KPM

WE CRAFT ASSURANCE

Food & Industrial Process Control Solutions

KPM

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

1920 — CHOPIN TECHNOLOGIES

1979 — BRUINS INSTRUMENTS

1983 — Sensortech Systems

1988 — AMS Alliance

1996 — PROCESS SENSORS CORPORATION

Smart Solutions for Seamless Production

In today's fast-paced food and industrial production environments, precision and efficiency are essential. At KPM Analytics, we provide cutting-edge automated process control solutions designed to help manufacturers optimize quality, reduce waste, and improve operational efficiency.

Our advanced in-line moisture analyzers offer real-time measurement and control of moisture levels in food and industrial products, ensuring consistency and compliance with quality standards. Meanwhile, our AI-powered vision inspection systems deliver unmatched accuracy in food quality assessment and foreign material detection, identifying even the smallest inconsistencies to enhance safety and reduce product loss.

By integrating smart automation, real-time data analytics, and machine learning, our technologies empower manufacturers to make faster, data-driven decisions, streamline production, and maintain the highest quality standards with minimal manual intervention. With KPM Analytics, you can achieve greater process control, optimize yield, and ensure the integrity of every product—every time.

PROCESS CONTROL TECHNOLOGIES FROM KPM ANALYTICS

Vision Inspection & Defect Removal Systems

Moisture, Compositional, & Temperature Analyzers & Sensors

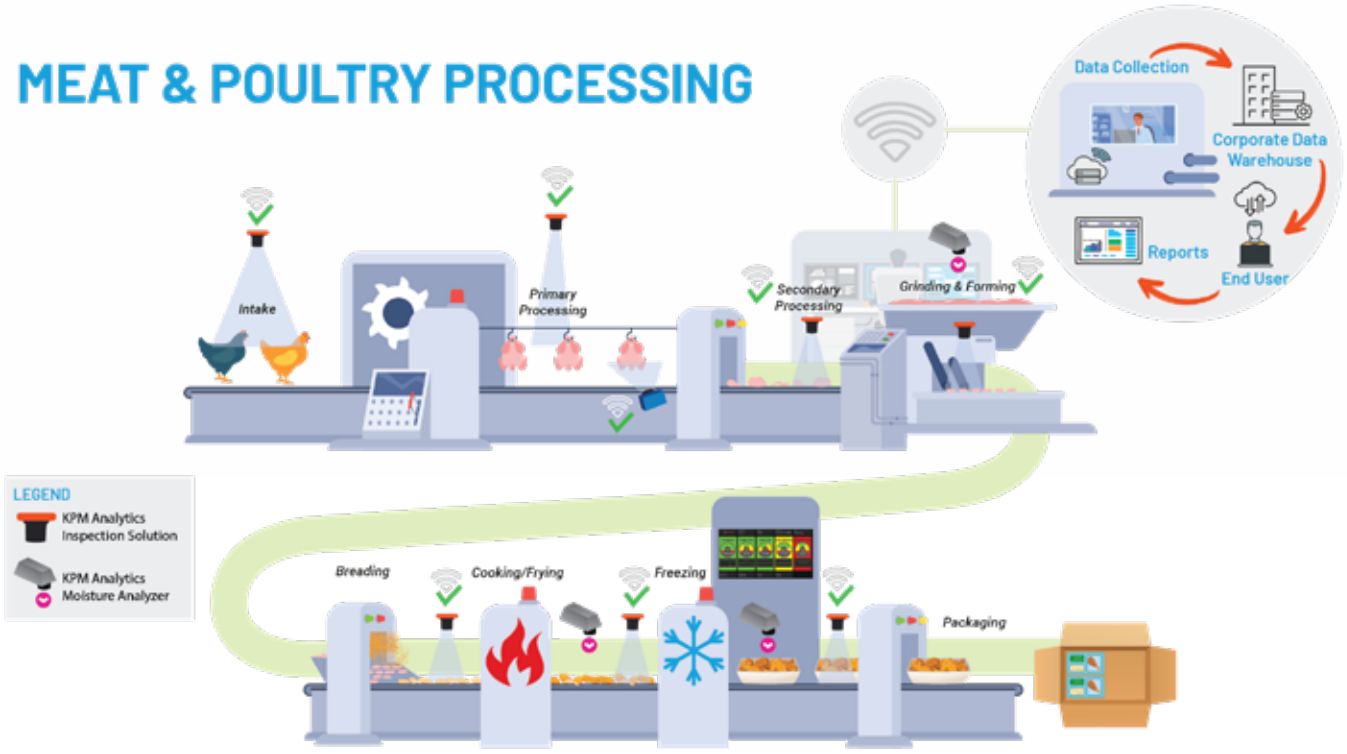
1999 — 2001 — 2009 — 2012 — 2015

EyePro System · Unity Scientific · SIGHTLINE · SMARTVISIONWORKS · KPM

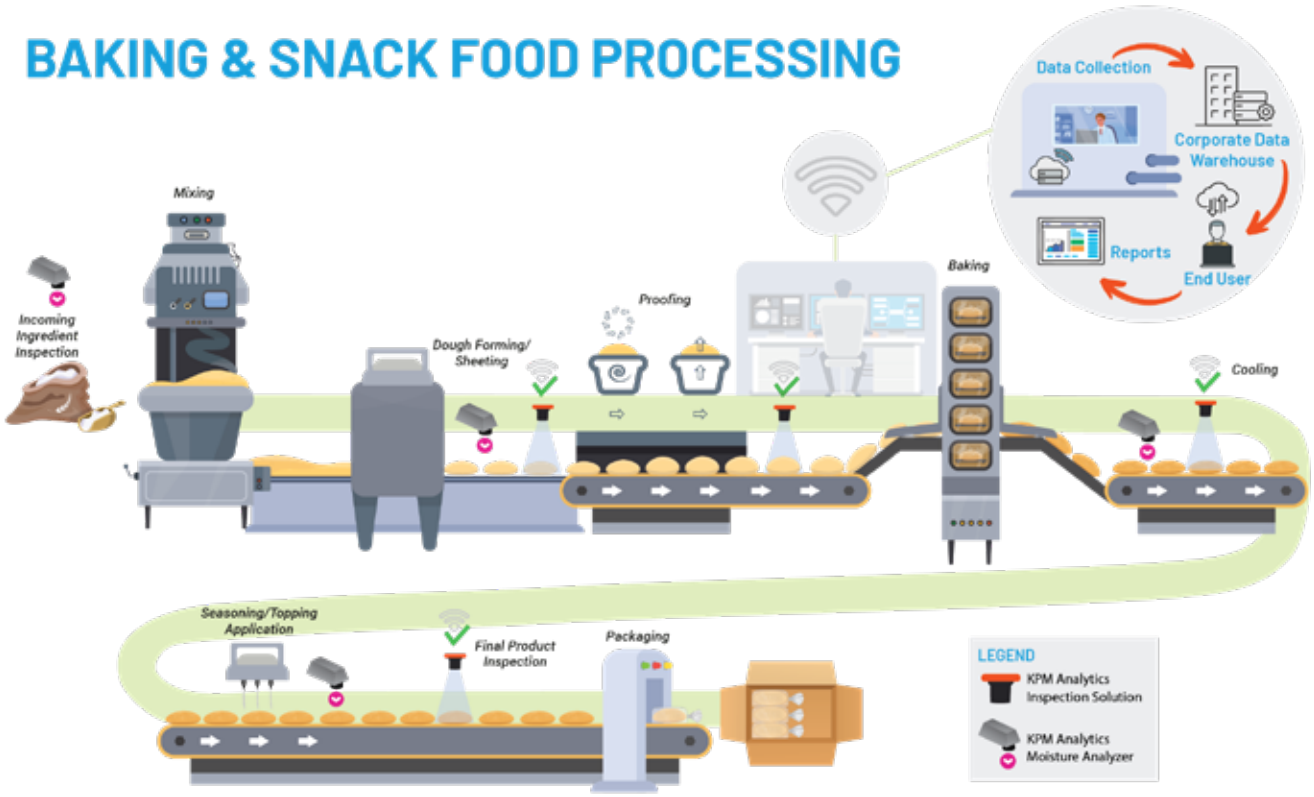
Automating Food Safety & Quality Assurance

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 food production plants.

MEAT & POULTRY PROCESSING



BAKING & SNACK FOOD PROCESSING

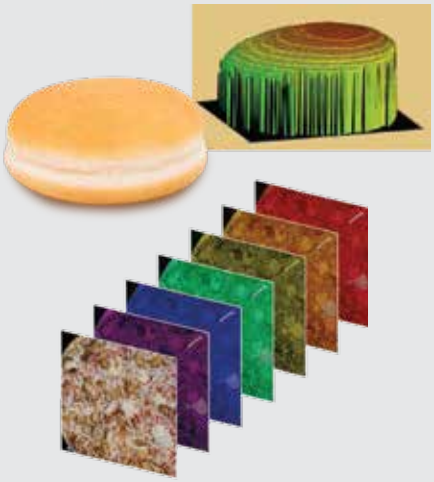


Offering a Better Vision Inspection Solution

KPM Analytics provides comprehensive vision inspection systems and artificial intelligence (AI) technologies for the food industry. Virtually every processed food product can benefit from vision inspection to improve quality, reduce waste, address labor shortages, and more, such as:

- Baked Goods
- Snack Food
- Cheese/Dairy Products
- Meat & Poultry
- Fresh Produce
- Pet food, and more

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

- Combines spectroscopy and imaging technologies from the visible spectrum, to Near Infrared (NIR) and up to Short Wave Infrared (SWIR) spectrum for superior product analysis.
- Challenging "soft" foreign material detection of the product surface.
- 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

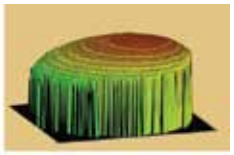
VISION INSPECTION APPLICATIONS

- In-line product quality control.
- Product sorting and grading.
- Process monitoring and control.
- Foreign material detection.
- Ensuring regulatory compliance/humane treatment.
- Lab/at line product quality inspection.

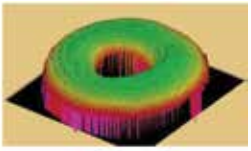
Vision Inspection Solutions for the Baking & Snack Industry

KPM Analytics' vision inspection systems have been used by bakeries large and small to inspect products for consistent size, shape, color, and other vital quality features.

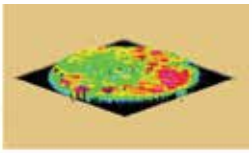
APPLICATION EXAMPLES

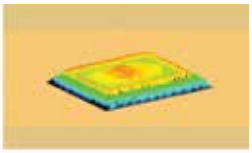
Buns & Rolls

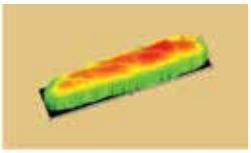
Bagels

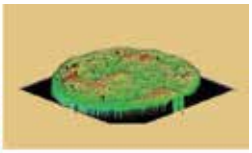
Tortillas

Cookies/Biscuits

Baguettes

Pizza

IN-LINE & OVER-LINE VISION INSPECTION TECHNOLOGIES

- 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.
- Built-in library with 100+ measurements and growing.


Q-Bake™ Vision Inspection for baking.

"My background is in Six Sigma lean manufacturing, so data is really important for making decisions and having the right sample size. The new vision system from KPM Analytics provides a sample size encompassing 100% of the product coming off all three production lines and rejects product that is out of spec. Our employees love it. It's a communication tool to tell where we're at with waste in real-time."

-Marcus Garcia, Bakery Director, La Brea Bakery

AT-LINE VISION INSPECTION TECHNOLOGIES

TheiaVu® E-Series Offline Vision Inspection System for Bakeries

TheiaVu® TVE-300WD (Wipe-down)

- Standalone vision inspection technology to replace manual measurement and data collection.
- Inspect pre-baked doughs, production samples, and final products, or use in R&D recipe development.
- Utilizes the same software, measurement library, and features of an in-line system.
- Wipe-down version (TVE-300WD) is IP67 compliant; IP69K options are also available.

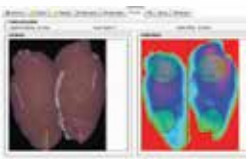
Automatic Lane Balancing

- Automatically adjust product flow to ensure packaging machines are fed efficiently.
- Uses cutting-edge vision and motion control technology to control a series of modular conveyors.
- Compatible with all types of baggers and bulk packers.

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

KPM Analytics vision inspection have been widely used by food manufacturers from meat & poultry processors to pet food manufacturers.

APPLICATION EXAMPLES



Raw Protein

Breaded Protein

Pet Food / Extruded Products

IN-LINE VISION INSPECTION TECHNOLOGIES

Achieve 100% inspection of products to ensure quality at every stage of the process.

- Integrate within primary and secondary process stages, as well as for final inspection of prepared foods.
- Designed for strict sanitation requirements in meat and poultry plants, such as IP69K.
- Real-time feedback on quality, generating reports and statistics that help your organization make informed decisions.
- Multi-surface inspection and rejection applications available.

OVER-LINE VISION INSPECTION TECHNOLOGIES

Integrate inspection and foreign material detection capabilities at precise moments of your process while utilizing a small footprint on the production floor.

- Powerful and easy to configure for your unique process.
- Integrates seamlessly over a processing line.
- Great solutions for commissioning new processing equipment or calibrating systems (ovens, fryers, etc.).

AT-LINE VISION INSPECTION TECHNOLOGIES

TheiaVu® WD-300 Wipe-down Vision Measurement System

Assists quality control professionals by obtaining precise and repeatable measurement data to improve their production process.

- Available in wipe-down configurations; can be used in a lab or production area.
- Performs quality checks faster and with better repeatability while creating stronger standards for quality assurance programs.
- Eliminates subjectivity from quality measurements by applying measurements defined for unique product lines.

MEASURA® 4 SOFTWARE SUITE

The measura® 4 Software Suite includes combines four components to enable comprehensive inspection analysis & data management. From creating new product measurements to inspecting product features in real-time, measura® 4 software is an essential contributor to a modern quality control system.

measura® toolbox

- Utilize a built-in library of over 100 measurements.
- Configure, modify, and customize product measurements.
- Leverage AI tools to streamline setup and improve accuracy.

measura® analytics

- Create valuable reports from multiple production lines and facilities.
- Export data into user-friendly file formats.

measura® inspection

- Measure up to 100 objects/second.
- Simplified operator interface.
- Display trends, lane data, and defect summaries.

POWERED BY AI

measura®
SOFTWARE SOLUTIONS

measura® dashboard

- Monitor real-time vision performance data wherever it's needed in the processing facility.
- Equipped with alarms to alert operations to process issues.
- Available on multiple display platforms.

AI-Powered Sizing, Sorting, and Foreign Material Detection in Fresh Produce

SiftAI® Artificial Intelligence Camera

Fresh produce processors have a lot to manage daily. Product quality control is a top priority, but in high-throughput operations, detection of potentially harmful foreign materials is critical for companies to avoid charge-backs from their customers or avoid potential recalls.

Artificial intelligence (AI) is quickly becoming a dependable method for fresh producers' processors to manage quality with superior accuracy, while also fortifying their food safety efforts.

HOW KPM ANALYTICS' AI-DRIVEN ANALYSIS WORKS

Our technologies incorporate vision inspection equipment positioned on the processing line, which captures real-time product images that are analyzed in our proprietary software. This software is equipped with AI models to detect specific product features passing through a conveyor system. If a defect is detected, the system automatically calculates the percentage defect, which triggers actions later in the process.

Unique AI Model Development and Deployment

Step 1: AI Training

After installation, KPM's AI developers work with the customer to build a data set of foreign material (FM) and grading samples to teach the system how to find unwanted FM or defects on the line.

Step 2: Initial AI Performance Monitoring

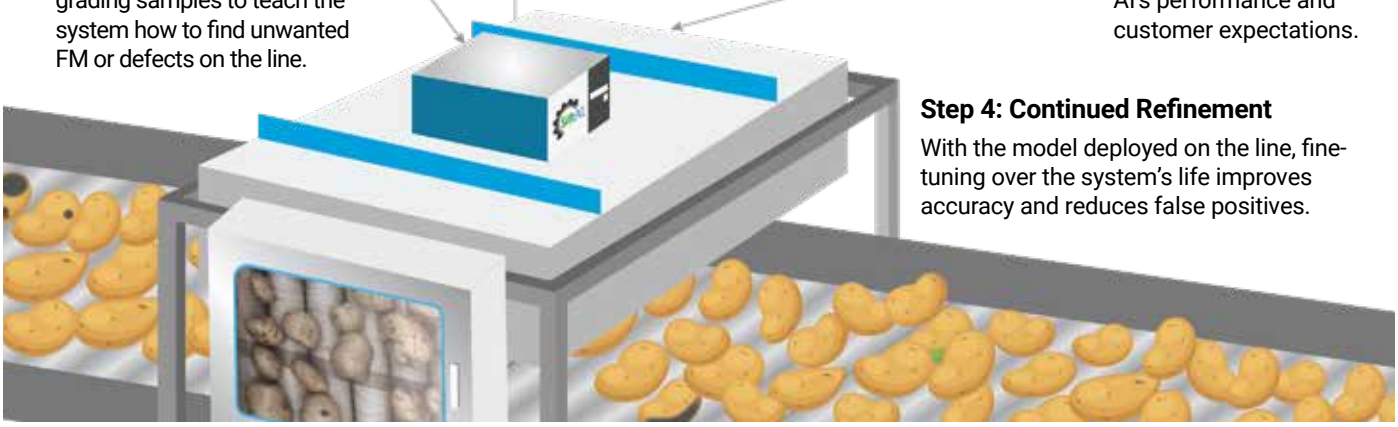
With the AI in place, test runs are recorded and monitored remotely by the KPM AI developers.

Step 3: AI Model Augmentation

KPM AI developers can make improvements to the models based on the AI's performance and customer expectations.

Step 4: Continued Refinement

With the model deployed on the line, fine-tuning over the system's life improves accuracy and reduces false positives.



Potato Sorting Solutions

KPM Analytics' AI vision inspection solutions help potato processors operate at higher capacities with greater accuracy, while helping operations detect foreign materials with greater precision.

SiftAI Smart Table

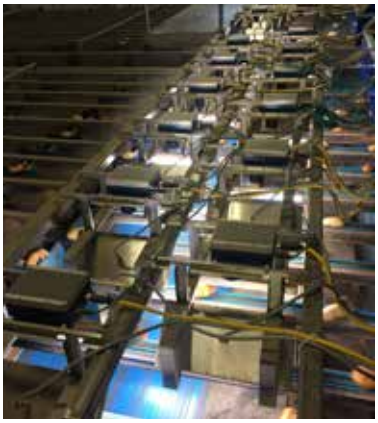
1 Inspection Post Wash

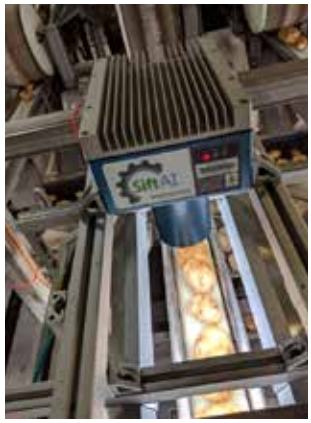
After potatoes are delivered to the process facility, they are typically washed and routed to a batch sorter. However, it is still possible for foreign materials to pass through the wash process.

The SiftAI® Smart Table utilizes a rolling table to detect foreign materials while also pre-sorting rotten or unacceptable products immediately from the process stream.

Golf ball detected

Ejection kicker engaged





SiftAI Multi-Lane Potato Sorter

2 Later-Stage Sorting, Sizing, and Grading

Some potato facilities utilize multi-lane sorting machines that automatically route fresh produce to specific customers. The SiftAI® Multi-Lane Sorter provides real-time inspection of visual product traits, ensuring they enter the correct lanes or rerouted to earlier drop-off lanes.

3 Final Product Inspection

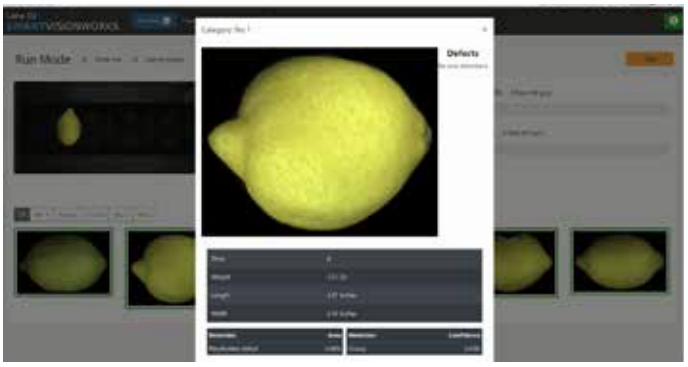
By combining AI with a robotic sorting arm, the SiftAI® Robotic Sorter provides objective final sizing and grading of 100% of potatoes to validate they meet all customer requirements before packaging. Should any products appear outside the acceptance range of the AI model, the system automatically triggers a robotic arm to pick up and remove the defective product at rates as high as 100 picks per minute (with two-robot systems).

SiftAI Robotic Sorter

AI Inspection Solutions for Fruits & Vegetables

From ensuring consistent product size, shape, and color, to detecting potentially hazardous materials from entering the production stream, AI-powered inspection technologies from KPM Analytics offer a dependable measure of assurance for fresh produce processors of all kinds.

PRODUCT SIZING & GRADING



Acceptable lemon

FOREIGN MATERIAL DETECTION

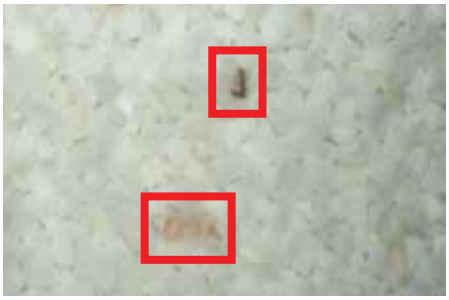
Irrigation ring in blueberries

Leaf in apples

Plastic in lettuce

Rock in oranges

Chopped golf ball in diced potatoes



Onion skins in chopped onion

Wood chip in diced potatoes

Moisture & Compositional Analyzers for Food & Agriculture

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.

In-Process NIR for Food Production

The MCT560 online smart NIR sensor series continuously monitors moisture and fat content of materials on a food process line to main consistent product quality, increase throughput, and reduce waste. Designed to operate in harsh food manufacturing conditions, MCT560 analyzers are easy to operate and integrate across multiple production lines and locations.

MCT566

- Ideally suited for demanding conditions in food and snack food manufacturing
- Stainless steel housing; IP67 rated
- IP67-rated 7-inch user interface
- Kel-F sensor window

MCT569

- Designed for full washdown capability in food and snack food manufacturing
- Stainless steel housing; IP69 rated
- IP67-rated 7-inch user interface
- Sapphire sensor window

At-Line Moisture & Oil (Fat) Analysis

QuikCheck

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.

Ruggedized Solutions for Challenging Industrial Environments

In many high-volume manufacturing operations, moisture, coat weight, and temperature variations directly influence product quality, prompt additional operational/energy costs, and ultimately cause waste if no parameter control measures are in place. However, not just any analyzer will do – industrial processing companies require this quality control in hostile operating conditions, such as in high-temperature conditions at the exit of a dryer, on an open conveyor with airborne particles, looking into a bin, chute, or auger, and elsewhere.

This is where KPM Analytics comes in with its line of online analyzers for industrial process control. From analyzing compositional parameters of incoming raw materials, managing product moisture before and after processing, and to improve spot-checking procedures, we partner with manufacturing industries of all kinds to solve their quality assurance demands, including:

Building Products

Bulk Chemicals and Powders

Bioenergy Products

Converting (Coatings, Plastics)

Wood Products

Mining and Minerals

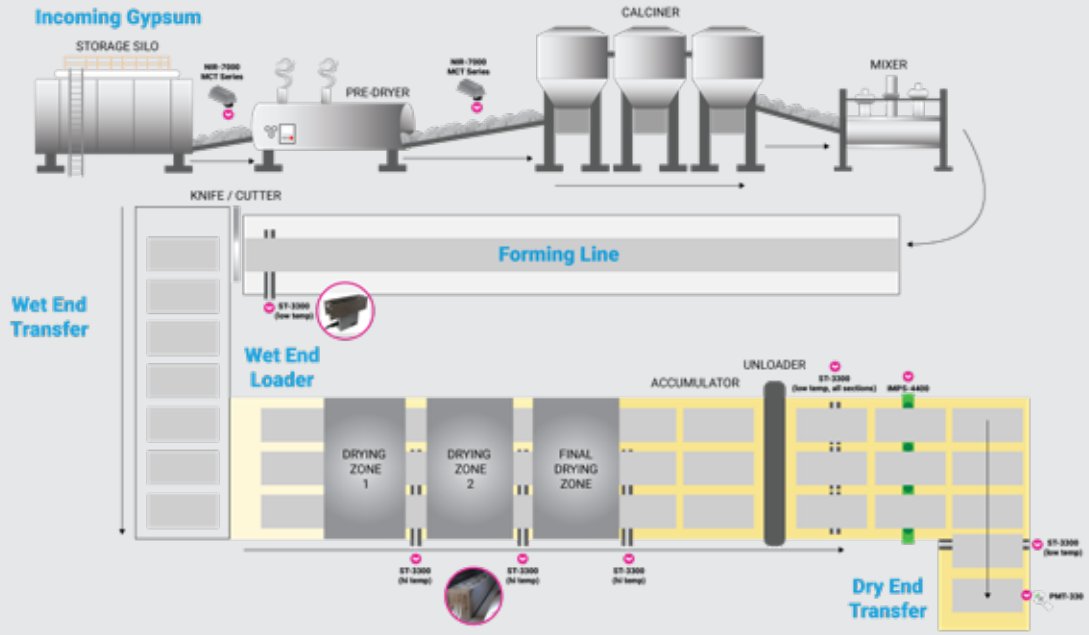
Paper Products

Textile Products

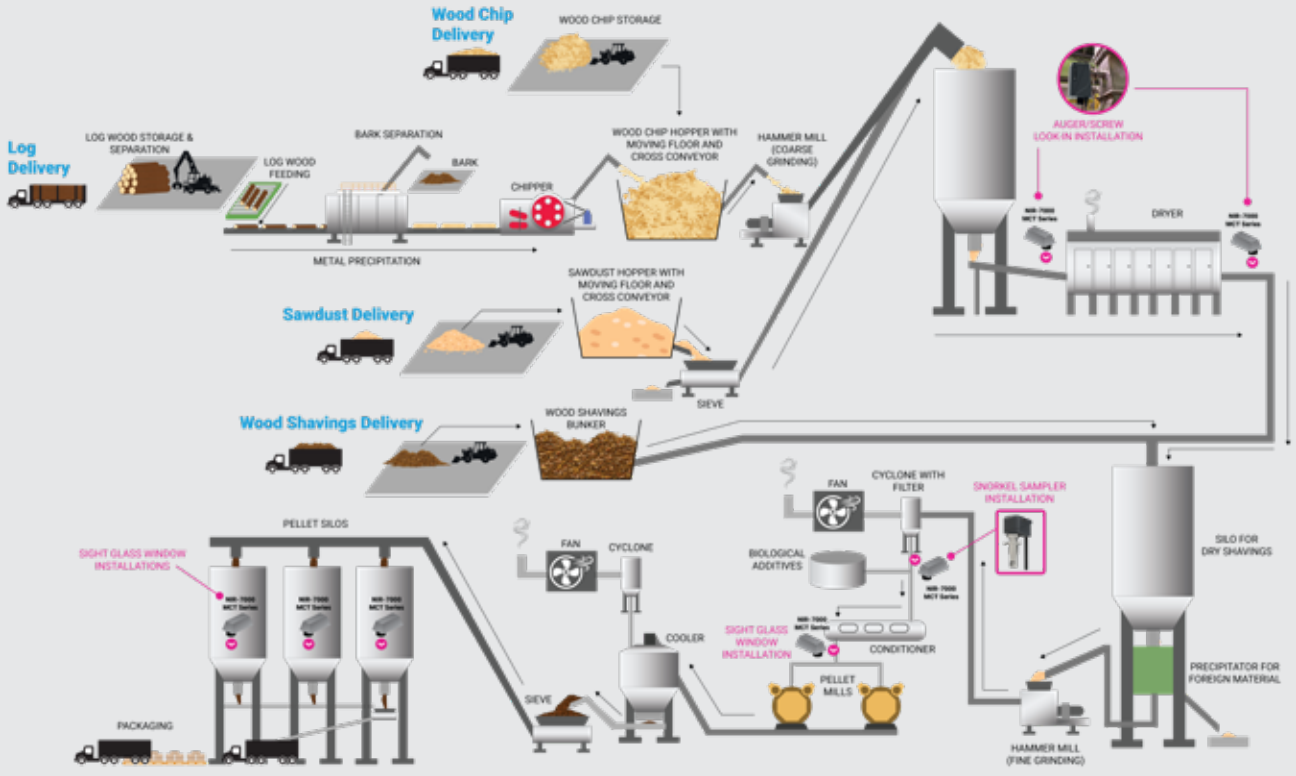
Measure Moisture Where it Matters

Below are two examples where KPM Analytics moisture analyzers are used to control moisture in common industrial processes.

KPM Solutions for Gypsum Board Manufacturing

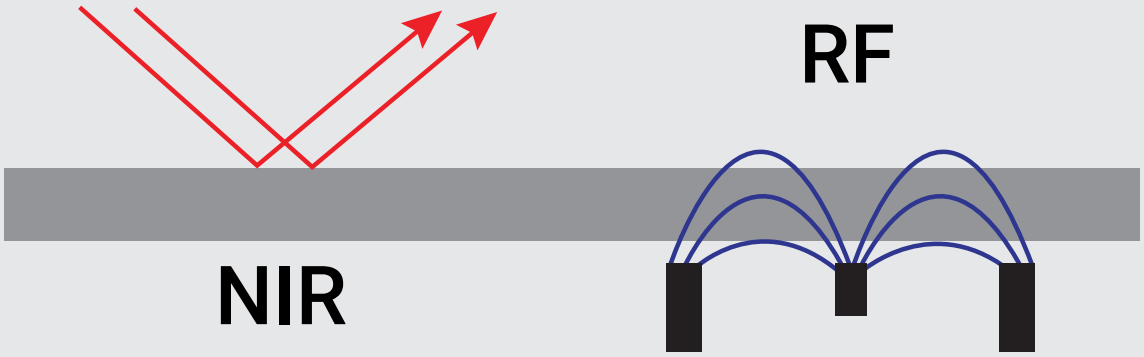


KPM Analytics Solutions for Wood Pellet Manufacturing



NIR or RF: Which Moisture Analyzer is Right for You?

Near-infrared (NIR) and radio frequency (RF) analyzers are two of the most commonly used online moisture analysis technologies for industrial processes – and KPM Analytics manufactures both. Choosing between NIR and RF moisture analyzers depends on specific requirements of the application, the product being measured, and the depth of measurement necessary.



	NIR Technology	RF Technology
Operating Principle	Surface measurement; moisture content is measured by directing NIR light and analyzing the reflectance of light from the sample.	Penetrating measurement; a signal is passed through the product to measure moisture content.
Ideal Product Types	Better suited for homogeneous products with uniform moisture distribution.	Better suited for heterogeneous products with a specific product mass, uniform shape (e.g., board products), and density (under 101 mm (4 in.) of penetration depth).
Precision and Calibration	Highly precise (+/- 0.1% moisture, application specific). Requires calibrations for each type of material being measured. Must be installed at a within 200-450 mm (8-18 in.) of distance from product. Can also measure other parameters beyond moisture (resins/oil, coat weight, etc.).	Highly precise (+/- 0.05%, application specific) to acquire a full moisture profile of the product. Also requires calibration but less affected by variations in the surface properties of the material.

KPM Online NIR Analyzers

KPM's online NIR sensors provide rapid and continuous analysis for manufacturing operators to continuously monitor incoming raw materials or process control on the production line. With this analysis, operators can maintain consistent product quality, increase yield, and minimize waste.

MCT560

Our newest addition to the KPM line of online sensors, the MCT560 provides high-speed measurement capabilities (up to 99 readings per second).

- Multiple constituent online analysis (moisture, coat weight, temperature, and others).
- IP67-rated 7-inch user interface for operating in challenging environments.
- Stores up to 200 product calibrations.
- More advanced user features (lamp life and motor life monitoring, vibration alarm).

MCT460

Predecessor to the MCT560 with equally high precision for analyzing multiple constituents (moisture, coat weight, temperature, and others).

- Measures up to 33 readings per second.
- IP67-rated 5.7-inch user interface for operating in challenging environments.
- Stores up to 100 product calibrations.

NIR-7000

KPM's single constituent NIR analyzer that delivers reliable non-contact moisture measurements for high-throughput industrial applications.

- Moisture-only analyzer (within +/- 0.1% precision, application specific)
- IP65 rated housing
- Next generation analyzer to the popular Sensortech NIR-6000, offering modern analysis software, more accessories, and a lower cost of ownership

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.

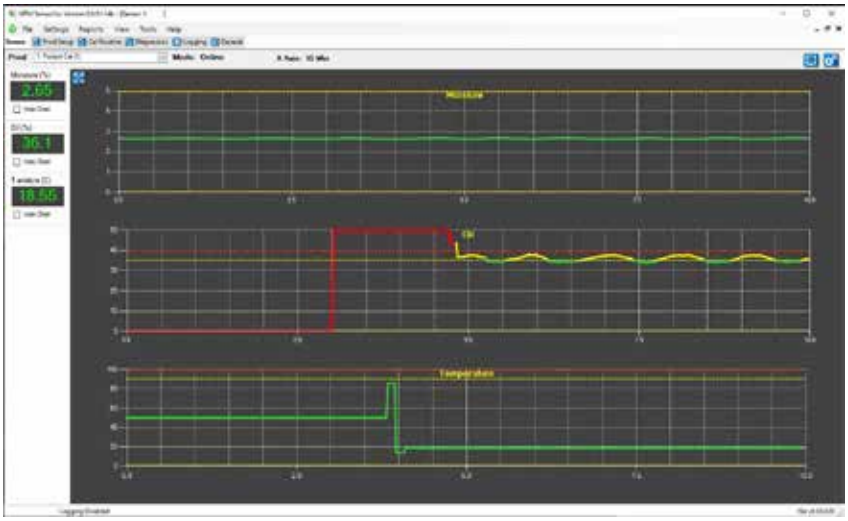
- Three options available to accommodate multiple product recipe codes, viewing displays, and multi-system monitoring capabilities.
- Each system customized to analyze full web width, along with the ability to position the sensor wherever it is needed (lane / move & park applications).
- Eliminates the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

SensorVu™

Proprietary Software for KPM Online NIR Analyzers

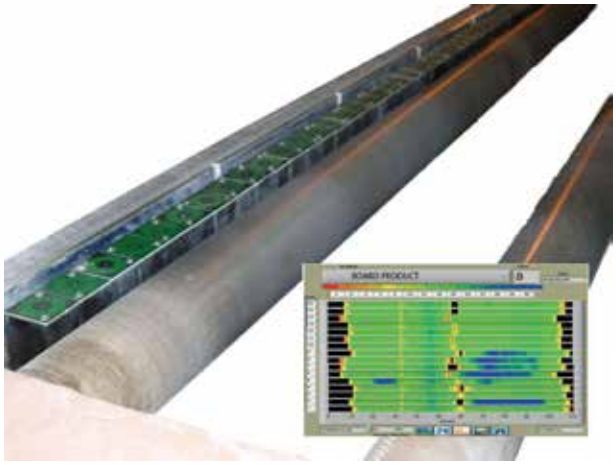
SensorVu™ is a Windows®-based open-source software that allows operators to insert set-up parameters, perform or adjust calibrations, select product codes, examine internal diagnostic values, and remotely view moisture and temperature trends.

- Set up and organize products for quick and easy selection.
- Trend screen with logging capability displays process reading changes in real time.
- Simple, graphical calibration routine for quick setup of new products.
- Connect to multiple analyzers in a single location for multi-system monitoring.



KPM Online RF Analyzers

For some manufacturing operations, even a slight variation in a product's moisture composition can cause significant quality control challenges. From gypsum processing, board manufacturing, and other industrial applications, many products have a tight moisture specification with little room for error. RF technology is ideally suited for these types of applications. These analyzers introduce radio waves that penetrate an object to collect its complete moisture reading across a full sample thickness.



IMPS-4400

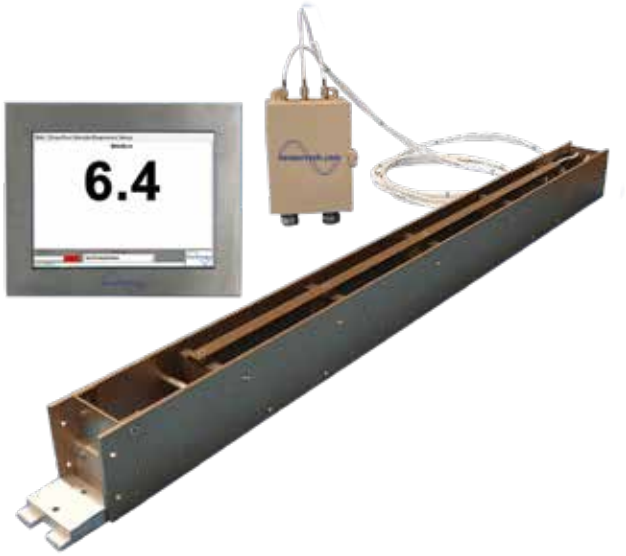
The Instant Moisture Profiling System (IMPS-4400) is a non-contact RF moisture profiling system for board manufacturers to improve and optimize production processes and meet quality standards, reduce energy costs, increase productivity, and generate revenue.

- Delivers the most advanced direct moisture profiling (accuracy range up to +/- 0.05%, application specific).
- Can integrate into process control systems through a digital I/O option.

ST-3300

Smart analyzer for process moisture measurement and control of materials used in wood products, building products, textiles, and paper industries.

- Designed to function virtually maintenance free in challenging conditions and temperatures up to 540°C (1000°F).
- Interfaces with your preferred HMI (PC, PLC, and optional 12" touch screen display)



PMT-330

Handheld RF moisture detection, allowing operators to spot-check moisture content of boards, wood, plastic, and paper products quickly and accurately.

- Low-cost, sophisticated at-line moisture solution.
- Completely wireless, rechargeable battery-operated unit.

Why is IR Temperature Measurement Important to Industrial Processing?

IR (Infrared) temperature measurement technology involves the use of devices, known as non-contact infrared thermometers or IR pyrometers, to measure the temperature of an object's surface from a distance without making physical contact. This technology is based on the principle that all objects emit infrared radiation at levels that vary depending on their temperature and material type. By detecting and measuring this infrared radiation, the temperature of the object can be determined.

IR temperature measurement capabilities offers several benefits to industrial processors, including:

- **Non-contact measurement:** Allows for product temperature to measured from a distance, ensuring safety and maintaining the integrity of the material.
- **Speed:** IR temperature measurement technology provides immediate temperature readings, which is crucial for many industrial production environments.
- **Non-destructive testing:** Since IR is non-contact, it does not alter or damage the material being measured.
- **Versatility and portability:** The flexibility of IR temperature sensors allows them to be used in a wide variety of applications and to be integrated into industrial control systems.

Through the Process Sensors Corporation product brand, KPM Analytics offers a wide range of online fixed IR temperature sensors and thermal imaging equipment for immediate and continuous temperature measurement and control in industrial processes, including:

- Steel
- Glass
- Induction heating
- Kilns
- Paper
- Ceramics
- Composites
- Building materials
- Aggregates, and more

KPM IR Temperature & Thermal Imaging Technologies (Available Only in the United States & Canada)

Temperature control is a main requirement for many industrial processes. When measuring temperature, the higher the moisture content of a product will lead a lower temperature, and vice versa. Monitoring and controlling temperature of a process is paramount to avoid over- or under-heating the material, thereby reducing waste, saving energy costs, improving yield, and increasing profits. Our IR temperature and thermal imaging products help industrial companies achieve these benefits.

IR Temperature Sensors

Online fixed pyrometers for continuous temperature measurement in industrial processes. Available with a variety of special features, accessories, and software options.

Thermal Imaging Camera Systems

Compact, radiometric, and enables the operator to view and measure thousands of temperature points, line profiles, or selectable regions of interest for temperature measurement and control.

Blackbody Calibration Sources

Emits a controlled and predictable source of IR radiance to calibrate pyrometers and thermal imaging systems accurately.

Portable IR Thermometers

Handheld, battery operated 1- and 2-color IR thermometers that offer the same accuracy and capabilities of fixed-mounted pyrometers.

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.

Remote Commissioning

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

Remote Support & Troubleshooting

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

Annual Calibration & Preventive Maintenance

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

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.

Training Collateral

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

KPM ACADEMY

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

U.S.A.
- Boston, Massachusetts
- Orem, Utah

Canada
- Ottawa, Ontario

U.K.
- London

Poland
- Warsaw

Germany
- Frankfurt

Italy
- Trento

China
- Beijing
- Zhenzhou

Malaysia
- Kuala Lumpur

KPM HEADQUARTERS
BRAND HEADQUARTERS / SALES OFFICE
KPM AI CENTER OF EXCELLENCE
SALES & SUPPORT OFFICE

KPM

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.

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