

Trusted  
Dairy Laboratory Services  
for more than 50 Years

# DQCI Dairy Quality Control Products and Services

## Dairy Foods Processor Plant Laboratory Services Catalog

(Product Testing - fluid dairy products cheese, whey,  
cultured, powder, ice cream, butter,)

Instrument Calibration / Validation Standards  
Composition Analyses  
Chemistry Analyses  
Microbiological Analyses  
Environmental pathogen testing  
3rd party testing

DQCI Services: Dairy Quality Control  
(A Division of Diversified Laboratory Testing LLC)

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# DQCI Services Dairy Quality Control Products and Services Catalog

## Our History

DQCI Services began in 1936, as the Dairy Quality Control Committee providing dairy laboratory testing services to a variety of Dairy Co-Ops and Producers primarily in the states of Minnesota, and Wisconsin. Since that time DQCI has continued to grow, broadening both its geographic service areas, as well as the variety of services and products offered to the Dairy Industry.

Today DQCI Services is a privately owned independent full service dairy testing laboratory conducting a wide variety of quality tests and chemical analyses.

DQCI specializes in making available various standards (calibration/quality control sets) for infrared and near infrared equipment, somatic cell counters, and other milk testing equipment. DQCI has a broad customer base throughout the U.S.A. and Canada, as well as in other international markets such as Mexico, Puerto Rico, Costa Rica, Taiwan and other countries around the world. DQCI does provide custom calibration standards for products not represented by our routinely manufactured items by special request.

In addition, DQCI also provides payment and official quality testing for thousands of dairy producers in the upper Midwest, as well as many other services including microbiology analyses that help producers and milk handlers optimize the output and quality of product.

DQCI Services is involved with many industry groups and organizations and is a member of the International Association for Food Protection (IAFP), Upper Midwest Dairy Industry Association (UMDIA), International Association of Food Industry Suppliers (IAFIS), and the Institute of Food Technology (IFT).

DQCI is a certified laboratory under the National Conference of Interstate Milk Shippers and currently provides official results to six states in the upper Midwest.

Our reputation is based upon the quality and consistency of our work. We have disciplined ourselves to consistently provide accuracy in our analyses -- providing our customers with confidence in accurately testing products in their own laboratories and plants. We take our responsibility seriously.

Customer satisfaction is indeed our goal and also our livelihood.

Note: DQCI Services is a completely independent dairy laboratory, and is not affiliated with nor directly influenced by any other dairy related organization or company interests

## 2006 Catalog

**DQCI Services: Dairy Quality Control**

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**DQCI Services**  
**Dairy Quality Control Products and Services Catalog**

**Dairy Foods Processor Plant/Lab Services**

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**Instrument Calibration - Validation Standards**

Item ID	Item Description
110000	<b>Raw Milk Component Calibration-Validation Standards (1-12 in duplicate)</b> Standards for calibrating-validating instruments testing raw milk products. Standard Development Protocol: Raw milk samples are sourced from individual herds that have approximate butterfat range of 2.8% to 5.8% and a protein range of at least 0.6%. Bronopol is added as a preservative. Samples have an expiration date of 21 days from date of manufacture. Laboratory analyses are performed by AOAC procedures. Sample 1 through 6 and 7 through 12 can be used for daily check samples.
110002	<b>Raw Milk Component Calibration-Validation Standards - Additional Sets (1-12 in duplicate sets)</b> (Sets shipped to the same location on the same date.) These are the same calibration-validation standard sets as Product # 110000, but ordered as additional sets
113000	<b>Raw Milk Calibration-Validation Standards (1-12 in triplicate):</b> These are the same calibration-validation standards as Product # 110000, however they are 12 levels in triplicate.
113001	<b>Raw Milk Calibration-Validation Standards (1-12 singles as Additional Sets):</b> (Sets shipped to the same location on the same date.) These are the same calibration-validation standard as Product # 110000, however 12 levels are singles, and ordered as additional sets
110004	<b>Single Item Standard:</b> One level of milk or cream at specified fat and or solids. Customer pays for analysis requested and may obtain multiple vials or a large single container
110005	<b>"A" Check Sample:</b> One sample (single vial) of Item ID # 110000 representing a relatively low fat level. May be used as a monitor of the stability of the instrument calibration. Generally available to customers purchasing Item ID # 110000 or 113000. Order is by "each".
110006	<b>"B" Check Sample:</b> One sample (single vial) of Item ID # 110000, representing a relatively high fat level. May be used as a monitor of the stability of the instrument calibration. Generally available to customers purchasing Item ID # 110000 or 113000. Order is by "each".
110007	<b>"A" CHECK SAMPLE &gt;50:</b> Discounted volume order of 1100005
110008	<b>"B" CHECK SAMPLE &gt;50:</b> Discounted volume order of 1100006
110010	<b>ESCC (Electronic Somatic Cell Count ) Calibration-Validation Standards (4 in duplicate)</b> for calibrating electronic cell count instruments. Standard Development Protocol: Raw milk samples from individual sources are used to prepare samples with the following levels of somatic cell counts: LOW: <200,000 LOW MEDIUM: 300,000 - 500,000 MEDIUM HIGH: 600,000 - 800,000 HIGH: 900,000 - 1,200,000 Ranges conform to levels required for NCIMS certified laboratories monitoring and reporting somatic cell counts. Bronopol is added as a preservative. Shelf life is 2 weeks from the date of manufacture. Direct Microscopic Somatic Cell counts ( field wide single strip method, SMEPD, 17 <sup>th</sup> edition). DQCI is an FDA certified somatic cell provider and NCIMS laboratories may use the published somatic cell values to calibrate or validate their electronic somatic cell count instrument.
110012	<b>ESCC (Electronic Somatic Cell Count ) Calibration-Validation Standards - Additional Sets (4 in duplicate).</b> (Sets shipped to the same location on the same date.) These are the same as Product # 110010, but ordered as additional sets. <b>(Note: Hourly check samples available upon request)</b>
114003	<b>ESCC (Electronic Somatic Cell Count) Calibration-Validation Standards Set of 4 in triplicate:</b> These are the same calibration-validation standard as Product # 110010, however are 4 levels in triplicate.
114005	<b>ESCC (Electronic Somatic Cell Count) Calibration-Validation Standards Set of 4 singles:</b> These are the same calibration-validation standard as Product # 110010, however are 4 levels of one each, but ordered as additional sets.

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**Instrument Calibration - Validation Standards**

Item ID	Item Description
110013	<b>ESCC 'Low' daily check sample:</b> "Low" count sample from Item ID 110010. May be ordered by "each" in addition to an item ID # 110010 or 114003 qualifying order
110014	<b>ESCC 'Low-Med' daily check sample:</b> "Low Medium" count sample from Item ID 110010. May be ordered by "each" in addition to an item ID # 110010 or 114003 qualifying order
110015	<b>ESCC 'Med-High' daily check sample:</b> "Medium High" count sample from Item ID 110010. May be ordered by "each" in addition to an item ID # 110010 or 114003 qualifying order
110016	<b>ESCC 'High' daily check sample:</b> "High" count sample from Item ID 110010. May be ordered by "each" in addition to an item ID # 110010 qualifying order
110017	<b>ESCC Daily Check 'Med-High' &gt;50 :</b> Volume discounted price on Item ID # 110015
110090	<b>Urea (MUN) Calibration-Validation Standards:</b> Set of 30 samples in duplicate for calibration or validation of instruments measuring MUN in milk samples. All samples are raw milk. MUN samples typically have a range of 6-20 mg. /DL. Analysis to determine MUN values is done enzymatically (ChemSpec). To ensure range of values, urea may be added to some samples in the set. Samples expire 14 days after date of manufacture.
110303	<b>Raw Milk Standards UNPRESERVED Calibration-Validation Standards:</b> Same as Item # 110000 except no preservative is added. <u>Must be ordered the week prior to manufacture. Only NDA shipments. Samples shelf life is limited.</u> Standard for calibrating-validating instruments testing raw milk products. Standard Development Protocol: Raw milk samples are sourced from individual herds that have approximate butterfat range of 2.8% to 5.8% and a protein range of at least 0.6%. Laboratory analyses are performed by AOAC procedures.
110020	<b>Raw Low Fat Non Fortified Calibration-Validation Standards (1-10 in triplicate) :</b> Standard for calibrating-validating instruments testing raw milk products for butterfat (.10% to 3.5%), protein and solids. Standard Development Protocol: Milk samples are made from comingled milk. Raw samples 1 through 10 are unfortified milk samples. Bronopol is added as a preservative. Samples expire 14 days after date of manufacture. Analyses are performed by AOAC procedures: Butterfat by Mojonnier; protein by Kjeldahl Method; Total Solids by Oven Method
110022	<b>Raw Low Fat Non Fortified Calibration-Validation Standards - Additional Sets (1-10 in triplicate):</b> (Sets shipped to the same location on the same date.) These are the same as Product ID # 110020, but ordered as additional sets, and represent a volume discount available when ordered in addition to a Product # 110020 order.
110034	<b>Raw Low Fat Fortified Calibration-Validation Standards (1-14 in duplicate):</b> Standard for calibrating-validating instruments testing raw milk products for butterfat (.10% to 3.5%), protein and solids. Standard Development Protocol: Milk samples are made from comingled Raw milk. Samples 1 through 10 are unfortified milk samples. Samples 11 through 14 are fortified with condensed skim milk for those laboratories and plants needing solids-non-fat calibration at a higher level (9% to 11%SNF). Bronopol is added as a preservative. Samples expire 14 days after date of manufacture. Analyses are performed by AOAC procedures: Butterfat by Mojonnier; protein by Kjeldahl Method; Total Solids by Oven Method.
110035	<b>Raw Low Fat Fortified Calibration-Validation Standards- Additional Sets (1-14 in duplicate):</b> (Sets shipped to the same location on the same date.) These are the same as Product ID # 110024, but ordered as additional sets, and represent a volume discount available when ordered in addition to a Product # 110024 order.
110130	<b>Raw Skim Standard:</b> <u>One skim sample in duplicate</u> for validating instruments testing skim milk for fat, protein, and total solids. Analyses are performed by AOAC procedures: Butterfat by Mojonnier; protein by Kjeldahl Method; Total Solids by Oven Method.

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**Instrument Calibration - Validation Standards**

Item ID	Item Description
110070	<p><b>Raw Whey Calibration-Validation Standards (1-10 in duplicate):</b> Ten (10) samples in duplicate, Analyses by AOAC methods, Butterfat by Mojonnier; Protein by Kjeldahl; Lactose by HPLC; and Total Solids by the Oven Method. Bronopol is added as a preservative. Sample shelf life of 14 days from date of manufacture. Whey Standards are manufactured every 2 weeks.</p> <p>Application – Cheese Operations: Raw whey evaluation; Fat; Protein; Total Solids and Lactose evaluation.</p> <p>Expected Range:</p> <p>Fat: .06% to .60%</p> <p>Protein: .85% - 1.10%</p> <p>Lactose: 4.90% - 5.60%</p> <p>Total Solids: 6.60% - 7.90%</p>
110072	<p><b>Raw Whey Calibration-Validation Standards - Additional Sets (1-10 in duplicate):</b> (Sets shipped to the same location on the same date.) These are the same calibration standard as Product # 110070, but ordered as additional sets, and represent a volume discount available when ordered in addition to a Product # 110070 order.</p>
110170	<p><b>Heavy Milk Calibration-Validation Standards(1-10 in duplicate).</b> Set of 10 samples in duplicate for calibrating/validating instruments test everything from milk to cheese vatsthat have higher fat, protein and solids than that of normal raw milk. Standard Development Protocol: Samples have a fat range of 3.8 to 5.2% and Total Solids up to 22%. Bronopol is added as a preservative. Shelf life is 14 days from date of manufacture. Analyses are performed by AOAC procedures: Butterfat by Mojonnier; protein by Kjeldahl Method; Total Solids by Oven Method.</p>
110172	<p><b>Heavy Milk Standards – Addtl Sets(1-10 in duplicate)</b> Sets shipped to the same location on the same date.) These are the same calibration standard as Product # 110170, but ordered as additional sets, and represent a volume discount available when ordered in addition to a Product # 110170 order.</p>
110100	<p><b>Pasteurized/Homogenized Non Fortified Calibration-Validation Standards (1-10 in triplicate) :</b> Standard for calibrating-validating instruments testing pasteurized-homogenized milk products for butterfat (.07% to 3.5%), protein and solids. Standard Development Protocol: Samples 1 through 10 are unfortified milk samples. Bronopol is added as a preservative. Samples expire 14 days after date of manufacture. Analyses are performed by AOAC procedures: Butterfat by Mojonnier; protein by Kjeldahl Method; Total Solids by Oven Method</p>
110102	<p><b>Pasteurized/Homogenized Non Fortified Calibration-Validation Standards - Additional Sets (1-10 in triplicate)</b> (Sets shipped to the same location on the same date.) These are the same calibration standard as Product # 110100, but ordered as additional sets, and represent a volume discount available when ordered in addition to a Product # 110100 order.</p>
110301	<p><b>Pasteurized/Homogenized UNPRESERVED Non Fortified Calibration-Validation Standards (1-10 in triplicate) :</b> Same product as Item ID # 110100 except no preservative is added. <u>Only NDA shipments. Samples shelf life is limited. Must be ordered the week prior to manufacture.</u></p> <p>Standard for calibrating-validating instruments testing pasteurized-homogenized milk products for butterfat (.07% to 3.5%), protein and solids. Standard Development Protocol: Samples 1 through 10 are unfortified milk samples. Analyses are performed by AOAC procedures: Butterfat by Mojonnier; protein by Kjeldahl Method; Total Solids by Oven Method</p>

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Item ID	Item Description
110114	<b>Pasteurized/Homogenized Fortified Calibration-Validation Standards (1-14 in duplicate)</b> : Standard for calibrating-validating instruments testing pasteurized-homogenized milk products for butterfat (.07% to 3.5%), protein and solids. Standard Development Protocol: Samples 1 through 10 are unfortified milk samples. Samples 11 through 14 are fortified with condensed skim milk for those laboratories and plants needing solids-non-fat calibration at a higher level (9% to 11%SNF). Bronopol is added as a preservative. Samples expire 14 days after date of manufacture. Analyses are performed by AOAC procedures: Butterfat by Mojonnier; protein by Kjeldahl Method; Total Solids by Oven Method.
110115	<b>Pasteurized/Homogenized Fortified Calibration-Validation Standards - Additional Sets (1-14 in duplicate)</b> : (Sets shipped to the same location on the same date.) These are the same calibration standard as Product # 110114, but ordered as additional sets, and represent a volume discount available when ordered in addition to a Product # 110114 order.
110160	<b>Condensed Whole Calibration-Validation Standards: (12 samples in duplicate)</b> Used for instruments testing condensed whole milk. Total solids range is approximately 24% to 34%. Samples are prepared quarterly. Shelf life is 10 days from date of manufacture. Samples should be run upon receipt to ensure best results. Analyses are performed by AOAC procedures: butterfat by Mojonnier, protein by Kjeldahl Method; Total Solids by Oven Method.
110162	<b>Condensed Whole Calibration-Validation Standards -Addl sets- (1-12 in duplicate)</b> (Sets shipped to the same location on the same date.) These are the same calibration standard as Product # 110160, but ordered as additional sets, and represent a volume discount available when ordered in addition to a Product # 110160 order.
110040	<b>Condensed Skim Calibration-Validation Standards: (12 samples in duplicate)</b> Used for calibrating instruments testing condensed skim milk. Standard development protocol: Skim condensed sourced from local production facility, solids level adjusted to provide approximately a total solids range of 19% to 36%. Samples prepared 1X per month. Shelf life is 10 days from date of manufacture. Samples should be run upon receipt to ensure best results. Analyses are performed by AOAC procedures: butterfat by Mojonnier, protein by Kjeldahl Method; Total Solids by Oven Method.
110042	<b>Condensed Skim Calibration-Validation Standards -Addl sets- (12 samples in duplicate)</b> as described in product ID # 110040. (Sets shipped to the same location on the same date.) These are the same calibration standard as Product # 110040, but ordered as additional sets, and represent a volume discount available when ordered in addition to a Product # 110040 order.
110050	<b>Light Cream Calibration-Validation Standards (1-10 in duplicate):</b> Heat treated low fat cream to be used for calibrating instruments for butterfat (9.5% to 18%), protein and total solids. Standard Development Protocol: Samples are made every other week from unhomogenized heat treated cream. Bronopol is added as a preservative. These samples expire 14 days from date of manufacture. Analyses are performed by AOAC procedures: Butterfat by Mojonnier; protein by Kjeldahl Method; Total Solids by Oven Method.
110052	<b>Light Cream Calibration-Validation Standards - Additional Sets (1-10 in duplicate):</b> (Sets shipped to the same location on the same date.) These are the same as Product # 110050, but ordered as additional sets, and represent a volume discount available when ordered in addition to a Product # 110050 order.



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**Instrument Calibration - Validation Standards**

Item ID	Item Description
110150	<b>Mid Range Cream Calibration-Validation Standards (1-10 in duplicate):</b> Heat treated cream to be used for calibrating instruments for butterfat (20% to 30%), protein and total solids. <b>(Note: Cat # 110150 &amp; 110152 manufactured quarterly)</b> Standard Development Protocol: Samples are made quarterly from heat treated cream. Bronopol is added as a preservative. These samples expire 14 days from date of manufacture. Analyses are performed by AOAC procedures: Butterfat by Mojonnier; protein by Kjeldahl Method; Total Solids by Oven Method.
110152	<b>Mid Range Cream Calibration-Validation Standards- Additional Sets (1-10 in duplicate):</b> (Sets shipped to the same location on the same date.) These are the same calibration standard as Product # 110150, but ordered as additional sets, and represent a volume discount available when ordered in addition to a Product # 110150 order.
110060	<b>Heavy (High) Cream Calibration-Validation Standards (1-10 in duplicate):</b> Unhomogenized, heat treated high fat cream to be used for calibrating-validating instruments for butterfat (32% to 45%), protein and total solids. Standard Development Protocol: Samples are made every week from unhomogenized, heat treated cream. Only NDA shipments. Bronopol is added as a preservative. Samples expire 14 days after date of manufacture. Analyses are performed by AOAC procedures: Butterfat by Mojonnier; protein by Kjeldahl Method; Total Solids by Oven Method.
110062	<b>Heavy (High) Cream Calibration-Validation Standards - Additional Sets (1-10 in duplicate):</b> (Sets shipped to the same location on the same date.) These are the same calibration standard as Product # 110060, but ordered as additional sets, and represent a volume discount available when ordered in addition to a Product # 110060 order.
110302	<b>Heavy Cream UNPRESERVED Calibration-Validation Standards: (1-10 in duplicate)</b> Same product as Item ID # 110060 except no preservative is added. <u>Only NDA shipments. Samples shelf life is limited. Must be ordered the week prior to manufacture.</u> Unhomogenized, heat treated high fat cream to be used for calibrating-validating instruments for butterfat (32% to 45%), protein and total solids. Standard Development Protocol: Samples are made every week from unhomogenized, heat treated cream. Analyses are performed by AOAC procedures: Butterfat by Mojonnier; protein by Kjeldahl Method; Total Solids by Oven Method.
110180	<b>Goat Milk Calibration-Validation Standards: (12 samples in duplicate)</b> Suitable for calibration/validation of instruments testing Raw goat milk for fat and protein. Standard Development Protocol: Samples are made from raw goat milk from a goat dairy. Samples are blended to provide a range of fat (approximately .2 %) and protein (0.7% or more). Bronopol is added as a preservative. Shelf life is 14 days from date of manufacture. Analyses are performed by AOAC procedures: Butterfat by Mojonnier; protein by Kjeldahl Method. Samples must be ordered at least 1 week prior to manufacture.
110300	<b>California Calibration-Validation Standards: (10 samples, 4 vials each level)</b> For production facilities or laboratories testing fluid milk conforming to California product standards. Standard Development Protocol: Pasteurized, homogenized milk is obtained from California bottlers, and samples are prepared with a fat range of 0.07 to 3.5% fat. Bronopol is added as a preservative. Shelf life is 14 days from date of manufacture. Analyses are performed by AOAC procedures: Butterfat by Mojonnier; protein by Kjeldahl Method; Total Solids by Oven Method.
	<b>Note: DQCI Develops Custom Standards for Special Needs, and is Developing New Additional Standards for Specialized Dairy Products Calibrations Please Call Us About Specialized Calibration- Validation Standards Needs</b>

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**Dairy Chemistries and Microbiology Services**

Item ID	Item Description
333100	<b>Plate Loop Count (PLC):</b> An alternative method to estimate the aerobic plate count of a raw milk sample. Determination of colony forming units per ml of bacteria, in raw milk, utilizing "Standard Methods for the Examination of Dairy Products" 17th edition; 6.030.
333200	<b>Pre-Inc Plate Loop Count (PI):</b> Raw milk sample undergoes preliminary incubation at 21 degrees Celsius for 18 hours before analysis to stimulate the growth of psychrotrophic organisms and subsequently a Plate Loop Count (PLC) is performed utilizing "Standard Methods for the Examination of Dairy Products" 17th edition; 9.020 and 6.030
332700	<b>Lab Pasteurized Count (LPC):</b> Raw milk in test tubes heated to 62.8C +/- 0.5C, survivors counted by standard plate count method utilizing "Standard Methods for the Examination of Dairy Products" 17th edition
333500	<b>Standard Plate Count (SPC):</b> Aerobic plate count of total colony forming units of bacteria per milliliter or gram of raw, processed liquid and dry dairy products utilizing "Standard Methods for the Examination of Dairy Products" 17th edition; 6.020
332100	<b>Coliform Colony Forming Unit (CFU) Test:</b> Agar plate method employing a media (VRB) optimizing the growth of coliform organisms
333400	<b>Sediment Test – Milk:</b> Quantitative determination of amount of insoluble extraneous material in a representative sample of milk, utilizing "Standard Methods for the Examination of Dairy Products" 17th edition; 15.072 and CFR 58.2728
333900	<b>Bactoscan:</b> an NCIMS approved alternate test for SPC ( Standard Plate Count) on Raw Milk. Bacterial cells in a sample are lysed, liberated DNA is stained, and passed through light. The signal from the DNA is converted to an estimate of Bacteria and CFU's in the original sample.
331000	<b>4-Bact Analysis Microbiology Test:</b> Raw milk quality testing that includes microbiological assays where the same sample is plated for Coilform, Aerobic plate count, PI (pre-incubated) count and LPC (Lab Pasteurized count)
332000	<b>Coagulase Test:</b> Confirmation assay on colonies from staph agar growth for presence of coagulase enzyme which is indicative of the presence of pathogenic staphylococcus organisms.
333600	<b>SPC 7 Day/with Fresh: (Moseley Keeping Quality Test):</b> A combination of tests of pasteurized milk products to estimate shelf life. <ol style="list-style-type: none"> <li>1. Aerobic plate count (Standard Plate Count) on a fresh sample</li> <li>2. Incubate sample aliquot or duplicate sealed package for 7 days at 45 degrees F. Conduct a Standard Plate Count again</li> </ol> This test provides an estimation of the bacteria that are potential causes of short shelf life and is often used as an indicator of the keeping quality of pasteurized products utilizing "Standard Methods for the Examination of Dairy Products" 17th edition; 9.011.
333700	<b>Tank Culture Analysis–</b> Bacterial identification and enumeration of organisms present in bulk tank samples
333800	<b>Yeast and Mold Plate Analysis:</b> Determination of yeast and mold cell forming colonies in a dairy sample under specified conditions utilizing "Standard Methods for the Examination of Dairy Products" 17th edition; 8.110.
442440	<b>Electronic Somatic Cell Count:</b> ESCC on a Raw Milk sample
442300	<b>Direct Micro Count (DMC):</b> Direct microscopic count examination of stained preparation of milk, or certain other dairy products, to identify and enumerate the number of bacterial clumps present
442420	<b>Direct Microscopic Somatic Count (DMSCC):</b> Direct microscopic count of somatic cells per milliliter in a milk sample utilizing "Standard Methods for the Examination of Dairy Products" 17th edition.
332500	<b>Cryoscope - Freezing Point:</b> Test of milk sample to determine the freeze point of the sample, determining whether the water content on the milk is within the expected range.
332900	<b>Phosphatase Test (Charm):</b> Determination if phosphatase enzyme has been deactivated by proper pasteurization processing. Charm phosphatase test is recognized as official (NCIMS) test for milk, cream, and other Grade A dairy products.

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**Dairy Chemistries and Microbiology Services**

Item ID	Item Description
336000	<b>ESCC, Fat, Protein, Lactose:</b> Instrumented analysis of the milk components providing per cent fat, protein and lactose, as well as flow cytometry analysis of somatic cell counts in the sample.
337600	<b>Milk Urea Nitrogen (MUN):</b> Determination of measure of milk urea nitrogen in a milk sample
337700	<b>Milk Urea Nitrogen (MUN, 2 or more samples per order):</b> Determination of measure of milk urea nitrogen in a milk sample
336100	<b>Acid Degree Value:</b> A rancidity test applicable to raw and pasteurized milk, cream and other non-homogenized dairy products utilizing "Standard Methods for the Examination of Dairy Products" 17th edition;
336200	<b>Ash test:</b> A test that virtually eliminates the presence of organic matter, leaving primarily minerals, utilizing Association of Analytical Chemists Method 945.46
336300	<b>Casein Single:</b> Indirect Kejldahl method of casein determination in a sample, utilizing "Standard Methods for the Examination of Dairy Products" 17th edition
336400	<b>Casein Duplicate:</b> A duplicate total nitrogen analysis and a single non-casein nitrogen analysis complimentary to cat # 336300
336410	<b>% Denatured Protein :</b> Determination of % denatured protein in a sample
337300	<b>Lactose (single):</b> Determination of lactose content in a dairy sample by HPLC, sample utilizing "Standard Methods for the Examination of Dairy Products" 17th edition; 15.090
337400	<b>Lactose (duplicate):</b> Determination of lactose content in duplicate, in a dairy sample by HPLC, sample utilizing "Standard Methods for the Examination of Dairy Products" 17th edition
338800	<b>Titrateable Acidity:</b> Measures the extent of growth of acid producing bacteria in a dairy sample, the titrateable acidity of a dairy sample is determined utilizing "Standard Methods for the Examination of Dairy Products" 17th edition; 15.021
338711	<b>Lactic Acid Analysis:</b> Analysis of the amount of lactose in a dairy sample converted to lactic acid by microbial or culture activity. The D/L forms (Dextro/Levo) are generally separated. The determination of L lactic acid aids in determining potential lactic acid crystal formation in aged or processed cheese
331100	<b>Antibiotic (HPLC per Family):</b> High Performance Liquid Chromatography used to separate drug residues in milk, primarily beta-lactams. Used to delineate the specific residue(s) responsible for a positive response on a beta-lactam screening assay.
331200	<b>Inhibitor – Delvo antibiotic residue detection:</b> Growth inhibition assay for the detection of inhibitory substances in Raw Bovine milk and Pasteurized white milk
331700	<b>Antibiotic Confirmatory (Duplicate): Delvo antibiotic residue detection:</b> Same as test # 331200. Growth inhibition assay for the detection of inhibitory substances in Raw Bovine milk and Pasteurized white milk however, it is conducted in duplicate with a set time and temperature, and positive and negative controls.
331500	<b>Inhibitor - Charm Antibiotic Residue Test:</b> Radioactive labeled receptor assay analysis of milk and other dairy products to detect the residues of various antibiotics which may be found in milk. Test may be performed for one or more drug families. Each family is a different assay. The tests may also be used for analysis of feed, grain, urine and serum.
331510	<b>Inhibitor - Charm Test (&gt;1):</b> Same as Item # 331510 but multiple samples for the same drug or drug family examined on the same day are discounted.
331300	<b>IDEXX Snap Antibiotic residue detection:</b> Elisa test for Raw Bovine milk and Pasteurized white milk to detect the presence of Beta Lactam Residues in these products
555000	<b>Salmonella (Reveal AOAC RF):</b> Test for rapid recovery of <i>Salmonella</i> in food, allowing detection and presumptive identification of the salmonella organism
555010	<b>Listeria (Reveal):</b> Test for detection and presumptive identification of the listeria organism
555040	<b>E-Coli:</b> VRB-MUG Agar plate test or Reveal
555050	<b>E-Coli 0157:H7: (Reveal AOAC Official Method)</b> for identification and presumptive identification of E Coli H157:H7
555054	<b>Enterobacteriaceae:</b> Micro ID rapid differentiation of Enterobacteriaceae (eg. Klebsiella, E Coli, Salmonella, Shigella)
555060	<b>CP Staph:</b> Baird-Parker agar-BAM approved for food

**DQCI Services: Dairy Quality Control**

(A Division of Diversified Laboratory Testing LLC)

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**DQCI Services**  
**Dairy Quality Control Products and Services Catalog**

**Dairy Foods Processor Plant/Lab**  
**Dairy Chemistries and Microbiology Services**

Item ID	Item Description
336800	<b>Mojonnier fat content test – Single:</b> Determination of Fat content in a dairy sample utilizing “Standard Methods for the Examination of Dairy Products” 17th edition.
336900	<b>Mojonnier – Duplicate:</b> Determination of Fat content in duplicate in a dairy sample utilizing “Standard Methods for the Examination of Dairy Products” 17th edition.
337000	<b>Mojonnier – Triplicate:</b> Determination of Fat content in triplicate in a dairy sample utilizing “Standard Methods for the Examination of Dairy Products” 17th edition.
336600	<b>Babcock (Cream, Cheese) – Single:</b> Fat determination test applicable to unhomogenized cream and cheese utilizing “Standard Methods for the Examination of Dairy Products” 17th edition.
336700	<b>Babcock(Cream, Cheese) - Duplicate:</b> Fat determination test in duplicate applicable to unhomogenized cream and cheese utilizing “Standard Methods for the Examination of Dairy Products” 17th edition.
338000	<b>Total Protein (Kjeldahl Single):</b> Total (crude) protein is provided by Kjeldahl determination, which measures the total nitrogen content in a sample utilizing “Standard Methods for the Examination of Dairy Products” 17th edition.
338100	<b>Total Protein (Kjeldahl Duplicate):</b> Total (crude) protein is provided by Kjeldahl determination, in duplicate, which measures the total nitrogen content in a sample utilizing “Standard Methods for the Examination of Dairy Products” 17th edition.
338200	<b>Total Protein (Kjeldahl Triplicate):</b> Total (crude) protein is provided by Kjeldahl determination, in triplicate, which measures the total nitrogen content in a sample utilizing “Standard Methods for the Examination of Dairy Products” 17th edition.
338300	<b>True Protein single:</b> Total nitrogen protein and non protein nitrogen equivalent in a dairy sample are determined using the Kjeldahl method, the True Protein analysis is completed utilizing the indirect method described in “Standard Methods for the Examination of Dairy Products” 17th edition; 15.133
338400	<b>True Protein duplicate:</b> Total nitrogen protein and non protein nitrogen equivalent in a dairy sample are determined in duplicate, using the Kjeldahl method, and True Protein analysis is completed utilizing the indirect method described in “Standard Methods for the Examination of Dairy Products” 17th edition.
338900	<b>Total Solids Single</b> (raw and processed milk, condensed milk, evaporated milk, cream, ice cream, frozen dairy desserts, and other liquid dairy products): The total solids of a dairy sample is determined utilizing “Standard Methods for the Examination of Dairy Products” 17th edition.
339000	<b>Total Solids Duplicate:</b> (raw and processed milk, condensed milk, evaporated milk, cream, ice cream, frozen dairy desserts, and other liquid dairy products): The total solids of a dairy sample is determined in duplicate utilizing “Standard Methods for the Examination of Dairy Products” 17th edition.
339100	<b>Total Solids Triplicate:</b> (raw and processed milk, condensed milk, evaporated milk, cream, ice cream, frozen dairy desserts, and other liquid dairy products): The total solids of a dairy sample is determined in triplicate utilizing “Standard Methods for the Examination of Dairy Products” 17th edition.
663000	<b>Cheese Sample Test :</b> Samples are analyzed for fat, moisture, pH and salt content. Fat is determined by the Babcock method utilizing “Standard Methods for the Examination of Dairy Products” 17th edition. Salt is determined with a model 926 chloride analyzer; ph is determined with a Corning pH instrument, and moisture is determined with a vacuum oven utilizing “Standard Methods for the Examination of Dairy Products” 17th edition.
339199	<b>Combination Protein, Casein, True Protein, Single:</b> This is a series of tests. Indirect Kejl Dahl method of casein determination in a sample, utilizing “Standard Methods for the Examination of Dairy Products” 17th edition. Total nitrogen protein and non protein nitrogen equivalent in a dairy sample are determined using the Kjeldahl method, and the True Protein analysis is completed utilizing the indirect method described in “Standard Methods for the Examination of Dairy Products” 17th edition.



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**Dairy Foods Processor Plant/Lab**  
**Dairy Chemistries and Microbiology Services**

Item ID	Item Description
<b>339200</b>	<b>Combination Protein, Casein, True Protein, Duplicate</b> : This is a series of tests conducted in duplicate on a sample. Indirect Kjeldahl method of casein determination in a sample, utilizing "Standard Methods for the Examination of Dairy Products" 17th edition. Total nitrogen protein and non protein nitrogen equivalent in a dairy sample are determined using the Kjeldahl method, and the True Protein analysis is completed utilizing the indirect method described in "Standard Methods for the Examination of Dairy Products" 17th edition.
<b>338500</b>	<b>Salt Analysis - Chloride Analysis:</b> Chloride ion determination of a sample is conducted on a model 926 chloride analyzer to determine the salt content of a dairy sample.
<b>338510</b>	<b>Salt Analysis Duplicate:</b> Chloride ion determination of a sample is conducted in duplicate on a model 926 chloride analyzer to determine the salt content of a dairy sample
<b>338600</b>	<b>Scorched Particle Analysis:</b> A visual estimate of the number of "scorched particles" in a specified amount of a dry dairy product. A USDA quality parameter for Dried Milk and Dried Whey
<b>338700</b>	<b>Sodium Analysis</b> : Atomic Absorption analysis for sodium concentration in an original sample is reported.
<b>338710</b>	<b>Calcium Analysis:</b> Atomic Absorption analysis for calcium concentration in an original sample is reported.
<b>338720</b>	<b>Phosphorus Analysis:</b> Atomic Absorption analysis for phosphorus concentration in an original sample is reported
<b>338730</b>	<b>Potassium Analysis:</b> Atomic Absorption analysis for potassium concentration in an original sample is reported
<b>338740</b>	<b>Magnesium:</b> Atomic Absorption analysis for magnesium concentration in an original sample is reported
<b>338760</b>	<b>Sorbic Acid:</b> Analysis of concentration of allowable preservative in a sample dairy product or food product
<b>338770</b>	<b>Manganese:</b> Atomic Absorption analysis for manganese concentration in an original sample is reported
<b>338795</b>	<b>Iron:</b> Atomic Absorption analysis for Iron concentration in an original sample is reported
<b>338780</b>	<b>Zinc:</b> Atomic Absorption analysis for zinc concentration in an original sample is reported
	<p><b>In Addition To The Above Listed Products and Services, DQCI Offers Custom Testing Services And Customer Specific Combination Packages. Please Call Us to Inquire About A Special Custom Test or Combination Test Package That Would Best Meet Your Needs.</b></p>

**DQCI Services**  
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Note: Calibration – Validation Standards Results are posted regularly to our website  
 Ask about our annual Standing Order option for Calibration – Validation Standards

<b>RAW MILK COMPONENT STANDARDS</b>												
<b>CHEMICAL RESULTS</b>												
<b>DQCI SERVICES</b> <b>5205 QUINCY STREET</b> MOUNDS VIEW, MN 55112-1400 PHONE: 763-785-0484 FAX: 763-785-0584 ATTENTION: MILK LAB!!!												
<b>SET: 17</b>			<b>DATE: 04/24/06</b>									
SAMPLE NUMBER	MOJONNIER FAT%	TOTAL N. PROTEIN%	TRUE PROTEIN%	TOTAL SOLIDS%	BY DIFF LACTOSE%	CALCULATED VALUES**			UREA mg/DL			
						SNF%	tot. pro.	tru. pro.				
1	2.71	3.37	3.16	11.72	4.92	9.01	5.64	5.86	17.2			
2	3.35	3.32	3.15	12.31	4.91	8.96	5.64	5.81	8.4			
3	3.64	3.39	3.21	12.34	4.59	8.70	5.31	5.49	10.3			
4	3.86	3.24	3.06	12.59	4.79	8.73	5.50	5.88	11.4			
5	4.06	3.41	3.21	12.94	4.73	8.87	5.47	5.66	12.8			
6	4.68	3.91	3.73	14.16	4.78	9.48	5.57	5.75	10.9			
7 A	3.26	3.29	3.12	12.19	4.91	8.92	5.63	5.81	12.1			
8	3.60	3.24	3.04	12.23	4.66	8.63	5.39	5.59	14.8			
9	3.76	3.08	2.89	12.21	4.65	8.45	5.37	5.56	14.6			
10 B	4.02	3.29	3.12	12.62	4.59	8.60	5.31	5.48	7.4			
11	4.54	3.50	3.35	13.55	4.76	9.01	5.50	5.65	7.5			
12	5.63	3.63	3.43	14.79	4.78	9.17	5.54	5.74	15.4			
13	0.10	3.35		9.08		8.98						
AVG.(1-12)	3.93	3.39	3.21	12.80	4.76	8.88	5.49	5.67	11.9			
References:	SMEDP 15.8F, 15.12B, 15.10C, 15.9B, 15.8A											
AOAC	989.05, 991.20, 991.21, 991.23, 990.20, 990.21, 989.04											
**calculations:	lactose by diff = total solids - fat - total n protein - ash											
	tot. pro. other solids = total solids - fat - total N protein											
	SNF = total solids - fat											
	tru. pro. other solids = total solids - fat - true protein											

**Key Account, Group Account, Global Account Agreements**

DQCI Services has introduced a variety of Key Account (large plants) and Group Account Agreements for organizations with multiple plant sites in North America.

DQCI also offers Global Account Agreements for organizations with plants located in International locations outside of the USA in addition to their USA plants.

These agreements allow various levels of discounts dependant on committed volume monthly purchases of products and services from DQCI's Dairy Foods Processor Plant/Lab Catalog.

Please call DQCI for additional information about these Agreements.

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**General Terms and Conditions**

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Liability of DQCI Services and Diversified Laboratory Testing LLC from all causes of action in the aggregate shall be limited to the fees paid by the client for the services. The client agrees to indemnify and defend DQCI Services and Diversified Laboratory Testing LLC from all claims, liabilities, and expenses relating to the client’s use of the services, analyses, and results. Placement of an order for analytical services constitutes the client’s acceptance of the terms and conditions contained herein. The foregoing shall supersede any provision to the contrary stated in any purchase order or other order for work submitted by the client.





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