



DAIRY TESTING SOLUTIONS

Instrumentation, Analysis,
Software, and Service


PerkinElmer[®]
For the Better



COMPLETE ANALYSIS SOLUTIONS FOR DAIRY

Analytical technologies from PerkinElmer help dairy farms, processors, and regulators authenticate and protect the integrity and quality of their products. Whether the threat is known or unknown, we offer a range of targeted and nontargeted solutions to aid in the fight against food fraud. And many of our milk analyzers work according to internationally recognized standards like IDF, ISO, ICAR and AOAC.

Use our analytical solutions to aid in product development, formulation, and optimization; to measure ingredients before they enter your process; to improve efficiency and productivity and reduce costs while improving quality; or to detect antibiotics, hormones, veterinary drug residues, natural toxins, constituents, and a variety of microbial and industrial contaminants.

From geographic origin to dilution, substitution, or product enhancement, we have the instrumentation and expertise to help protect your brand. As new adulterants enter the supply chain, we continuously add innovative new solutions to our detection capabilities to keep you one step ahead.

SAFETY, COMPOSITIONAL, AND FUNCTIONAL ANALYSIS

Our instruments and techniques are extremely versatile. Used to aid in product development, formulation, and optimization, they measure ingredients before they're used in your process. They improve efficiency and productivity and reduce costs – all while improving quality and ensuring safety.

Safety: Measure and test contamination – from heavy metals, pesticides, and other toxins to drugs and antibiotics and accidental or purposeful adulteration.

Compositional: Lactose, fat, total solids, protein, moisture, and minerals are required for formulation and nutritional information.

Functional Information: How the product will perform – melt, flow, stick, and so on – under certain conditions in a specific formulation or matrix.

Service and Support: Our Informatics solutions and OneSource® Laboratory Services take a one-of-a-kind managed approach, utilizing a powerful, interwoven suite of solutions, including analytics, compliance, laboratory computing, scientific lab support, asset management, lab relocation, and other services.

Enhancing Brand Quality and Protection

Through our analytical solutions we're continuously working toward being the trusted partners for food manufacturers in optimizing production processes and maintaining consistency in final product quality through:

- Monitoring incoming ingredients
- Optimizing production processes
- Verifying finished product quality
- Improving formulations and development of new products
- Building brand equity

SAFETY ANALYSIS AT A GLANCE

The ideal solutions for protecting the food supply from adulterants of all kinds

HEAVY METALS TESTING

Avio® ICP-OES

Produces rapid multielement throughput and robust operating conditions ideal for dairy products



NexION® ICP-MS

Analyzes toxic and nutritional metals in one run



PinAAcle® AA

Provides low-cost, simple, single-element analysis



PESTICIDES TESTING

QSight® LC/MS/MS

Delivers high selectivity and high sensitivity for multipesticide analysis



Clarus® SQ8 GC/MS

Provides a more cost-effective pesticide analysis



MYCOTOXINS TESTING

QSight® LC/MS/MS

Detects Aflatoxin M1 down to sub-ppb level with potential for combined analyte analysis



Flexar™ HPLC

Identifies Aflatoxin M1 levels down to regulatory mandated levels



MaxSignal® Aflatoxin ELISA Kit

Measure aflatoxin (M1) in milk



ANTIBIOTIC AND DRUG RESIDUE SCREENING

QSight® LC/MS/MS

Detects veterinary drugs down to sub-ppb level with potential for combined analyte analysis



AuroFlow™ Test Strips

Test strips for detection of beta-lactams, tetracyclines, and sulfonamides



AuroBLOCK™ Incubator

Ready-to-use incubator with built-in timer and minimal footprint.



MaxSignal® ELISA Kits

36 different kits available for detecting antibiotics and select veterinary drugs



QuickSTAR™ Strip Reader

Handheld lateral flow testing system provides qualitative assay results in seconds



EnSight™ Plate Reader

Image-based cytometry and industry-leading detection in one system



EnVision® Plate Reader

Exceptional speed, throughput, and sensitivity across for high-throughput screening



CONTAMINATION AND ADULTERATION TESTING

DairyGuard™ FT-NIR Milk Powder Analyzer

Test milk powder for standard quality parameters and screen for adulterants



Spectrum™ Two (FT-IR and FT-NIR)

Screens for adulterants throughout the dairy supply chain



CONTAMINATION AND ADULTERATION *(Continued)*

Clarus® SQ8 GC/MS

Tests for adulterants throughout the dairy supply chain



PASTEURIZATION

MaxSignal® Kit

Test products to ensure proper pasteurization



COMPOSITIONAL ANALYSIS AT A GLANCE

The perfect solutions for determining formulations and nutritional information

PROXIMATES TESTING

LactoScope™ FTA FT-IR

30-second AOAC/IDF-compliant multicomponent analyzer for high-viscosity dairy products



LactoScope™ FTB FT-IR

45-second AOAC/IDF-compliant multicomponent analyzer for low-viscosity dairy products



DA 7250™ SD At-line NIR

10-second multicomponent analysis of dairy products



DA 7300™ In-line NIR

Continuous analysis for process monitoring and control



DA 7440™ On-line NIR

Overbelt, continuous analysis for process monitoring and control



LabChip® GXII Touch™

Rapid protein analysis tool that performs high-throughput protein identification and analysis



SUGARS TESTING

Flexar™ HPLC

Measure sugar levels in dairy products



TOTAL FATTY ACIDS AND DE NOVO FATTY ACIDS TESTING

Clarus® SQ8 GC/MS

Accurate fatty acid profiling of any dairy product



LactoScope™ FTA FT-IR

Multiple fatty-acid profile analysis, including de novo fatty acids in milk



CombiScope FT-IR

High-speed FT-IR and somatic cell counter analyzer, including multiple fatty-acid profiles and de novo fatty acids



METALS/MINERALS TESTING

NexION® 2000 ICP-MS

Can analyze toxic and nutritional metals in one run



Avio® ICP-OES

Rapid multielement throughput and robust operating conditions ideal for dairy products



PinAAcle® AA

Low-cost, simple, single-element analysis in all dairy products



FUNCTIONAL ANALYSIS AT A GLANCE

The right solutions for determining how your products perform under varying conditions

INGREDIENT PERFORMANCE AND MINI-PILOT PLANT

Rapid Visco® Analyzer® 4800

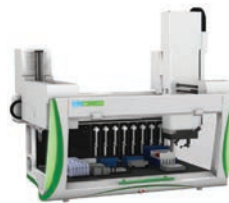
Measure ingredient performance; simulate process conditions and create miniature batches of product (10-25 ml)



SAMPLE PREP

Janus® G3 Workstations

Precision liquid-handling solutions provide adaptability in throughput, plate capacity, and dynamic volume range



TEXTURE

TVT 6700

Measure textural properties



SOFTWARE AT A GLANCE

ChemDraw®

Industry-leading chemical structure drawing solution

Electronic Lab Notebooks

Facilitate the make/test/decide workflow common to virtually all scientific disciplines

iLAB™ Laboratory Execution System

Enables QA/QC labs with a structures platform that eliminates paper while automating testing procedures

TIBCO Spotfire®

Leverage data wrangling, machine learning, and hyper-rich visualization and analytics capabilities

NetPlus

Monitor your NIR results and configure your NIR instruments from anywhere, anytime

Software for Instrument Control

Syngistix™ for AA, ICP, ICP-MS; TurboMass™ for Clarus SQ8 GC/MS; Spectrum™ 10 for IR

Spectrum Adulterant Screen

Enhances Spectrum 10 software with screening methods for materials of concern

LimsLink™

Lab integration solution that reduces errors and costs associated with manual data management

SERVICE AT A GLANCE

Asset Services

Provides constant view of how instruments are performing and when it's time for maintenance and upgrades

Asset Genius Monitoring Solution

Intelligent wireless sensors that automatically measure temperature, humidity, and more, on one platform

OneSource Portal

Generate service requests via desktop or mobile app, view site-specific equipment data, access interactive dashboard

Information Services

Single point of accountability: quickly get engaged with the right personnel and skill sets

Analytics Platform

Insights and actionable data with interactive visualization and mobile applications to optimize lab operations

Information Services/Lab Computing

Knowledge base that connects our Lab Computing Analysts around the world

Relocation Services

Turnkey, end-to-end logistics and management solutions that lessen burden and risk

Compliance Services

Harmonized, automated approach to compliance that streamlines processes across multivendor environments

Multivendor Services

Optimizes operations and manages lab assets throughout their lifecycle

MILK ANALYSIS

Efficient production of quality dairy products requires full control of incoming milk quality. This puts high demands on milk analyzers to meet multiple, seemingly conflicting, criteria. Accuracy, rapid analysis, ease of use, and robustness are all critically important. The PerkinElmer portfolio of analyzers is the result of more than 30 years of experience in milk testing technology.



Analysis for payment and acceptance

Our LactoScope™ system is widely used by dairy companies to determine the quality of incoming milk for pricing purposes. Accuracy is essential to building trust between buyer and seller, and the LactoScope system uses patented mid-IR technology and follows AOAC- and IDF-approved methods for the analysis of butterfat and protein in milk. The system also determines a range of other parameters, including lactose, total solids, solids nonfat, and added water. In addition, our ICP-OES, ICP-MS, and AA systems ensure the safety of milk from heavy metal contamination as well as provide the necessary nutritional information for mineral content.

Milk standardization

When producing consumer milk, you can realize tremendous savings through standardization. Monitoring seasonal variation in composition and between suppliers gives you the opportunity to adjust composition and produce milk that's closer to targets. Rapid analysis of fat content in skim milk and cream happens after the separator enables you to adjust the blending back of cream to reach your exact target. The LactoScope system makes it easy to test fat content in milk and cream samples, providing you with accurate results for optimal standardization.

Cheese producers can optimize the casein content, and the ratio between fat and casein in the milk, to increase cheese

yield. Our LactoScope system accurately determines casein and makes it possible to optimize the milk composition for the specific cheese type to be produced.

And milk powder producers can tailor the ratio between fat and protein in the end product by standardizing the milk. The LactoScope system supports several techniques for increasing or decreasing milk protein content, delivering rapid and accurate analysis of milk composition.

Testing for antibiotic residues in milk

Our AuroFlow lateral flow test strips rapidly screen for a broad range of antibiotics in raw, commingled cow's milk. These tests detect 14 beta-lactam antibiotics, major tetracyclines, and 11 major sulfonamides in milk at or below EU and CODEX maximum residue limits (MRL). The combo kits allow simultaneous detection of different classes of antibiotic residues. The AuroFlow BTS Combo Kit can detect more antibiotics at or below the MRL, compared to other competitors' kits. These state-of-the-art tests also use novel binding proteins that eliminate the need for a heating block. Validation reports are available showing the efficacy of the tests in room-temperature and cold milk.

Our QSight LC/MS/MS can confirm presence after screening and detects veterinary drugs down to the sub-ppb levels. It can also measure additional analytes (such as pesticides) in the same test.

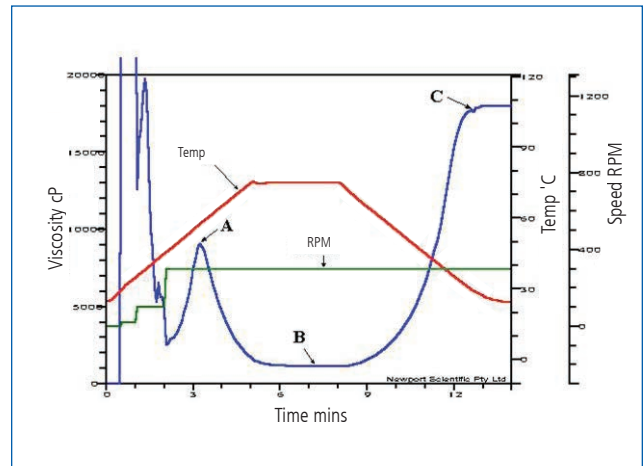
Ingredient Performance Analysis

Important ingredients

Dairy stabilizers are used to keep semi-gelled dairy products like yogurt and sour cream from separating after packaging, or to improve the texture of reduced-fat products. Common components of dairy stabilizer blends are carrageenan, gums, other hydrocolloids, and starch. For organic dairy products, there are strict rules governing the stabilizer components, making them subject to greater variability than nonorganic stabilizer blends.

Verify product performance

The Rapid Visco Analyzer (RVA) allows you to measure your product's functionality before it leaves your facility, so your customers can rest assured that your product will meet their use demands. You can cook up cheese powders and monitor gelling and pasting properties just as the customer will use it, and record the results and fingerprints for comparison and verification.



Uses and benefits

Dairy producers benefit in several ways by using the RVA for quality control of stabilizer blends and components. The system:

- Reveals flaws in raw materials before an entire batch is put through the packaging process – saving time and money through reduced packaging scrap and rework
- Shows flaws or sources of contamination in the large-scale finishing process
- Allows facilities to test every batch of yogurt that's produced for viscosity, reducing manufacturer recalls of out-of-spec products

And once an RVA test is initiated, the operator doesn't need to be present – the results are digitally archived and reported automatically. This eliminates sources of operator error and allows them to be more efficient with their time.



CHEESE ANALYSIS

Six-second compositional analysis

With the DA 7250 SD system, you can measure multiple components in cheese in just six seconds. Analysis can be performed on grated, block, sliced, or core samples. Samples are analyzed in open-faced dishes, minimizing sample prep and eliminating time-consuming cleanup. Large sample volumes can be tested to ensure that they're representative of an entire batch. Typical parameters include moisture, fat, pH, and salt.

Formulate processed cheeses using the RVA

Processed cheese quality depends on the performance of its components: natural cheese, dairy solids, and other functional ingredients. Because of the natural variability in component ingredient performance and the high cost of rework, processed cheese manufacturers use the RVA to ensure optimal performance and drastically reduce rework and waste. The RVA allows you to:

- Ensure normal performance of incoming ingredients
- Measure cooking behavior of premix dough
- Quantify melting performance of finished processed cheese
- Make informed decisions about blending and rework to minimize additional waste

Because RVA tests are user customizable, our applications group works with you to create the most descriptive, highest throughput tests possible. RVA results are similar to a fingerprint for a given product's performance, so deviations from normal behavior can be detected and dealt with at the source.

Uses and benefits

The DA 7250 SD system is the ideal platform for analysis of cheese products, enabling you to:

- Optimize use of ingredients
- Monitor cheese quality quickly and accurately
- Save money by reducing rework
- Improve customer retention through delivery of consistent quality products
- Formulate processed cheeses to exact specifications

In addition, you can use the RVA as a miniature pilot plant to optimize costs of ingredients such as emulsifiers, while maintaining desired functionality.

YOGURT, CHEESE SPREADS, AND SAUCES ANALYSIS

Savings potential

The DA 7250 SD NIR instrument analyzes yogurt, cheese spreads, and sauces in only six seconds – and thanks to disposable analysis cups, there's no need for cleanup after analysis. You can quickly test for moisture/solids, protein, and fat, saving money on ingredients while improving consistency.

Improve product quality

Yogurt - Extremely repeatable, user-friendly, rapid analysis of texture, viscosity, mouth feel, effects of shear, heat, cold, and enzymatic activity.

Cheese and processed cheese spreads - Analyze melting characteristics, viscosity of melted cheese, gelling characteristics of whey protein concentrates, and the hydration index of rennet caseinate.

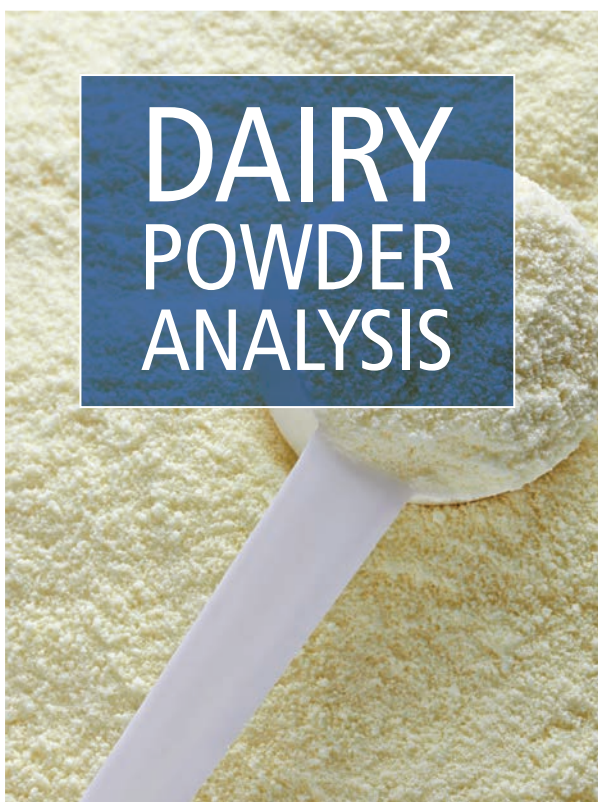
Sauces - Assess thickening, viscosity breakdown, melting, and starch pasting characteristics quickly.



Better results

Our NIR instruments help you optimize production and ensure you meet your most stringent regulations as profitably as possible. The DA 7300 In-line NIR system measures fat, moisture, and salt in real time in the process line, and can be integrated into various process-control systems to feed results directly into them. You can optimize production and minimize tolerances on butterfat, reduce rework and product recalls, and avoid penalties.

The DA 7250 SD At-line NIR system measures the same parameters at-line or in the lab, in only six seconds. It uses disposable cups, so it needs no cleanup after analysis. Results are nearly instantaneous and can be used for both production monitoring and verification of finished product quality.



Variety of uses

Dairy powders are used as ingredients in many different types of foods. The diversity of uses places stringent specifications – both nutritional and functional. The combination of NIR and the RVA will help you to meet all of your customers needs, allowing you to customize products for specific uses – whether it's a milk powder for pudding production or a whey protein powder for protein supplements.

Improve quality while optimizing profitability

Our DA 7300 In-line NIR system measures moisture, fat, protein, and more in real time in your production process. You can use it to optimize drying or verify conformity with specifications, and the continuous measurement provides better information on your process than a grab sample does.

The DA 7250 SD system analyzes all types of dairy powders for multiple parameters in just six seconds, and ease-of-use features allow your plant operators to analyze all batches, simply and easily.

Measurements of physical properties

The RVA system provides valuable information as to how powders perform under various conditions in different matrices. You can test the dairy powder as it is, determine properties such as gelling temperature, or detect heat damage due to processing or storage. You can also test it as a component within a given formulation, ramp the temperature and mixing speeds up and down, and measure responses to these stressors over time.

Micronutrients, vitamins, and minerals

Dairy powders are often key ingredients in nutraceuticals, too. They are primary sources of protein, and important sources of other micronutrients. Our ICP and AA instruments measure trace metals accurately and simply. And our Flexar HPLC and UHPLC systems measure vitamins such as Vitamin A, Biotin, Vitamin D, and many more.

Uses and benefits

- Monitor quality and detect product variation such as gelling temperature
- Detect manufacturing variation
- Save money through moisture content optimization and by reducing rework and scrap
- Use the RVA to ensure proper performance at customer site
- Formulate products that meet your customers' or consumers' functional and nutritional needs

Avio® 200 ICP-OES ■ ■

Capable of handling even the most difficult, high-matrix samples without dilution, the Avio® 200 brings a whole new level of performance and flexibility to ICP. The smallest ICP on the market, the Avio 200 offers the most efficient operation, reliable data, and lowest cost of ownership by delivering the lowest argon consumption of any ICP, the fastest ICP startup (spectrometer ready in just minutes from power off), superior sensitivity and resolution for all elements of interest, and the widest linear range with dual viewing technology.



NexION® 2000 ICP-MS ■ ■

The most versatile ICP-MS available, the NexION® 2000 features an array of unique technologies and innovations that combine to deliver the highest performance to laboratories, no matter your analytical challenge.

- The highest flexibility regardless of matrix
- The most powerful interference removal for the best detection limits
- The fastest data acquisition (100,000 points/sec) to measure any particle size



PinAAcle® 900 Series AA ■ ■

The PinAAcle™ 900 series of atomic absorption (AA) spectrometers brings AA performance to new heights. Available in flame, furnace, or combination models, PinAAcle instruments offer exactly the level of performance you need with the smallest footprint of any combined flame/graphite furnace AA system on the market.



PinAAcle® 500 Flame AA ■ ■

The PinAAcle™ 500 is the world's first completely corrosion-resistant flame atomic absorption spectrometer, designed to withstand the harshest environments and most corrosive samples. It offers superior durability, longer life, lower maintenance costs, and the fastest return on investment of any flame AA.



QSight® LC/MS/MS ■

High sensitivity, throughput, and productivity are what set the QSight LC/MS/MS apart from traditional triple quadrupole solutions. The QSight system sets the standard for high-sensitivity food safety applications with its innovative, patented technologies that deliver lower cost per analysis, higher throughput, and decreased sample prep time – all in a compact form factor that doesn't take up much valuable bench space.



Clarus® SQ 8 ■ ■

Our Clarus SQ8 GC/MS offers unsurpassed sensitivity and unparalleled stability for identification and quantitation of volatile and semivolatile compounds (VOC and SVOC). It's designed to deliver high throughput, rugged dependability, and great results. Plus, with our patented SMARTsource™ (for both EI and CI), maintenance is easy.



Flexar™ LC ■ ■ ■

Meet the HPLC system you can count on day after day. For routine analyses, it simply streamlines your processes with easy, trouble-free operation, while delivering reliable results every time.

Flexar™ UHPLC ■ ■ ■

For demanding applications when you need to collect more information in less time, our Flexar UHPLC is the perfect solution. This UHPLC is designed for a high-productivity environment and delivers high sensitivity and resolution, exceptional flow accuracy and precision, and faster results.



MaxSignal® ELISA Kits ■

An enzyme-linked immuno-sorbent assay (ELISA) allows for the fast screening and quantitation of antibodies or analytes against a variety of materials. A wide range of ELISA kits are offered for the rapid detection of industrial contaminants, natural toxins, constituents, hormones, antibiotics, and other veterinary drug residues or small molecules found in food and feed. Each kit has the capacity for 96 determinations.



MaxSignal Mycotoxin Testing Kits: Aflatoxin M1

MaxSignal Antibiotic & Drug Residue Screening Kits: Amoxicillin, Beta-Lactam, Chloramphenicol, Chlortetracycline, Ciprofloxacin, Doxycycline, Fluoroquinolone, Lincomycin, Oxytetracycline, Sarafloxacin, Sulfamethazine, Sulfamethoxazole, Sulfonamide, Tetracycline

Other Residues: Dairy Product Pasteurization Verification Kit, Diethylstilbestrol, Melamine

MaxSignal® 4302 Microplate Reader ■

The MaxSignal 4302 microplate reader is a versatile microplate spectrophotometer for 96-well plates, providing all the functionality needed for numerous laboratory applications while offering superior performance and value. The MaxSignal 4302 microplate reader is a compact, PC-controlled, multipurpose instrument designed to read and calculate the results of microplate-based assays.



AuroFlow™ Lateral Flow Test Strips ■

Designed for the detection of a broad range of antibiotics in raw, commingled cow's milk. These rapid tests detect antibiotics at or below the sensitivities required to adhere to EU and CODEX standards for 14 beta-lactam antibiotics, major tetracyclines, and 11 major sulfonamides.

AuroFlow Antibiotic & Drug Residue Screening Kits: Beta-lactam Strip Test, BT Combo Strip Test, BTS Combo Strip Test, PR1ME™ Beta-lactam MRL Assay, PR1ME™ BT Combo MRL Assay



AuroBLOCK™ Incubator ■

The AuroBLOCK incubator is used to ensure all AuroFlow™ PR1ME™ kits receive a constant incubation temperature. A fixed temperature combined with optimized tubes enhance the flow of sample along the strip tests, allowing for proper visual interpretation. Each incubator arrives ready to use for all AuroFlow PR1ME kits with no programming needed.



QuickSTAR™ Strip Reader ■

A patented ruggedized handheld lateral flow testing system that provides rapid qualitative assay results and increases testing throughput and efficiency. The unit features a rechargeable lithium battery and a touchscreen menu-driven interface, and provides users test results in less than 10 seconds. The unit is compatible with a wide array of preprogrammed test types and is software upgradeable to accommodate additional assays.



EnSight® Multimode Plate Reader ■

Brings image-based cytometry together with our industry-leading detection technologies for the first time; imaging is fast, with online data analysis in minutes

AhaLISA Kits: Aflatoxin Total, Beef Troponin, Chloramphenicol, Chloramphenicol biotin-tolerant, Soybean Agglutinin



EnVision™ Multimode Plate Reader ■

Provides exceptional speed, throughput, and sensitivity across all detection technologies; robust performance and reliable data for high-throughput screening; higher sensitivity for time-resolved fluorescence (TRF) applications

AhaLISA Kits: Aflatoxin Total, Beef Troponin, Chloramphenicol, Chloramphenicol biotin-tolerant, Soybean Agglutinin



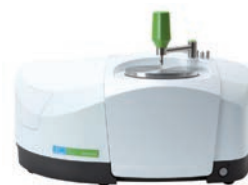
DairyGuard™ FT-NIR Milk Powder Analyzer ■

Based on our Frontier® FT-NIR system, the DairyGuard™ milk powder analyzer applies advanced algorithms to screen for known and unknown economic adulterants in milk powder, as well as performing the same fast measurements routinely used for protein, moisture, and fat monitoring today.



Spectrum Two™ ■

Easy to use, powerful, compact and robust – Spectrum Two is the FT-IR spectrometer of choice for scientists everywhere. With fully integrated, robust universal sampling for trouble-free measurements and portability options, Spectrum Two is ideal for use in both laboratory and remote testing environments. Ideally suited to everyday analysis, you can confidently perform fast, accurate IR analysis and assure the quality of your materials across a wide range of applications.



Spectrum Two™ N ■

A high-performance, yet robust and transportable FT-NIR system platform enabling simple, reliable NIR analyses. It's the perfect system for labs that need to combine high-end performance with the ease-of-use features of a portable instrument, allowing users with different levels of expertise, from novice to seasoned professionals, to be proficient with it in no time.



LactoScope™ FT-A Dairy Analyzer ■

AOAC and IDF compliant for the analysis of fat, protein, lactose, and total solids in milk. It's a state-of-the-art instrument, with modern FT-IR optics and simple-to-use, powerful software. It can test other products such as cream, yogurt, and whey, increasing its value and versatility. Ideal for checking incoming milk and end products, it offers low cost of ownership, modular design, low reagent expense, and 30-second response time. It's the ideal component-analysis tool for busy dairy laboratories.



CombiScope™ FT-IR and LFC Analyzer ■

AOAC and IDF compliant for analysis of fat, protein, lactose, and multiple fatty-acid profiles, and FDA and MicroVal certified for somatic cell count. This high-speed raw milk analyzer combines the latest technology in FT-IR and LED flow cytometry, allowing you to easily increase lab capacity, throughput, and business opportunities.

■ Safety Analysis ■ Compositional Analysis ■ Functional Analysis



DA 7300™ In-line NIR ■

USDA-approved NIR process sensor to provide continuous real-time control. The instrument and results are readily integrated into process control systems for automated or manual adjustment. Connect to butter churns and control butter fat to <0.2% of target while monitoring salt levels. Mount on dryers for moisture optimization.



DA 7440™ On-line NIR ■

The DA 7440 On-line offers real-time analysis over a moving conveyor belt. It measures fat, moisture, and more in samples like sliced or grated cheese and cheese products.



LabChip® GXII Touch™ ■

Our advanced microfluidics technology streamlines the multiple, manual steps of slab gel electrophoresis and provides sample integrity checks essential for high-throughput protein identification and analysis. With its easy-to-use touchscreen interface, even occasional users get up and running samples quickly. TIBCO SpotFire® data visualization further enhances data output.



Rapid Visco® Analyzer ■

A flexible heating, cooling, and variable shear viscometer for process simulation of recombined products such as sweetened condensed milk, yogurt, cream cheese, and ice cream. Assess batch differences in skim milk powders, whey protein concentrates, and protein isolates that affect fitness for purpose. Assess the rehydration rate of rennet caseinate. Use the RVA as a miniature pilot plant for processed cheese manufacture and meltability.



TVT Texture Analyzer ■

The TVT measures various textural properties of dairy products by cutting, pulling, pushing, and poking samples and measuring force response over time. The TVT is used in R&D/product development to test effects of new ingredients or suppliers used in production/quality control to ensure consistent quality. It also measures properties such as cutting force, gel strength, springiness, gumminess, and extensibility.



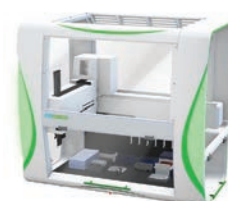
JANUS® G3 Workstation ■

Precision liquid-handling solutions provide adaptability in throughput, plate capacity, and dynamic volume range, with single- or dual-arm systems available on the JANUS G3 system and choice of dispense heads on the JANUS G3 MDT model.



JANUS® G3 MDT Workstation ■

This liquid-handling solution offers multiple pipetting technologies on a single modular platform with 96- or 384-channel Modular Dispense Technology™ (MDT) dispense head. It provides flexibility in throughput, plate capacity, and dynamic volume range -- just add a second integrated labware movement module. To accommodate additional microplate capacity or disposable tip boxes, add a PlateStak™ microplate storage device.



SOFTWARE

Software is the glue that holds a solution together. Electronic lab notebooks, imaging and analysis software, data reporting, and so much more: our software helps you get the most out of your instrumentation – and your dairy analysis solution.

ChemDraw®

For more than 30 years, food and beverage scientists have relied on ChemDraw, our industry-trusted chemical structure drawing solution, to support their research. ChemDraw software's chemical intelligence and integrations with leading chemical compound and reaction libraries allow scientists to spend less time drawing and more time on what really matters: their research.

Electronic Lab Notebooks

Our electronic lab notebooks facilitate the make/test/decide workflow common to virtually all scientific disciplines. ELNs provide the central framework for record keeping, collaboration, and the data for insights from integrated tools, including Signals™ Lead Discovery, Signals™ Screening, and TIBCO Spotfire®.

Signals Notebook

The intuitive, searchable, scalable, and secure electronic lab notebook designed to increase productivity, enhance collaboration, and reduce risk.

- Cloud-native ELN delivering the rapid setup, scalability, and speed expected from modern cloud-based applications
- Dedicated workflows for synthetic chemistry supported by a new, Web-based version of ChemDraw®, the world's leading chemical structure sketcher
- Easy inclusion of virtually any type of data, with the ability to share, collaborate, and retrieve data at unprecedented speed

E-Notebook

Accelerates time to discovery – from ideation through synthesis and testing of your dairy products.

- Robust and highly configurable to deliver workflow functionality
- Deployable on premise or hosted by PerkinElmer
- Captures experimental procedures and results to define and protect intellectual property
- Enables sharing of organization-wide insights while providing data control and security

iLAB

The iLAB Laboratory Execution System (LES) provides QA/QC laboratories with a structured platform that eliminates paper while automating and controlling testing procedures.

TIBCO Spotfire®

We provide TIBCO Spotfire® in a secure platform-as-a-service (PaaS) architecture to enable limitless analytics across your enterprise. Whether you choose PaaS, on-premise, or a hybrid implementation, you can leverage data wrangling, machine learning, and hyper-rich visualization and analytics capabilities.

NetPlus

Monitor your analysis results and configure your NIR instruments from anywhere, any time: Our Web-based NetPlus software suite provides access wherever you are. NetPlus Reports lets you monitor production, verify quality of ingredient shipments, get an update on latest analyses – and see results in tables and charts on your laptop. NetPlus Remote lets you configure instruments, monitor performance, and update calibrations. Whether you manage one instrument or a hundred, NetPlus Remote streamlines your tasks.

Software for Instrument Control

Syngistix Software: AA, ICP, ICP-MS

TurboMass: Clarus SQ8GC/MS

Spectrum 10: IR

Spectrum Adulterant Screen

Designed to enhance FT-IR/NIR Spectrum 10 Software, Spectrum Adulterant Screen allows the development and execution of screening methods for suspected materials of concern. The algorithm accounts for sample variability and provides a simple method that adapts to new threats.

LimsLink

A laboratory integration solution that reduces errors and costs associated with manual data management by ensuring that results and sample information are accurately and efficiently transferred in real time between instruments, instrument data systems, and informatics systems such as LIMS, ELN, LES, SDMS, DMS, SAP, and more.

LimsLink helps laboratories in any industry maximize their investments in instruments and informatics by providing accurate, efficient, and real-time transfer of data and information between all instruments, instrument data systems, and informatics systems.

Asset Services

Whether your goal is resource optimization or standardization of vendors and processes, OneSource Asset Services can bring your asset management activities to the next level, providing a constant view of how your instrumentation is performing. And with advanced notification tools you'll know exactly when it's time for maintenance and upgrades.

Asset Genius Monitoring Solution

This comprehensive solution includes intelligent wireless sensors that automatically measure temperature, humidity levels, and more, on a single platform. And by using state-of-the-art data analytics, Asset Genius Monitoring can give you essential information on equipment utilization.

OneSource Portal

Our services portal allows you to quickly generate a service request via your desktop or mobile app, view site-specific equipment data, review service requests, and access the interactive dashboard for analytics and reports.

Information Services

Your information technology and scientific instrumentation need to work together seamlessly. With an almost exclusive focus on R&D and manufacturing, and grounded in both scientific and lab IT technologies, our Information Services experts bring global, multivendor, multisite expertise to your project. With a single point of accountability, we quickly get you engaged with the right personnel and the right skill sets in instrumentation, application software, operating systems, networking, and computing hardware, for fast problem resolution, via our training hubs and remote support.

Analytics Platform

The OneSource InSite Analytics Platform provides insights and actionable data with interactive visualization tools and mobile applications that help optimize laboratory operations.

Information Services/Lab Computing

Our Lab Computing solutions infrastructure includes a knowledge base that connects our Lab Computing Analysts around the world. Parameters include instrument inventory location/relocation; preventative maintenance and qualification documentation; firmware and software data information; workflow data for commissioning/decommissioning; new instrument onboarding; and IT safety, facility, and lab management user groups and workflow designs.

Relocation Services

OneSource Relocation Services delivers turnkey, end-to-end solutions, lessening burden and risk with project managers and logistics professionals who can help with premove testing; labeling, dismantling, and packing; documentation support; qualification and protocol development; and system integration and application support.

Compliance Services

With OneSource Compliance Services, you'll be meeting regulatory requirements companywide. Our OneSource Universal Operational Qualification (UOQ) framework delivers a harmonized, automated approach to testing, documentation, and compliance, streamlining processes across all major models of laboratory instrumentation, regardless of vendor. To ensure your lab and processes are compliant, our team can support data integrity assurance, paper-based qualifications, computer system validation, and regulatory submissions in compliance with AOAC standards.

Multivendor Services

From preventive maintenance and repair to qualification, calibration, and laboratory relocation, we help you to optimize your operations and cost-effectively manage laboratory assets throughout their lifecycle.

DAIRY SOLUTIONS OVERVIEW

Whether you're testing for pesticides, mycotoxins, or contaminants in your dairy products; assessing their nutritional components; or seeking information on how they'll perform under varying conditions, we have the ideal instrumentation to meet your needs.

	SAFETY						COMPOSITIONAL				FUNCTIONAL		
	Heavy Metals	Pesticides	Mycotoxins	Antibiotic and Drug Residue	Contamination and Adulteration	Pasteurization	Proximates	Sugars	Total and de Novo Fatty Acids	Metals/Minerals	Ingredient Performance	Mini-pilot Plant	Texture
Avio ICP-OES	•									•			
NexION ICP-MS	•									•			
PinAAcle AA	•									•			
QSight LC/MS/MS		•	•	•									
Clarus SQ8 GC/MS		•			•				•				
Flexar HPLC			•					•					
MaxSignal 4302			•	•	•	•							
MaxSignal Kits			•	•	•	•							
AuroFlow Test Strips				•									
AuroBLOCK Incubator				•									
QuickSTAR Strip Reader				•									
EnSight Plate Reader				•									
EnVision Plate Reader				•									
DairyGuard FT-NIR					•								
Spectrum Two					•								
LactoScope FTA FT-IR							•	•	•				
LactoScope FTB FT-IR							•						
DA 7250 SD At-line NIR							•						
DA 7300 In-line NIR							•						
DA 7440 On-line NIR							•						
LabChip GXII Touch							•						
Rapid Visco Analyzer 4800											•	•	
TVT 6700													•
Janus G3 Workstations													•

Put that together with informatics, software, and services, and you have a testing solution that's right for your lab – *and* application.

For more information visit www.perkinelmer.com and www.perten.com

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