



# GRAIN TESTING SOLUTIONS

Instrumentation, Analysis,  
Software, and Service

  
**PerkinElmer**<sup>®</sup>  
*For the Better*





# COMPLETE ANALYSIS SOLUTIONS FOR GRAIN

The grain industry is very complex. It's global, diverse, and can also present analytical challenges. Today's grain users demand more when it comes to quality, safety, and uniformity. In addition, they seek diverse products with unique characteristics.

PerkinElmer is equipped to help the grain industry in its quest to feed the world – nutritiously and economically. Our testing and analysis solutions encompass the three primary areas required for complete knowledge of grains and their derivatives – composition, functionality, and safety.

Our analytical technologies help farmers, traders, and processors get the most value from grain at each stage of

its journey, from farm to consumer. Whether your focus is moisture, protein, oil, fiber, or another component, we have the analytical solutions to meet your needs. Farmers use our systems to optimize grain drying and know its value prior to delivering to the elevator. Elevators use our instruments for grading to avoid taking in subquality grain, for segregation to obtain optimum value, and for load-out verification. Processors use our solutions to verify incoming grain quality, blending/segregation, in-process monitoring, and quality verification at load out. Additionally, our mycotoxin solutions are used at all stages to help keep dangerous material out of the grain trade and processing streams.

## COMPOSITIONAL ANALYSIS

Grains are a significant portion of human and animal food consumption. Ensuring proper nutritional content and digestibility are important grain aspects.

## FUNCTIONAL ANALYSIS

Grains and their derivatives may have functional requirements. This functionality is often not solely dependent upon composition, but also upon energy input and the resulting interactions of substances.

## SAFETY

While grains are generally a safe food source, there are conditions that may compromise that. It's critical that companies ensure the safety of food products from natural, unintentional, and intentional compromise.

## 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.

Through our analytical solutions we're continuously working toward being trusted partners for the grain industry in optimizing production processes and maintaining consistency in final product.

# COMPOSITIONAL ANALYSIS AT A GLANCE

Ensure proper nutritional content and digestibility.

## MOISTURE TESTING

### Aquamatic™ 5200

Officially approved grain moisture meter



## PROXIMATES TESTING

### Inframatic™ 8800

Portable, battery-powered whole-grain analyzer for moisture, protein and oil



### Inframatic™ 9500

Elevator/lab whole-grain analyzer with best accuracy and multiple official approvals



### DA 7250™ SD At-line NIR

Ten-second, multi-component analysis of grains and grain derivatives



### DA 7300™ In-line NIR

In-line, continuous measurement for process monitoring and control



### DA 7440™ On-line NIR

Overbelt, continuous analysis for process monitoring and control



### FT 9700™ FT-NIR

Full-spectrum analysis for ground grains and derivatives



### LabChip® GXII Touch™

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



## PROXIMATES TESTING *(Continued)*

### NEXTFLEX® Library Prep Kit

Increases flexibility and workflow efficiency of library preparation



## SUGARS TESTING

### Flexar™ HPLC

Measure sugar levels in grain products



## MINERALS/METALS TESTING

### NexION® 2000 ICP-MS

Analyze toxic and nutritional metals in a single test



### Avio® ICP-OES

Rapid multielement throughput and robust operating conditions ideal for grain labs



### PinAAcle® AA

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



## FATTY ACID PROFILES

### Clarus® SQ8 GC/MS

Accurate fatty acid profiling of grain and grain derivatives



# FUNCTIONAL ANALYSIS AT A GLANCE

Discover the functional requirements of grains and their derivatives.

## SPROUT DAMAGE

### Falling Number® 1000

World-standard method for detecting sprout damage and alpha-amylase in wheat and flour



## ENZYME ACTIVITY

### Rapid Visco® Analyzer Systems

Tests the effects of enzymes on grains and their derivatives



## RHEOLOGY

### doughLAB™

Measures characteristics of wheat and flour use



### Rapid Visco® Analyzer Systems

Measure starch pasting characteristics



### Glutomatic® System

Determine gluten content and Gluten Index of wheat flours



## GRAIN GRADING

### Paddycheck™

Objective, consistent, automated rice grading system



## PHYSICAL – TEXTURE, DIMENSIONS, THERMAL PROPERTIES

### Paddycheck™

Image and texture analysis of rice and other small grains



### DSC 8000™

Measures thermal properties of grain and grain derivatives



## SAMPLE PREP

### SPD 4200™

Rapid, reproducible, sample divider for small grains



## Lab Mills

### LM 3610™

Low moisture loss grinder for grains and oilseeds



### LM 3100™

Sample prep grinder for grains for subsequent analysis

### Shakematic™

Enhances reproducibility of Falling Number testing



### JANUS® G3 Workstations

Versatile liquid handling workstation that can be used as a front end for setting up reactions or samples prior to analysis



# SAFETY ANALYSIS AT A GLANCE

Ensure the safety of food products from natural, unintentional, and intentional compromise.

## MYCOTOXINS TESTING

### QSight® LC/MS/MS

High selectivity and high sensitivity for multipesticide analysis



### MaxSignal® Mycotoxin ELISA Kits

Testing results in less than one hour



### AuroFlow™ Test Strips

Water-based extraction, quantitative total aflatoxin test strip, certified USDA FGIS 2019-121



### QuickSTAR™ Horizon Strip Reader

Improves results and removes operator influence



## HEAVY METALS TESTING

### NexION® ICP-MS

Analyzes toxic and nutritional metals in one test



### Avio® ICP-OES

Rapid multielement throughput and robust operating conditions



### PinAAcle® AA

Low-cost, simple, single-element analysis



## PESTICIDES TESTING

### QSight® LC/MS/MS

High selectivity and high sensitivity for multipesticide analysis



### Clarus® SQ8 GC/MS

More cost effective pesticide analysis



## CONTAMINATION AND ADULTERATION TESTING

### Spectrum™ Two FT-IR

Rapidly screens for adulterants throughout the grain supply chain



### Clarus® SQ8 GC/MS

Tests for and verifies adulterants throughout the grain supply chain





## 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, Simplicity for LC/MS/MS

### 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





## THE IMPORTANCE OF MOISTURE TESTING

It's hard to overstate the importance of accurately testing the moisture of grains, oilseeds, and pulses. Grains are traded on either a dry basis or constant moisture basis. No one wants to pay for water, so moisture content impacts grain value throughout the entire chain of custody. This means accurate moisture readings play a primary role in profitability at each grain transaction. Farmers in the northern hemisphere often must dry crops – particularly corn. The drying process costs money. Elevators store grain properly or risk losing entire silos to mold or degradation. Our grain moisture meters are based on state-of-the-art USDA developed technology and significantly more accurate than older meters.

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## PROXIMATE TESTING

Grains are often valued and traded on other constituents such as protein or oil. These values accurately set the price of a load of grain. Fast measurement is critical. Our line of NIR whole-grain instruments provide multicomponent results in seconds. Grains and grain derivatives are key ingredients in all kinds of food and animal feed. Animal feed is often least-cost formulated meaning the formulation constantly changes based on the prices of protein sources. This creates the risk of nonoptimal nutrition as different animals, and different ages of the same animal, require different levels of amino acids. Our HPLC instruments can provide this information. Grain companies who can provide this information to their companies have an edge over the competition.

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## FUNCTIONAL ANALYSIS

Grain derived products are often primary ingredients in more complex foods. Wheat flour is a prime example – it's a key ingredient in crispy cookies but also in soft, velvety cakes. This diversity means that not only is it necessary to know flour composition, but also its functionality – how it will perform in a mixture of ingredients when baked – must be understood. Our flour and dough-testing systems can provide the information necessary to create the products your customers want and need.



# MYCOTOXINS ANALYSIS

Mycotoxins are metabolites produced by mold. As some of the most carcinogenic substances known to man, they are also hardy. For example, they can survive the fermentation process at an ethanol plant and can be at even more concentrated levels in the Dried Distiller's Grains byproduct. It's therefore critical to keep them from entering the food supply. We have solutions to test for mycotoxins including quantitative screening using lateral flow test strips in a field or elevator or in a lab using ELISA kits or LC/MS/MS.

## Automating Your Genomics Workflows to Advance Your Ag-genomics Research

Our Applied Genomics group eliminates the challenges associated with agricultural genomic analysis by providing researchers with complete, single source systems encompassing everything from sample to solution. By enabling complete application-based solutions – from genotyping to CRISPR fragment analysis to next generation sequencing (NGS) – we can help increase your throughput while simplifying the generation of accurate, reproducible results.

### NGS Solutions

With applications expertise spanning the NGS workflow, we enable automated workflows for library preparation chemistries to produce accurate, reproducible sequencing results. Our NGS offerings for agricultural research include microfluidic assays to simplify nucleic acid and library analysis, workstations to automate library preparation, and library preparation kits. The NGS workflow solutions we offer are designed to alleviate workflow bottlenecks and process inefficiencies. From simplifying nucleic acid analysis to increasing throughput to reducing bias, we have the solution you need.

## CRISPR Fragment Analysis Solutions

Determining the editing efficiency of your experiments is necessary for precise CRISPR/Cas9 gene editing; however, traditional analysis is time consuming, laborious, and far from accurate. The LabChip® GX Touch™ nucleic acid analyzer automates the visualization and quantitation of gene editing events, thus, increasing the accuracy, throughput, and speed of your analysis.

### NEXTFLEX® Library Prep Kit

Our NEXTFLEX prep kits and barcodes have several protocols optimized for use with agricultural samples. They're designed to increase flexibility and workflow efficiency of library preparation.

## PCR Genotyping Solutions

Manual pipetting and analysis in PCR workflows can introduce errors and reduce experimental sample throughput. We offer automated liquid handling solutions to reduce human pipetting variability and increase experimental efficiency and throughput. Additionally, we offer automated microfluidic-based capillary electrophoresis for PCR fragment analysis providing accurate, reproducible, quantitative, and qualitative results.



## Aquamatic™ 5200 Grain Moisture Meter ■

**AUDIENCE:** Seed Breeders, Traders, Processors

Approved, more accurate, 10-second analysis of moisture, temperature, and test weight of grain. Robust, reliable with connectivity designed in and based on USDA UGMA and high-frequency technology.



## Inframatic™ 8800 NIR Grain Analyzer ■

**AUDIENCE:** Seed Breeders, Researchers, Farmers

The Inframatic 8800 is a portable grain analyzer. It determines moisture, protein and oil in less than two minutes and can be used basically anywhere. Compact, light enough to hand carry, and powered by 12V to 24V or battery (up to two hours), the Inframatic 8800 goes with you where you need it most.



## Inframatic™ 9500 NIR Grain Analyzer ■

**AUDIENCE:** Seed Breeders, Researchers, Traders

Fast, accurate analysis of grains and oilseeds using global ANN calibrations. Built-in networking capability with remote updating and diagnostics. Multiple national approvals.



## DA 7250™ SD At-line NIR ■

**AUDIENCE:** Seed Breeders, Processors, Lab/At-line

Ten-second, multicomponent analysis of whole grains, powders, pastes, and meals. Accurate, robust design requires little or no sample prep or cleanup, resulting in high throughput. Noncontact measurement with large spot and analysis size for testing heterogeneous materials.



## DA 7300™ In-line NIR ■

**AUDIENCE:** Processors- In-process

NIR process sensor provides continuous, real-time multicomponent monitoring. The instrument and results are readily integrated into process control systems for automated or manual adjustment. Integrated camera provides view into actual process and can perform visual analyses such as speck count. Mount at transition points, mixers, blend setups, after dryers, and at loadout.



## DA 7440™ On-line NIR ■

**AUDIENCE:** Processors, On-line/Over-belt

Fast, accurate, simple, flexible multicomponent analysis of grain materials. Mount systems over a belt and integrate into process systems for manual or automatic process adjustment.



## FT 9700 ■

**AUDIENCE:** Processors, Labs

Multicomponent, continuous spectrum analysis of ground grain and grain derivatives. Measure components such as moisture, protein, fat, fiber, and even amino acids in some products. Fast, accurate, and simple to use for lab and production personnel.



## 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 samples up and running quickly. TIBCO Spotfire® data visualization further enhances data output.



## NEXTFLEX® Library Prep Kit ■

Designed to increase flexibility and workflow efficiency of library preparation, our NEXTFLEX prep kits and barcodes are optimized for use with agricultural samples.



## Flexar™ LC ■

**AUDIENCE:** Processors, Labs

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 ■

**AUDIENCE:** Processors, Labs

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.



## NexION® 2000 ICP-MS ■ ■

**AUDIENCE:** Researchers, Labs, Processors

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, regardless of 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



## Avio® 200 ICP-OES ■ ■

**AUDIENCE:** Researchers, Labs, Processors

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, it 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, superior sensitivity and resolution for all elements of interest, and the widest linear range with dual viewing technology.





## PinAAcle® 900 Series AA ■ ■

**AUDIENCE:** Researchers, Labs, Processors

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 ■ ■

**AUDIENCE:** Researchers, Labs, Processors

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.



## Clarus® SQ8 GC/MS ■ ■

**AUDIENCE:** Researchers, Labs, Processors

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.



## Falling Number® 1000 ■

**AUDIENCE:** Traders, Processors, Elevators, Receiving Stations, Labs

World-standard for detection of sprout damage and alpha-amylase activity in wheat, barley, rye, and their respective flours; AACCI, ISO, and ICC approved methods.



## Rapid Visco® Analyzers ■

**AUDIENCE:** Breeders, Researchers, Traders, Processors, Labs

Measure ingredient performance including starch pasting characteristics and enzymatic effects.



## doughLAB™ ■

**AUDIENCE:** Corporate Purchasing Labs, Flour Millers

Test wheat and flour for baking characteristics, and measure water absorption, mixing time, mixing tolerance, stability, and more; new patented method aligns and standardizes fleets of instruments, reducing significant variability associated with old Farinograph™ methods.



## Glutomatic® 2200 ■

**AUDIENCE:** Breeders, Traders, Flour Mills

Measure gluten characteristics of wheat and flour, including wet gluten content, dry gluten content, and Gluten Index™.



## DSC 8000™ ■

**AUDIENCE:** Seed Breeders, Researchers, Pasta Producers

Double-furnace, power-compensation DSC provides exceptional sensitivity and accuracy and fast, reliable results



## SPD 4200 ■

Sample splitter for small grains to obtain representative samples for tests including mycotoxins and Falling Number



## Lab Mills ■

Hammer mills and disc mills for all kinds of sample preparation needs.

### LM 3610 ■

Disc-type sample prep mill for grains and oilseeds for analysis such as moisture, mycotoxins, and HPLC

### LM 3100 ■

Hammer mill prepares grains and oilseeds for analysis such as NIR, mycotoxins, HPLC, and GC/MS



## Shakematic™ ■

Replaces hand shaking of Falling Number tubes, removing a source of variation

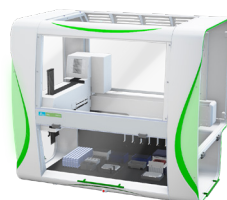
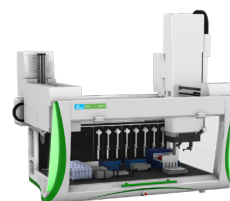


## JANUS® G3 Workstation ■

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.





## MaxSignal® 4302 Microplate Reader ■

**AUDIENCE:** Researchers, Labs, Processors

Versatile microplate spectrophotometer for 96-well plates, providing functionality, performance, and value required for numerous laboratory applications; compact, PC-controlled, multipurpose instrument designed to read and calculate the results of microplate-based assays



## MaxSignal® ELISA Kits ■

**AUDIENCE:** Researchers, Labs, Processors

Testing results in less than one hour

### MaxSignal ELISA Testing Kits:

Total Aflatoxin ELISA Kit, Aflatoxin B1 ELISA Kit, Deoxynivalenol ELISA Kit, T-2 ELISA Kit, Zearalenone ELISA Kit



## AuroFlow™ AQ Afla Strip Test ■

Water-based extraction, quantitative lateral-flow assay designed to detect total aflatoxin certified USDA FGIS 2019-121



## QuickSTAR™ Horizon Strip Reader ■

**AUDIENCE:** Researchers, Labs, Processors

Objective and reproducible quantitative analysis of lateral flow strips improves results and removes operator influence. A patented ruggedized system increases testing throughput and efficiency, while the rechargeable battery and touchscreen menu-driven interface tests results in seconds. It's compatible with a wide array of preprogrammed test types with upgradeable software to accommodate additional kits.



## QSight® LC/MS/MS ■

**AUDIENCE:** Researchers, Labs, Processors

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.



## Spectrum Two™ ■

**AUDIENCE:** Researchers, Traders, Labs, Processors

Easy to use, powerful, compact, and robust – Spectrum Two is the FT-IR spectrometer of choice for scientists everywhere. With fully integrated 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.



# 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 grain 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®.

## PerkinElmer 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 grain 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

|                            |                 |
|----------------------------|-----------------|
| <b>Syngistix Software:</b> | AA, ICP, ICP-MS |
| <b>TurboMass:</b>          | Clarus SQ8GC/MS |
| <b>Spectrum 10:</b>        | IR              |
| <b>Simplicity:</b>         | QSight LC/MS/MS |

## 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.



# GRAIN SOLUTIONS OVERVIEW

Whether you're looking to realize full value from your grain products; focusing on their nutritional components; or testing for mycotoxins, heavy metals, pesticides, and more in your ingredients, we have the ideal instrumentation to meet your needs.

|                             | COMPOSITIONAL |            |        |                 |                     | FUNCTIONAL    |                 |          |               |                     |             | SAFETY     |              |            |                                |
|-----------------------------|---------------|------------|--------|-----------------|---------------------|---------------|-----------------|----------|---------------|---------------------|-------------|------------|--------------|------------|--------------------------------|
|                             | Moisture      | Proximates | Sugars | Minerals/Metals | Fatty Acid Profiles | Sprout Damage | Enzyme Activity | Rheology | Grain Grading | Physical Properties | Sample Prep | Mycotoxins | Heavy Metals | Pesticides | Contamination and Adulteration |
| MaxSignal 4302 Plate Reader |               |            |        |                 |                     |               |                 |          |               |                     |             | •          |              |            |                                |
| MaxSignal Kits              |               |            |        |                 |                     |               |                 |          |               |                     |             | •          |              |            |                                |
| AuroFlow Test Strips        |               |            |        |                 |                     |               |                 |          |               |                     |             | •          |              |            |                                |
| NexION ICP-MS               |               |            |        | •               |                     |               |                 |          |               |                     |             |            | •            |            |                                |
| Avio ICP-OES                |               |            |        | •               |                     |               |                 |          |               |                     |             |            | •            |            |                                |
| PinAAcle 900 AA             |               |            |        | •               |                     |               |                 |          |               |                     |             |            | •            |            |                                |
| PinAAcle 500 AA             |               |            |        | •               |                     |               |                 |          |               |                     |             |            | •            |            |                                |
| QSight LC/MS/MS             |               |            |        |                 |                     |               |                 |          |               |                     |             |            |              | •          |                                |
| Clarus SQ8 GC/MS            |               |            |        |                 | •                   |               |                 |          |               |                     |             | •          |              | •          | •                              |
| Spectrum Two                |               |            |        |                 |                     |               |                 |          |               |                     |             |            |              |            | •                              |
| Aquamatic 5200 RF           | •             |            |        |                 |                     |               |                 |          |               |                     |             |            |              |            |                                |
| Inframatic 8800 NIR         | •             | •          |        |                 |                     |               |                 |          |               |                     |             |            |              |            |                                |
| Inframatic 9500 NIR         | •             | •          |        |                 |                     |               |                 |          |               |                     |             |            |              |            |                                |
| DA 7250 SD At-line NIR      | •             | •          |        |                 | •                   |               |                 |          |               |                     |             |            |              |            |                                |
| DA 7300 In-line NIR         | •             | •          |        |                 |                     |               |                 |          |               |                     |             |            |              |            |                                |
| FT 9700 FT-NIR              |               | •          |        |                 |                     |               |                 |          |               |                     |             |            |              |            |                                |
| Flexar HPLC                 |               |            | •      |                 |                     |               |                 |          |               |                     |             |            |              |            |                                |
| Falling Number Systems      |               |            |        |                 |                     | •             |                 |          |               |                     |             |            |              |            |                                |
| Rapid Visco Analyzers (RVA) |               |            |        |                 |                     |               | •               | •        |               |                     |             |            |              |            |                                |
| doughLAB                    |               |            |        |                 |                     |               |                 | •        |               |                     |             |            |              |            |                                |
| Glutomatic System           |               |            |        |                 |                     |               |                 | •        | •             |                     |             |            |              |            |                                |
| Paddycheck                  |               |            |        |                 |                     |               |                 |          | •             | •                   |             |            |              |            |                                |
| DSC 8000                    |               |            |        |                 |                     |               |                 |          |               | •                   |             |            |              |            |                                |
| SPD 4200                    |               |            |        |                 |                     |               |                 |          |               |                     | •           |            |              |            |                                |
| LM 3610                     |               |            |        |                 |                     |               |                 |          |               |                     | •           |            |              |            |                                |
| LM 3100                     |               |            |        |                 |                     |               |                 |          |               |                     | •           |            |              |            |                                |
| Shakematic                  |               |            |        |                 |                     |               |                 |          |               |                     | •           |            |              |            |                                |

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

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