



## **Inspection and Test Solutions**







# WE CRAFT ASSURANCE. For Our Partners, For Their Customers.

Founded in 2015 and comprised of nine strong product brands, KPM Analytics is a global leader in analytical instrumentation, inspection systems, and machinery, that enable companies to effectively manage product quality and brand value. Through long partnerships with global blue-chip companies in the industry, we focus on serving craftspeople in the food, agriculture, and environmental sectors, offering a comprehensive range of products and services to analyze critical parameters in their processes and solve their unique challenges. As a partner, we provide key metrics and intelligence to reduce waste and costs, increase energy efficiency, improve quality, and help companies protect their brands.

## **OUR PURPOSE**

We provide premium quality assurance equipment for food producers, environmental researchers, industrial manufacturers, and others through expert craftsmanship and intimate knowledge of their business needs.

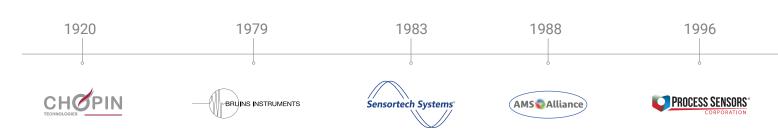
## **OUR VISION**

Our partners all over the world will grow stronger from our driven, dedicated, and caring approach to solving their challenges, enabling KPM to become the global industry leader.

## **OUR MISSION**

We provide the best solutions to help our partners control their product quality, scale capacity, and protect their brands.

## NINE STRONG BRANDS SPANNING OVER 100 YEARS IN QUALITY ASSURANCE



## **CORE PRODUCT TECHNOLOGIES:**







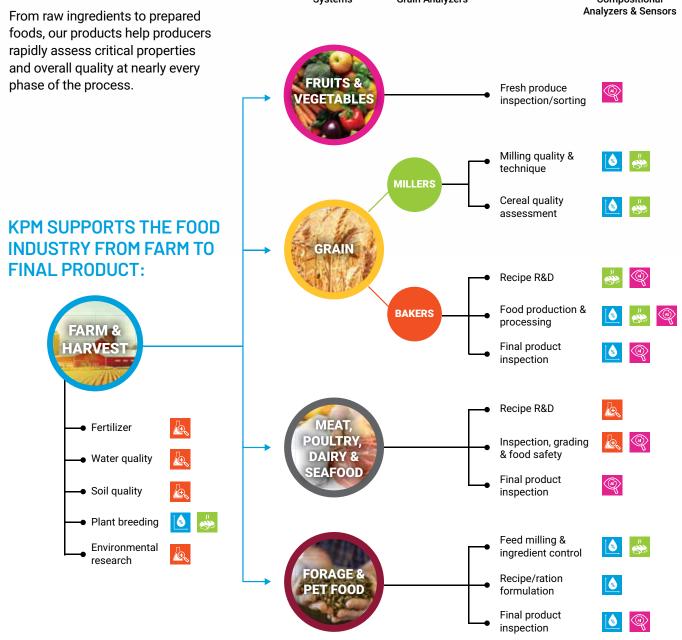
Flour, Dough & Grain Analyzers



**Chemical Analyzers** 



Moisture & Compositional Analyzers & Sensors









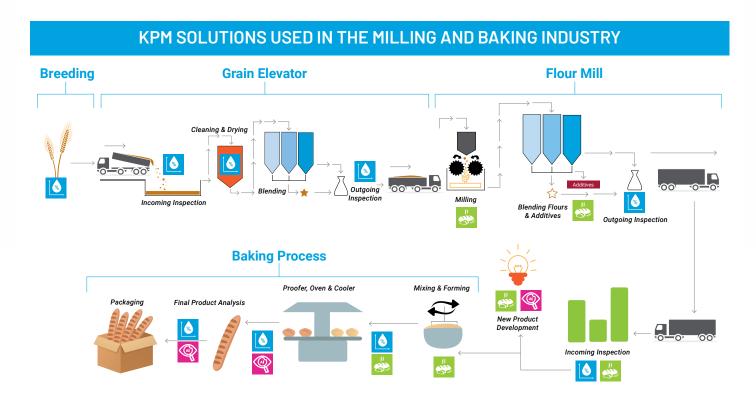


**SMART**VISIONWORKS



## **Measure Quality Where it Matters**

KPM brand solutions are used in every process step throughout production, processing and manufacturing. Below are two examples where KPM products and solutions are used in milling and baking industry, and a poultry processing plant.



## KPM SOLUTIONS USED IN A POULTRY PROCESSING PLANT





# Offering a Better Vision for Food Quality Inspection







**SMART**VISIONWORKS

KPM Analytics provides comprehensive vision inspection systems and artificial intelligence (AI) technologies for the food industry driven by our three core product brands: EyePro System, Sightline Process Control, and Smart Vision Works. Virtually every processed food product can benefit from vision inspection to improve quality, reduce waste, address labor shortages, fortify food safety programs, and more, such as:



**BAKED GOODS** 



**MEAT & POULTRY** 



**SNACK FOOD** 



**FRESH PRODUCE** 



CHEESE



PET FOOD



## The Power of Al Enhanced Vision Inspection Systems

From controlling the consistency of a product's size and shape to more detailed measurements, vision inspection and AI technologies from KPM Analytics help companies obtain critical information to enhance quality control.



## **SURFACE MEASUREMENTS**

- · 2D size, shape, color, 3D height and volume.
- Top, bottom, and side inspection.
- Special measurements such as product defects, pizza toppings, and foreign materials.

#### **MULTI/HYPER-SPECTRAL IMAGING**

- Non-visible inspection analysis.
- · Foreign material detection.
- Mapping of moisture, fat, and other compositional parameters.



## THE POWER OF AI

- Complement to traditional vision techniques, detect objects and features when traditional techniques fail.
- Improve accuracy and reliability of detection for products with wide appearance variations.
- Shorten development and deployment cycles of new products.
- · Continuous machine training for better production over time.



## PRODUCT HANDLING AND AUTOMATION

- Integrated conveyor control and defect rejection.
- Real time feedback loop and control of processing equipment.
- Vision-based automatic lane balancing and production flow optimization.
- Integrated robotics for product handling.



## VISION INSPECTION APPLICATIONS

- Inline product quality control.
- Product sorting and grading.
- · Process monitoring and control.
- · Foreign material detection.
- Lab/at line product quality inspection.









# Vision Inspection Solutions for the Baking & Snack Industry



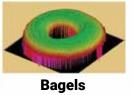
Since 1999, KPM's EyePro vision inspection systems have been used by global and regional baking companies to ensure highest quality products are delivered to their customers.

## **APPLICATION EXAMPLES**





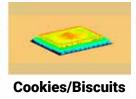




















## Q-Bake® & Q-Bake® Lite

- Inline and overline, customizable systems to analyze baked products' attributes and provide data to manage process control.
- Multiple defect rejection and product handing options.
- Vision Process Control systems for production optimization.
- Hygienic and sanitary design options.





## **Automatic Lane Balancing**

 Automatically adjust product flow to ensure packaging machines are fed efficiently.





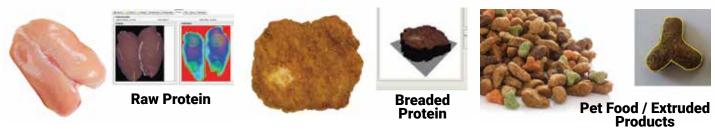
## Vision Inspection Solutions for Meat, Poultry, Dairy, Prepared Foods, and More



Since 2009, KPM's Sightline Vision Inspection Systems have been widely used by food manufacturers globally for quality control and process improvement. Sightline Vision Inspection Systems help companies:

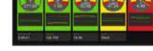
- · Control costs by reducing labor and waste.
- Improve quality control and food safety programs.
- Make better informed decisions to protect brand standards.

#### APPLICATION EXAMPLES



#### **MEASURA® SOFTWARE SUITE**





measura\*

•dashboard

KPI Dashboard (Optional)



**Analytics and Reports** 

- Complete software platform for easy setup and operation.
- Data and reports on products, trends, and production performance.
- Extensive 2D and 3D measurement library enhanced by Artificial Intelligence.

## IN-LINE (IL) SERIES & PROTEIN (P) SERIES

- · Detect product features where manual vision techniques fail.
- Hygienic solutions for wet and dry sanitary environments.
- Improve quality and consistency while reducing operational costs.
- Real time and historic data for feedback control and process optimization.
- Control point for improved food safety and hazard prevention.
- Integrate with other manufacturing equipment enabling Industry 4.0 applications.







## **AI & Machine Learning**

#### **SMART**VISIONWORKS

Since 2012, KPM's Smart Vision Works vision systems and AI platform have been used for fruit and vegetable sorting and inspection, meat grading, and foreign material detection in various food production lines.



## SIFTAI® MACHINE VISION PLATFORM

SiftAl is a modular smart vision platform with embedded Al models and control for sorting, inspection, and foreign material detection applications.

#### SORTING AND GRADING FOOD PRODUCTS

· Analyze organic variations and automatically route products based on user-defined attributes.



**Fresh Produce Sorting** 



**Potato Sorting and Inspection** 



Meat Grading

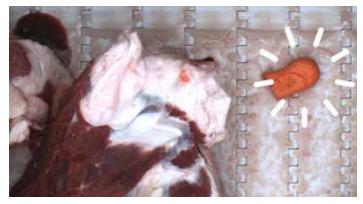
## ENABLING ROBOT-DRIVEN FINAL PRODUCT INSPECTION PROCESSES

 Automatically learns reject limits from recorded products, providing input to robotic systems for sorting and rejection applications.



## FOREIGN MATERIAL DETECTION IN RAW FOODS

- Fortify food safety programs by detecting a wide array of foreign materials while operating at full-line speeds.
- IP69K rated for wash-down cleaning.





## **Offline Vision Inspection Solutions**



Available in multiple configurations, TheiaVu® compact vision inspection systems provide a wide variety of measurements of unique features that quantify product quality.

#### LABORATORY / R&D INSTRUMENTS / SAMPLING

Compact design in benchtop form, TheiaVu® is a versatile and powerful quality inspection solution for QC labs or near food production lines.

## TV-250, TV-250HR & TV-300

- Conveyor width: 229mm (9 in.) for TV-250 & TV-250HR;
  300mm (11.8 in.) for TV-300.
- Top 2D dimension, color, and 3D heights/volume measurements.
- High-resolution 2D camera configurations available (TV-250HR).
- measura® software suite.
- Large product and measurement library.
- Al enabled capabilities for product classification and advanced feature detection.

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## **AT-LINE INSTRUMENTS**

Designed as standalone unit, TheiaVu® At line models are used at food production lines for quick product quality inspection

#### WD-300

- · Conveyor width: 300mm (12 in.).
- Stainless steel housing for complete wash-down applications (ideal for meat & poultry analysis).
- Top 2D dimension, color, and 3D heights and volume measurements.
- measura® software suite.
- Al enabled capabilities for product classification and advanced feature detection.

#### TV-250E

- Conveyor width: 229mm (9 in.).
- Designed for at line quality inspection for bakery and snack food applications.
- Top 2D dimension, color, and 3D height and volume measurement.
- Optional hyperspectral imaging capability for foreign material detection and moisture mapping.
- · Bakespect software.



## Flour, Dough & Grain Analyzers





Since 1920, CHOPIN Technologies products have helped pioneer new methods for analyzing cereals, flours, and their derivatives. These methods and products are recognized by numerous international standards, including ISO, AACC, ICC, and numerous local standardization bodies, and serve as a reference in the industry for compositional and functional analysis.

KPM Analytics offers a comprehensive suite of products to help millers and bakers complete their quality control programs.



## GRAIN MILLING & SAMPLE PREPARATION INSTRUMENTS

 Rapid preparation of all types of grain to produce grist or whole grain.



#### RHEOLOGICAL ANALYZERS

 Analyze dough properties (gluten, protein, and starch) to help match flour specifications with production process requirements.



#### **FUNCTIONAL ANALYZERS**

 Understand how vital flour polymers (glutenin, damaged starch, and pentosans) behave when hydrated and processed into baked goods.



## **Alveograph Test Series**

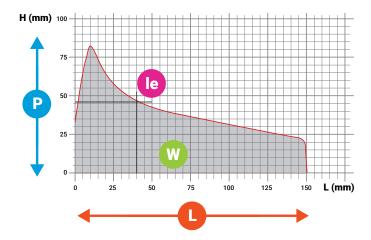


The industry-standard tool used to measure rheological properties of dough, such as tenacity, extensibility, elasticity, and baking strength (meets AACC, ICC, ISO, and other local standards). With this data, millers and bakers can predict the performance of flours used for baked goods, noodles, biscuits, and other products.



## Alveolab®

- Fully automated testing and control, including temperature and hygrometry.
- Intuitive and complete software including a blending law tool and assistance to select the most suitable additive to obtain target values.
- Additional protocols including the possibility to test flour at adapted hydration, as well as the ability to test whole wheat flours.





#### **AlveoPC**

- · Suited for controlled lab environments.
- Includes a mini-PC for data collection.
- Smaller, cost-effective benchtop analyzer.

## WHAT THE ALVEOGRAPH TEST SERIES MEASURES

- P: Tenacity (capacity to resist deformation)
- L: Extensibility (maximum volume of air the bubble can contain)
- le: Elasticity index, le = P200/P (P200: pressure at 4 cm from the beginning of the curve)
- W: Dough baking strength (area under the curve) or Energy value









## Mixolab 2 Universal Dough Characterizer

Simulate the constraints that dough undergoes during its production process. It is programmed with protocols to understand dough behavior by evaluating the quality and baking performance of flours.



- Create a database of flour quality protocols to check the regularity of flours, assess enzyme impact, develop new product formulations, and more.
- Automated testing to characterize flour quality as well as dough quality (at-line analysis).
- Compliant with international standards (ISO, AACC, ICC, and numerous local standardization bodies).
- Ideal rheology tool for wheat flour, rice, pulse, vital gluten, and many other matrices and ingredients like gluten-free flour, whole wheat flour, proteins, and more.
- Intuitive profiler chart for white flour quality inspection and specification.

## **Rheo F4 Dough Proofing Analyzer**

The industry's only fully automated analyzer that provides all the key measurements for understanding dough behavior during proofing (fermentation).



- Measures dough development, gas production, porosity, and tolerance in a single test.
- Determine optimal proofing time of a dough formulation, which helps reduce time and energy costs.
- Save proofing performance data to benchmark against future flour formulations.













## SDmatic 2 Starch Damage Analyzer

A simple and precise instrument to measure damaged starch in flours for the milling and baking industries.

- Since damaged starch multiplies the water absorption capacity of flour, this analyzer helps bakers take greater control over dough stickiness, as well as final product volume.
- Fully-automated enzyme-free analysis based on the amperometric method (Medcalf & Giles).
- Compliant with international standards (NF EN ISO, ICC, AACC, and numerous local standardization bodies).



## SRC-CHOPIN 2 Automated **Solvent Retention Capacity Tester**

An automated solution for precise and reproducible Solvent Retention Capacity (SRC) testing, supporting quality control for the baking and milling industries.

- Analyze significant flour components effect on overall water absorption and specific absorption for glutenins, damaged starch, and pentosans of the flour and its potential impact on product properties (water, sucrose, lactic acid, and sodium carbonate).
- · Automates manual processes and produces more repeatable and reliable results (AACC and ICC Standards).
- Designed for simplicity and complete walk-away operation.

## Flour Milling & Sample Preparation Devices



## CD1 Mill

- Fixed settings ensure repeatability and reproducibility of testing. The CD1 mill is therefore ideal to obtain flour with controlled biochemical composition.
- The only laboratory mill compliant with Alveograph test from wheat grain (ISO 27971).



#### LabMill

- Adjustable milling settings ensures versatility of use.
- Breaking and reduction parts are independent (making it possible to run 2 simultaneous milling samples)
- Ideal to produce flours adapted (quantity and quality) to bread-making tests and obtain more information about milling behavior, helping to optimize mill settings.

## **Chemical Analyzers**





Since 1988, the AMS Alliance family of high throughput automatic wet chemistry analyzers has helped environmental research labs, municipalities, food and beverage producers, and many others improve operational efficiencies. Thousands of organizations worldwide use KPM Analytics' discrete and continuous flow analyzers, reagents, and in-line pH, temperature, and redox potential systems.



## PLANT, SOIL, AND FERTILIZER ANALYSIS

 Optimize agricultural practices, ensure proper nutrient management, enhance crop productivity, and protect the environment.



## **WATER AND BEVERAGE ANALYSIS**

 Assess pH, dissolved oxygen, impurities, acid, sugars, alcohol content, and several other parameters to ensure quality control and compliance.



## **FOOD EXTRACT ANALYSIS**

 Help ensure the safety and integrity of food products, protect consumer health, and support accurate product labeling.



#### **ACIDIFICATION TESTING**

 Used by ferment and starter culture manufacturers for product quality and the development of new cultures for the dairy and fermented foods industries.



## **SmartChem® Wet Chemistry Analyzer Series**



SmartChem® tabletop and stand-alone discrete analyzers offer a reliable and convenient walk-away solution to increase laboratory productivity. The SmartChem® Series is widely used for the automation of manually run wet chemistry testing in environmental, industrial, and research laboratories.



#### SmartChem® 200

- · Up to 200 tests/hour.
- 5 racks enable continuous loading of samples (126 positions).
- Up to 16 onboard reagents.



#### SmartChem® 210

- · Up to 300 tests/hour.
- 4 removable racks enable continuous loading of samples (60 positions).
- Up to 32 onboard reagents.



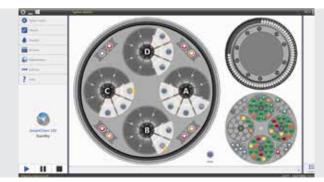
## SmartChem® 450

- Up to 450 tests/hour.
- 4 racks enable continuous loading of samples (72 positions), along with 28 extra positions for urgent samples, calibrators, and controls.
- Up to 72 onboard reagents.



## SmartChem® 600

- Up to 600 tests/hour (including 120 for EC Module (pH, conductivity, and redox)).
- 2 independent carousels hosting 20 racks of 10 positions each.
- Up to 100 onboard reagents.



## SmartChem® Pro Software

SmartChem Pro software improves the user experience with a simplified operator interface, on-board troubleshooting resources, and more.









## **FUTURA Continuous Flow Analyzer & Autosampler**

FUTURA continuous flow analyzers (CFA) provide a complete and reliable solution for testing parameters in sea water, drinking water, wastewater, environmental samples, soil, food, beverages, and many other matrices.



- Sophisticated design and software dedicated to CFA technology guarantees lowest level of detection.
- Includes a range of autosamplers to match your laboratory's current and future needs, as well as automated shut down capability to provide unattended, reliable operation, and overnight testing.
- Up to 120 samples/hour (with autosampler) for high throughput sampling, offering full automation of routine and complex chemistries.

## iCinac Lactic Acid Bacteria Fermentation Monitor Series

The iCinac Series is a first-of-its-kind solution designed for acidification activity of lactic acid bacteria, as well as simultaneous monitoring of pH, temperature, and Oxidation Reduction Potential (ORP). The iCinac Series is used by ferment and starter culture manufacturers, both for product quality control and the development of new cultures for the dairy and fermented foods industries.



#### iCinac Wired

- 16 or 32 measurement channels.
- Integrated touch screen software.
- Optional output assembly and accessories to control external equipment or conditions.



#### iCinac Wireless

- · Scalable from 1-to-16 channels per receiver.
- Up to 60 m (19.6 ft.) range for indoor use without cables.
- Lithium-ion rechargeable batteries within each receiver.

## Moisture & Compositional Analyzers & Sensors











When measuring products for moisture, fat, protein, and other essential quality constituents, KPM Analytics offers a full suite of near-infrared (NIR) analysis solutions for your application since 1979. Our product line of laboratory, at-line, or in-process analyzers is trusted by thousands worldwide to provide actionable information to ensure quality and consistency everywhere it is needed.



#### **AGRICULTURE**

 Our robust NIR calibration library provides valuable data for whole grain analysis and plant breeding programs.



#### **FOOD PROCESSING**

 NIR technologies help food producers save costs and manufacture products to the highest standards.



## FEED, FORAGE, AND ANIMAL FOOD

 NIR instruments help feed mills and pet food manufacturers hold their suppliers accountable while verifying ration quality.



#### INDUSTRIAL PROCESSING

 In-process NIR and RF instrumentation provide industrial manufacturers with crucial information to control moisture at critical stages of production.









## SpectraStar™ XT NIR Analyzer Series



The SpectraStar™ XT NIR Analyzer Series is a comprehensive line of plug & play solutions for laboratory composition analysis of solids, powders, forages, seeds, liquids, slurries, and other products. They are programmed to quickly analyze products for moisture, protein, fat, sugar, and fibers, to more complex parameters like ash, fatty acids, and lignin.



## SpectraStar XT-3

 Analyze moisture, oil (fat), and/or protein of simple sample types.



## SpectraStar XT-F

 Optimized for flour, wheat, and wheat by-products to measure moisture, protein, ash, and more.

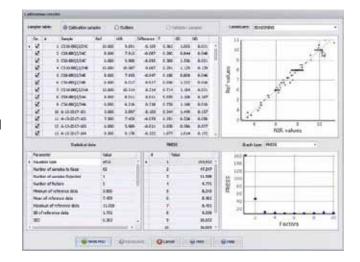


## SpectraStar XT-R

 High-performance extended range NIR analyzer supporting calibrations to analyze virtually all sample types.

## UCal 4™ Custom Calibration Software

UCal 4 is a complete software package for the development of high-performance NIR calibrations in food, agricultural, and industrial applications for a SpectraStar XT Analyzer.





KPMLink is a cloud based networking software that connects multiple SpectraStar XT series analyzers within a company to centralize product configuration, calibration, and test results.





## AgriCheck Rapid Whole Grain NIR Analyzer Series



AgriCheck is a series of cost-effective, high-performance NIR analyzers with specific calibration libraries dedicated to analyzing whole grains including wheat, corn, soybeans, sorghum, rice, and others. Accurately measure for major components like moisture, protein, and starch, as well as oil, fiber, gluten, amylose, FFA, and others, depending on product type.



## **AgriCheck**

- Standard measurements for whole grains.
- Easy-to-use with quick and accurate results.
- Automatic feed with multiple sub-sample measurements.



## AgriCheck XL

- Measurements for all kinds of whole grain, oilseeds and feed products.
- Unique top sample presentation dish ideal for non-free-flowing, high-moisture or very small grains.
- Able to analyze small amounts of samples for plant breeding applications.



## **AgriCheck Plus**

- Dual optics transmission and reflectance – to measure all kinds of whole grain, oilseeds, feed products, and high moisture samples.
- Able to measure ground products and pastes.
- Ideal for use in mills or processors to measure incoming grain for processed flours or meals.

## QuikCheck Moisture & Oil NIR Analyzer



The QuikCheck at-line or lab NIR analyzer provides quick and accurate moisture and oil (fat) analysis of a wide range of non-homogeneous solids and ground products (snack foods, seasonings, whey powders, minerals, ores, and more). The QuikCheck integrates seamlessly into most quality assurance labs or production facilities to analyze finished food or industrial products for quality.



- Designed for speed and simplicity; results are returned to the operator in 5 to 10 seconds.
- Easy setup, calibration, and operation with little required training.
- Little-to-no sample preparation required for most sample types.



## MCT460 Online Smart NIR Sensor Series



The MCT460 Series sensors continuously monitor moisture and oil (fat) content of materials on a food or industrial process line to maintain consistent product quality, increase yield, and minimize waste. Designed to operate in harsh conditions, MCT460 sensors are simple to operate and integrate across multiple production lines and locations.







#### **MCT460**

- Designed for use in industrial applications.
- Powder-coated cast aluminum sensor housing.

#### MCT466-SF

- Designed for demanding food and snack food manufacturing applications.
- · Stainless steel housing; IP67 rated.

## **MCT469-SF**

- Full wash-down capability for food and snack food manufacturing.
- · Stainless steel housing; IP69 rated.

## **Guardian-HD Web Profiling Series**

The Guardian-HD Web Profiling Series of rugged NIR sensors measure moisture, coat weight, adhesive thickness, and web temperature for all paper, film, and web-converting processes. Sensors mount to a traversing frame to provide non-contact, non-destructive on-line measurement across a full web width.



- Three options available to accommodate multiple product recipe codes, viewing displays, and multi-system monitoring capabilities.
- Each system customized to analyze full web width, along with the ability to position the sensor wherever it is needed (lane / move & park applications).
- Eliminates the need for time-consuming lab testing and adjustments.



## NIR-6000 Series Online NIR Moisture Sensors



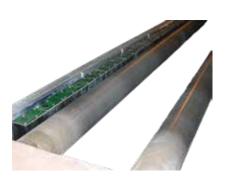


The NIR-6000 Series Online NIR Moisture Sensors deliver reliable non-contact moisture measurements in high throughput industrial applications.

- NIR-6000: Ideal for common industrial applications (lumber, building products, textiles, mining, chemicals).
- NIR-6700: Ideal for products darker in color or have a higher moisture content (bauxite, cellulose, cement, coke, iron ore, etc.).

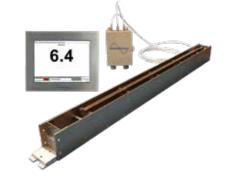
# Industrial Radio Frequency (RF) Online & Portable Moisture Sensors

Industrial RF sensors are a penetrating moisture measurement method ideally suited for gypsum processing, board manufacturing, and other industrial applications with tight moisture specifications.



#### **IMPS-4400**

 True moisture profiling for paper and board products.



## ST-3300

 Process moisture measurement for materials used in chemical, mining, textiles, and more.



#### **PMT-330**

 Portable, hand-held RF moisture tester for spot-checking boards, wood, plastic, and paper products.

## **Temperature Measurement & Thermal Imaging**



## Infrared (IR) Temperature Sensors

 On-line fixed pyrometers for immediate and continuous temperature measurement control in industrial processes.



## **Thermal Imaging Cameras**

 Compact, radiometric cameras for visual detection and measurement of thousands of temperature points.

# Committed to Keeping Your Operation Seamless, from Start to Finish

At KPM Analytics, our focus is to provide your organization with end-to-end support through our highly skilled customer service teams and worldwide network of distributor partners. Each instrument and application are matched with specific support offerings to get the most out of your investment, including:



## Field Service Commissioning & Training

 KPM's team of qualified service engineers offer professional guidance and expertise to ensure a seamless process.



## Annual Calibration & Preventive Maintenance

 KPM offers various annual services (in field & depot) to ensure equipment is running at factory standards.



## **Remote Commissioning**

 For some instruments, remote commissioning provides a simpler, cost-effective method to ready your KPM technology for use.



## Depot Repair at Global Service Centers

 For issues that cannot be addressed on-site or remotely, our worldwide Depot network is available to quickly inspect, repair, and return your equipment in a timely manner.



## Remote Support & Troubleshooting

 To minimize downtime, remote support from KPM is available to help companies quickly correct issues and save costs.



## Training Collatera

 From "Best Practice" recommendations to quick startup and maintenance guides, KPM provides customers with the tools they need to succeed.



#### ON-DEMAND COURSES FOR KPM PRODUCT BRANDS

The KPM Academy is an online education platform that provides product training and maintenance support for our broad range of analysis solutions. Your KPM Academy license includes:

- · Product training from the experts
- · Staff training for new-hires or cross-training employees
- Refresher training
- Procedure updates, including preventive maintenance
- Courses on-demand



## **OUR GLOBAL SERVICE AND SUPPORT NETWORK**











Working with KPM means you have a partner for the life of your equipment and beyond. Let's discuss how we can help you solve production challenges and protect your brand value.



#### **CONTACT US TODAY:**

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