rejection.
8. Each SARF form must be emailed in advance to Merieux NutriSciences **Email:** [crete.sampleadmin@mxns.com](mailto:crete.sampleadmin@mxns.com). This step will help to expedite the log-in process when samples are received.
9. Please send **two** samples of ice cream and fluid milk, **three** samples of all other products during the designated time slot for your group. For UHT/ESL products- please send **four** samples of all the products. For 3/8 oz. creamers- please send 15-20 packages (see General Procedure for Packing and Shipping Samples).



### HTST FLUID PRODUCTS SAMPLING SCHEDULE

Product	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Milk (whole)	X	X	X	X	X	X	X	X	X	X	X	X
2% Low-fat Milk	X	X	X	X	X	X	X	X	X	X	X	X
1% Low-fat Milk	X	X		X	X	X	X		X		X	X
Skim Milk (non-fat)	X	X	X	X	X	X	X	X	X	X	X	X
Chocolate Milk (whole, low or non-fat)			X					X		X		
Egg Nog					X							

\*Heavy Cream, Light Cream, and Half & Half samples are not required but may be sent at plant’s discretion. Results will not be factored in for program compliance.

**NOTE:** All fluid retail packaging lines must be represented over the course of the year, i.e. Gallon, Half gallon, Quart, etc. to be eligible for award recognition (see Representative Sampling Guidelines).

### CULTURED PRODUCTS SAMPLING SCHEDULE

Product	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Cottage Cheese (4%)	X	X	X	X	X	X	X	X	X	X	X	X
Low-fat Cottage Cheese	X	X	X	X	X	X	X	X	X	X	X	X
Sour Cream	X	X	X	X	X	X	X	X	X	X	X	X
Yogurt (Three different flavors)	X	X	X	X	X	X	X	X	X	X	X	X
Yogurt Smoothies (Two different flavors)		X			X			X			X	

\* Dip samples are not required but may be sent at plant’s discretion. Results will not be factored in for compliance.



### FROZEN PRODUCTS SAMPLING SCHEDULE

Product	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Ice Cream - Vanilla	X	X	X	X	X	X	X	X	X	X	X	X
Ice Cream – Chocolate	X	X		X	X		X	X		X	X	
Ice Cream-Strawberry			X			X			X			X

\* Frozen Yogurt, Sherbet, and feature flavor samples are not required but may be sent at plants discretion. Results will not be factored in with compliance.

### ULTRA-PASTEURIZED – ESL (REFRIGERATED) SAMPLING SCHEDULE

Product	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Ultra pasteurized Milks (all fat levels)	X	X	X	X	X	X	X	X	X	X	X	X
Ultra pasteurized Chocolate milk	X			X			X			X		
Egg Nog					X							

### UHT –ASEPTIC SCHEDULE

Product	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
UHT-Aseptic Milks (Whole Milk)	X	X	X	X	X	X	X	X	X	X	X	X
UHT-Aseptic Milks (Skim milk {non-fat})	X	X	X	X	X	X	X	X	X	X	X	X
UHT-Aseptic Milks (Low fat)	X	X	X	X	X	X	X	X	X	X	X	X

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**2019-2020 MEMBER SAMPLE SUBMISSION SCHEDULE**

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**1<sup>ST</sup> THRU 7<sup>TH</sup> OF THE MONTH:**

HILAND *FAYETTEVILLE AR*  
HILAND *FT SMITH AR*  
HILAND *NORFOLK NE*  
HILAND *SPRINGFIELD MO*  
HILAND *WICHITA KS*  
HILAND *LITTLE ROCK AR*  
PRAIRIE FARMS *CARLINVILLE IL*  
PRAIRIE FARMS *ANDERSON IN*  
PRAIRIE FARMS *ROCKFORD IL*  
PRAIRIE FARMS *QUINCY IL*  
PRAIRIE FARMS *SOMERSET KY*  
PRAIRIE FARMS *MEMPHIS TN*

**8<sup>TH</sup> THRU 14<sup>TH</sup> OF THE MONTH**

HILAND BELFONTE *KANSAS CITY MO*  
HILAND *CHANDLER OK*  
HILAND *KANSAS CITY MO*  
HILAND *NORMAN OK*  
HILAND *OMAHA NE*  
HILAND *TYLER TX -DAIRY*  
HILAND *TYLER TX - ICE CREAM*  
OBERWEIS DAIRY *NORTH AURORA IL*  
PRAIRIE FARMS *BATTLE CREEK MI*  
PRAIRIE FARMS *CARBONDALE IL*  
PRAIRIE FARMS *DECATUR IL*  
PRAIRIE FARMS *DUBUQUE IA*  
PRAIRIE FARMS *FT WAYNE IN*  
PRAIRIE FARMS *HOLLAND IN*  
PRAIRIE FARMS *JEFFERSON CITY MO*  
PRAIRIE FARMS *KOSCIUSKO MI*  
PRAIRIE FARMS *OLNEY IL*  
PRAIRIE FARMS *PEORIA IL*





### 15<sup>TH</sup> THRU 21<sup>ST</sup> OF THE MONTH

EBERHARDS DAIRY *REDMOND OR*  
GALLIKER *JOHNSTOWN PA*  
GALLIKER *CUMBERLAND MD*  
LOCHMEAD DAIRY *JUNCTION CITY OR*  
MEIJER DAIRY *TIPP CITY, OH*  
MEIJER DAIRY *HOLLAND, MI*  
OAKHURST DAIRY *PORTLAND ME*  
SMITH DAIRY *ORRVILLE OH*  
SMITH DAIRY *RICHMOND IA*  
UMPQUA DAIRY *ROSEBURG OR*

### 22<sup>ND</sup> THRU 28<sup>TH</sup> OF THE MONTH

CREAMLAND DAIRY *ALBUQUERQUE NM*  
GANDY'S DAIRY *LUBBOCK TX*  
SUPERIOR DAIRY *CANTON OH*  
PRODUCERS DAIRY *FRESNO CA*  
PRODUCERS DAIRY *FAIRFIELD CA*  
UNITED DAIRY *CHARLESTON WV*  
UNITED DAIRY *MARTIN'S FERRY OH*  
UNITED DAIRY *UNIONTOWN PA*

### 15<sup>TH</sup> THRU 21<sup>ST</sup> OF THE MONTH – NON-U.S. PLANTS

ALQUERIA DAIRY *CAJICA, COLOMBIA*  
ALQUERIA DAIRY *PALMIRA, COLOMBIA*  
ALQUERIA DAIRY *MEDELLIN, COLOMBIA*  
ALQUERIA DAIRY *SANTA MARTA, COLOMBIA*  
FRESKALECHE DAIRY *BUCARAMANGA, COLOMBIA*  
FRESKALECHE DAIRY *AGUACHICA, COLOMBIA*



## RETEST PROTOCOL FOR OUT-OF-STANDARD RESULTS

Retesting out-of-standard samples is a standard protocol within the Compliance Program. The intent of the retest protocol is to further validate out-of-standard products submitted; it may or may not improve compliance scores. This protocol involves retesting a sample within the month's sample batch received by Merieux. The protocol does not imply that a plant has been granted permission to resubmit samples.

### Microbiological Testing

**Note:** Though plates may be read and reported on weekends, retesting of the product will not be conducted until an accredited technician is on duty the following Monday. Out of standard results may be displayed on the COA in MyMXNS system until they are replaced by the retest data, which is indicated by the 'RT' designation in the Comments column.

#### • Milk Products

1. Retests are conducted on out-of-standard 7-day SPC and 7-day coliform by obtaining a sample from the 18-day flavor sample container. This is performed after initial results are determined to be out-of-standard. Sanitary sampling procedures are exercised to prevent contamination of the 18 day flavor container.
  - Retests are conducted in duplicate to validate plating methods
  - Retests are recorded and reported as follows:
    - If both retest duplicates are *in-spec*, the better of the two is reported
    - If one retest duplicate is *in-spec* and the other is *out-of-spec*, and the log difference is  $<1$ , the *in-spec* result will be reported on the COA.
    - If one retest is *in-spec* and the other is *out-of-spec* and the log difference is  $\geq 1$ , the sample is retested, an investigation is conducted to determine the source of the disparity, and resubmits are requested if the investigation deems necessary.
    - If the retest(s) and original test are both *out-of-spec*, the original test is reported because this is the true 7-day result (the retest product is actually over 9 days old)
2. When a retest result within standard is reported; the original result will be recorded as "not reportable". All results will be recorded, but only one result will be reported.
3. Micro retests are not conducted on ESL and shelf stable milks.

**Note:** It must be considered that *after 7 days* certain organisms may die off resulting in a lower plate count later in shelf life. Other organisms may continue to replicate, resulting a higher count. When a retest does not place a product in the 'in-spec range', the original test is used and is considered to most accurately represent the product's 7-day attributes.



- **Ice Cream**

1. If an ice cream sample test result is out-of-standard for the stress coliform evaluation, the retained sensory sample will be tested upon completion of the sensory evaluation.
2. The same procedure is followed as outlined in steps 2-3 for milk products.

- **Cultured Products**

1. Micro retests are not conducted on cultured products when out-of-standard results are obtained. Due to the amount of time elapsed between samplings, a retest would not accurately reflect the microbial load in the original sample.

### **Chemistry Testing**

- **Milk Product fat/solids testing is not conducted as part of the QC Compliance Program**

- **Cultured Products and Ice Cream Fat and Solids Testing**

1. If a fat and/or solids test is out-of-standard for an ice cream or cultured sample, a new sample will be tested in duplicate (7-day sample for cultured, and sensory (scoring) sample for ice cream).
2. If the retest confirms the out-of-standard, the original test will be reported.
3. If the retest is in-standard, the first value of the duplicates is reported.
4. All results will be recorded, but only one result will be reported.

**Note:** Fat tests below the minimum for ice cream and cultured products must be reported promptly to the Member and to Quality Chekd. Quality Chekd standards reflect legal minimums and action is required.



## LATE SAMPLE PROCEDURE

**In order to provide consistency and fairness to the sampling program relative to samples being submitted late (or not at all) per the submission schedule, the following procedures will be implemented.**

- 1) When a set of samples is not received during the scheduled week assigned to a facility, the Merieux NutriSciences/Quality Chekd lab will call the key contact at the plant lab within two business days.
- 2) If samples are not received within seven calendar days from that call, Quality Chekd Staff will call the plant for immediate submission.
- 3) If samples are not received within two days from that call, the facility will be given a compliance score of zero for that submission month as it relates to establishing Merit Award.
- 4) Samples will still be required since twelve sample sets on an annual basis are required to ascertain quality compliance levels.

## SAMPLE RE-SUBMISSION GUIDELINES

- 1) Sample re-submits will generally not be permitted in the event that a plant laboratory test result does not agree with the Merieux NutriSciences/Quality Chekd laboratory result. Exceptions may be considered **when there is reason to believe the integrity of the sample(s) has been compromised during shipping and handling**, or when a known laboratory error is reported by the Merieux lab.
- 2) Re-submissions are authorized only by Quality Chekd staff.
- 3) In the event that a re-submission is authorized, generally a complete set of samples for subject product will be required, and all scheduled tests will be re-run; however, this will be evaluated case-by-case.
- 4) Recurring discrepancies on any sample analysis must be brought to the attention of Quality Chekd staff for further follow-up. There are typically reasons for testing discrepancies and it is best to get them resolved sooner than later. A detailed QC Test Disparity Bulletin and QC Lab Manual are available to aid in resolving test discrepancy issues.



## GENERAL PROCEDURE FOR PACKING AND SHIPPING SAMPLES

1. Keep all samples as cold as possible (or frozen if ice cream) during collection.
2. Check all packages to be sure coding is legible in regard to code and plant number.
3. Each container should be individually packed in a sealed bag for protection during shipment. Placing several smaller containers in one sealed bag is acceptable.
4. Each refrigerated shipping container must have a “clearly identified” temperature control sample.
5. For Fluid samples, molded rigid containers, such as a Coleman cooler, are preferred over a polystyrene container in a corrugated box. Merieux NutriSciences will arrange to have these containers returned, but at the shippers expense. The use of this type of container, even with return cost, is usually cost effective.
6. For Frozen samples, it is recommended that a polystyrene container in a corrugated box be used (the dry ice tends to degrade the wrapping tape on the rigid plastic containers).
7. Place a large liner in the shipping container before ice/dry ice and samples are inserted to help contain melting ice and provide additional insulation.
8. Pack container with plenty of ice. Ice is recommended over freezer packs. Pack cooler contents tight to minimize sample shifting and potential sample damage.
9. Pack frozen samples with sufficient dry ice, and place cardboard or paper between dry ice and sample packages to maintain sample integrity.
10. Tape polystyrene box lid securely before closing corrugated box. Tape corrugated box on top and bottom. Securely tape the lid on rigid molded containers. Clear Scotch packaging tape is preferred.
11. Enclose a completed Sample Analysis Request Form (SARF) in each container.
12. Clearly mark the outside of each container with the number of containers in the shipment. For example, if two containers are sent, mark them 1 of 2 and 2 of 2. If only one container is sent, identify it as 1 of 1.
13. Maintain packed shipper in cool, dry place until pickup.
14. Samples can be shipped Standard Overnight. There is no need to ship Priority Overnight. Samples must be shipped to arrive Tuesday through Friday only.



## **SHIP SAMPLES TO:**

Merieux NutriSciences /Quality Chekd Laboratories  
3600 Eagle Nest Drive, North Building  
Crete IL 60417

## **EMAIL SAMPLE REQUEST FORMS (SARFs) TO:**

[crete.sampleadmin@mxns.com](mailto:crete.sampleadmin@mxns.com)

## **Merieux NutriSciences Contacts:**

**Marian Fenelon (QChekd Lab Supervisor)**

**Phone: (877) 777-6375**

**Email: [Marian.fenelon@mxns.com](mailto:Marian.fenelon@mxns.com)**

**Kanisha Kent (Customer Care Representative)**

**Phone: (844) 488-6374**

**Email: [getresults18@mxns.com](mailto:getresults18@mxns.com)**

## **Quality Chekd Contacts:**

**Chuck Yarris**

**Phone: 630-717-1110 x 2003**

**Email: [cyarris@qchekd.com](mailto:cyarris@qchekd.com)**

**Amanda Moore**

**Phone: 719-771-1110 x 2027**

**Email: [amoore@qchekd.com](mailto:amoore@qchekd.com)**



## SENSORY EVALUATION OF PRODUCTS

- ✓ Quality Chekd uses a scale of 5 - 9 for the sensory evaluation of products submitted to the Quality Chekd/Merieux NutriSciences Laboratory. Each attribute is scored individually, and samples are evaluated individually. Comparisons are not made with other samples in determining the score.
  
- ✓ **The scores are interpreted as follows:**
  - 9 - Excellent product
  - 8 - Good commercial product, no defects noted
  - 7.5 - Slight defect for ice cream texture (coarseness) and cottage cheese appearance (shattered curd) only
  - 7 - Slight to noticeable defect
  - 6 - Very noticeable and pronounced defect which will be discernable to consumers
  - 5 - Major defect which makes the product un-saleable
  
- ✓ **Fluid Milk and Cream Products** - HTST product sensory is conducted on samples stressed at 45°F for 17 days. UHT product sensory is conducted on samples stressed at 45°F for 30 days. These products are scored as either a pass or fail. A score of 8 is a pass, and a score of 7 or less is a fail.
  
- ✓ **Cultured Products** – sensory is conducted after products have been held at 45°F for 7 days. The score is weighted equally for each attribute evaluated.

Any defect noted with a score of a 5, 6, or 7 will be accompanied by a description on the scoring summary report. In calculating compliance for these sensory evaluations, the following formula is used:

- If the score is  $\leq 5$  the compliance is 50%
- If the score is = 6 the compliance is 70%
- If the score is = 7 the compliance is 90%
- If the score is = 7.5 the compliance is 100%
- If the score is = 8 the compliance is 100%

Example: If a cottage cheese sample scored an 8 on flavor (100), an 8 on body (100), a 7 on texture (90) and an 8 on appearance (100), then the compliance score =  $390/4 = 97.5\%$ .



- ✓ **Ice Cream Products** - attributes of flavor, body, texture, and color/appearance are weighted and a total sensory score is calculated based on the formula below. Attributes are weighted by their significance to the total quality of the product.

Any defect noted with a score of a 5, 6, or 7 will be accompanied by a description on the scoring summary report. In calculating compliance for these sensory evaluations, each attribute is scored as 5, 6, 7, 7.5 (for coarseness only), or 8.

$$(Flavor\ score\ X\ 6) + (Body\ score\ X\ 2) + (Texture\ score\ X\ 2) + (Color/appearance\ score) = Total\ Score$$

Example: If an ice cream sample scored a 7 on flavor, an 8 on body, an 8 on texture and a 7 on appearance, than the total score will be 81.

$$(7 \times 6) + (8 \times 2) + (8 \times 2) + (7) = 81$$

This formula provides a relative overall quality score for the ice cream. Scores above 80 are good quality products overall which will be found acceptable by consumers.

- ✓ **Sensory scores will be reported as follows:**

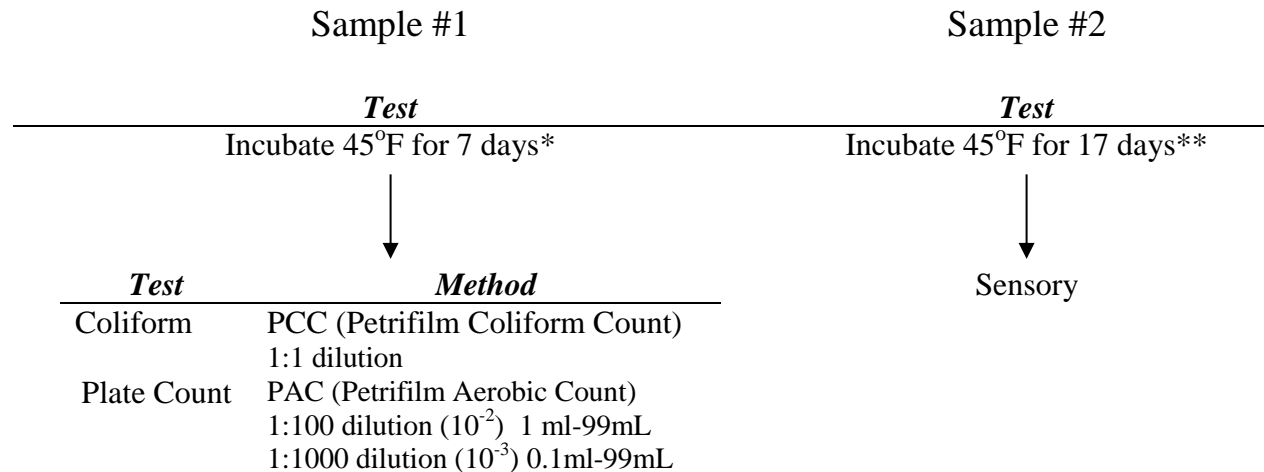
Fluid milks (HTST and UHT)	Flavor
Cultured products	Flavor, body, texture, appearance*
Novelties	Flavor, body, texture, appearance*
Creams	Flavor
Butter, Margarine	Flavor
Cheese	Flavor
Ice Cream	Flavor, body, texture, appearance*, total score

\*Color and appearance combined to one score.



**HTST FLUID MILK**

White, Chocolate, Flavored



\*Sample #1 is for 7 day Moseley test, and incubated for 7 days @ 45°F. Day “one” of the incubation period is counted the day after samples are received at the Merieux NutriSciences lab.

\*\* Sample #2 is an 18 day flavor sample that has been incubated for 17 days @ 45°F. Day “one” of the incubation period is counted the day after samples are received at the Merieux NutriSciences lab. Due to the challenge this test creates on conventional milk, the one day shipping time is included as part of the 18 day evaluation.<sup>(1)</sup>

**ICE CREAM**

Sample #1

Sample #2

<i>Test</i>	<i>Method</i>	<i>Test</i>
% Fat	Mojonnier	Hold at minus 20°C or lower for sensory
% Solids	Forced Air Oven (4 hours)	
Overrun		
Stress Coliform	Incubate 100g @ 21°C – 18 hours HSCC (High Sensitivity Coliform Count) Weigh 11g/99ml = 1:10 (10 <sup>-1</sup> ) 10mL on two HSCC plate	

**COTTAGE CHEESE**

Sample #1		Sample #2		Sample #3	
<i>Test</i>	<i>Method</i>	<i>Test</i>	<i>Method</i>	<i>Test</i>	
% Fat	Mojonnier	Fresh Coliform	HSCC (High Sensitivity Coliform Count Petrifilm) Weigh 11g/99ml = 1:10 (10 <sup>-1</sup> ) 10mL on two HSCC plate	Incubate 45°F for 7 days*	
% Solids	Forced Air Oven (4 hours)			↓	
				<i>Test</i> EB Enterobacteriaceae (Gram Negative Organisms)	<i>Method</i> EB Petrifilm Method
				Yeast & Mold Sensory	PDA Agar Method

\*Sample #3 is for 7 day EB Enterobacteriaceae test and Yeast & Mold, and incubated for 7 days @ 45°F. Day “one” of the incubation period is counted the day after samples are received at the Merieux NutriSciences lab.

**SOUR CREAM / DIPS / YOGURT**

Sample #1		Sample #2		Sample #3	
<i>Test</i>	<i>Method</i>	<i>Test</i>	<i>Method</i>	<i>Test</i>	
% Fat	Mojonnier	Fresh Coliform	HSCC (High Sensitivity Coliform Count) Weigh 11g/99ml – 1:10 Plate 10 ml on two HSCC plate	Incubate 45°F for 7 days*	
% Solids	Forced Air Oven (4 hours)				↓
				<i>Test</i>	<i>Method</i>
				Yeast & Mold Sensory	PDA Agar Method

\*Sample #3 is for 7 day Yeast & Mold, and incubated for 7 days @ 45°F. Day “one” of the incubation period is counted the day after samples are received at the Merieux NutriSciences lab.

**ULTRA-PASTEURIZED MILK**

Sample #1		Sample #2	
<i>Test</i>		<i>Test</i>	
Incubate 48 hours @ 30°C		Incubate 7°C (45°F) for 30 days**	
	↓		↓
<i>Test</i>	<i>Method</i>	<i>Test</i>	<i>Method</i>
Coliform	PCC (Petrifilm Coliform Count) 1:1 dilution	Yeast & Mold	PDA Agar Method
Plate Count	PAC (Petrifilm Aerobic Count) 1:100 dilution (10 <sup>-2</sup> ) 1 ml-99mL 1:1000 dilution (10 <sup>-3</sup> ) 0.1ml-99mL	Sensory	

\*Sample #1 is incubated for 7 days @ 45°F. Day “one” of the incubation period is counted the day after samples are received at the Merieux NutriSciences lab.

\*\* Sample #2 is a 30 day flavor sample that has been incubated for 30 days @ 45°F. Day “one” of the incubation period is counted the day after samples are received at the Merieux NutriSciences lab.

**UHT – ASEPTIC/SHELF STABLE - MILK**

Sample #1

Sample #2

Sample #3

<i>Test</i>		<i>Method</i>		<i>Test</i>		<i>Method</i>	
% Fat	LactiChek - 1% milk or higher	Incubate 35°C for 5 days*		Incubate 25°C for 30 days**			
% Fat	Mojonnier - skim & flavored milks	↓		↓			
		<i>Test</i>	<i>Method</i>	<i>Test</i>	<i>Method</i>		
		Mesophilic Aerobic Strip Count	Streak onto APC agar and incubate.	Fat Separation	Visual		
				Sediment	Visual		
				Flavor & Color	Visual/Sensory		

\*Sample #2 is incubated for 5 days @ 35°C. Day “one” of the incubation period is counted the day after samples are received at the Merieux NutriSciences lab.

\*\* Sample #3 incubated for 30 days @ 25°C. Day “one” of the incubation period is counted the day after samples are received at the Merieux NutriSciences lab.