

# ANALYTICAL SOLUTIONS FOR GRAIN, MILLING, BAKING & SNACK FOODS







# 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.

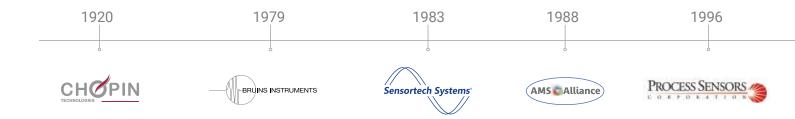
#### **OUR VISION**

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

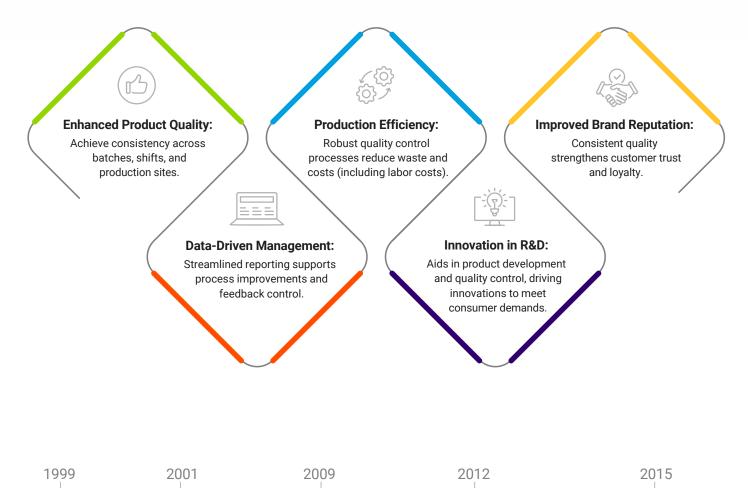


# Innovative Solutions for Enhanced Efficiency and Quality in Food Production

Quality control is an essential element in various sectors of the grain, milling, baking, and snack food industries.. Ensuring the highest quality standards is important not only to maintain product performance, but also to meet regulatory requirements and satisfy customers. Sound quality control processes help maintain supply chain integrity, improve product consistency and food safety, and enhance brand reputation and operational efficiency.

By prioritizing quality control, food producers can deliver superior products that meet consumer expectations, while optimizing production processes and preserving brand reputation.

KPM offers advanced analytical solutions that utilize cutting-edge technology to enhance the quality control processes. KPM provides a range of analytical tools and expertise to help breeders, grain elevators, millers, and bakery and snack manufacturers to ensure consistent quality and compliance with industry standards. From analysis of raw ingredients and products throughout the preparation and baking process, to visual inspection of finished products during processing and manufacturing, KPM offers a comprehensive array of solutions to help companies manage quality everywhere it matters.



Jnitv

**SMART**VISIONWORKS

### **100 Years of Commitment to Customer Success**

Over the past century, our brands have been supporting our customers for decades. At KPM Analytics, we take pride in this success and in our customers' satisfaction. Their positive experiences inspire us to continuously improve our services. Below, you will find a series of testimonials showing how our products and services have significantly impacted their businesses.

We use the Unity Scientific SpectraStar™ XT in our lab for quality control purposes, running samples 6-10 times an hour from various control points in our milling process.

The XT has definitely given us peace of mind when it comes to holding a calibration. We still look at primary analysis on a routine basis; however, the approach to primary analysis has become more balanced, from monitoring of the NIR performance to verification of the data. And whenever we need help, the quick response from the Unity Scientific team has been terrific."

MELODY FARAHANI, QUALITY MANAGER, MILLER MILLING COMPANY

The MCT Online NIR Systems we have at our facility are very **reliable** and consistent once programmed.

The KPM Analytics sales and support team have been extremely responsive to any service requests or issue resolutions.

DAVID J EGAN III, IT & CONTINUOUS IMPROVEMENT MANAGER, AXIUM FOODS



We're proud to be one of the best known companies in the world providing customized solutions for standardizing, improving and fortifying flour. We work closely with worldwide experts in grain, flour and dough analysis—like the team at CHOPIN Technologies—to stay at the cutting edge of innovation."

HENDRIK BEGEMANN, GLOBAL HEAD OF BUSINESS UNIT, MÜHLENCHEMIE

Over the years, we have developed flour quality profiles for our numerous products with the Mixolab. We test each new flour delivery before production to inform our product chefs about any discrepancies in quality. It allows our production team to plan ahead and take a lot of guesswork out of their responsibilities."

JESSICA BITAR, TOTAL QUALITY MANAGER, WOODEN BAKERY

My background is in Six Sigma lean manufacturing, so data is really important for making decisions and having the right sample size. Prior to this data we were making decisions on a small sample size, and we weren't able to make good decisions. The new vision system provides a sample size encompassing 100%

The new vision system 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

We started our journey with Mixolab as a pioneer within the Puratos group. We would typically send flour samples to an external lab to make rheological analyses, adding more steps to our quality control protocol. Bringing this analysis in-house has improved our operations in many ways."

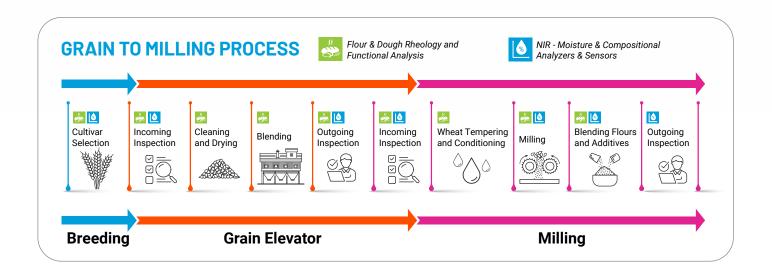
IVANA ANIČIĆ, R&D MANAGER, PURATOS We teach our students—who are trained for management positions in grain milling and process technology—that it is critical to obtain accurate measurements throughout the process. The Alveolab®, Mixolab and SDmatic from CHOPIN Technologies quickly and effectively get you those vital measurements."

MICHAEL WEBER, PRINCIPAL, SWISS MILLING SCHOOL

## **Optimizing the Flour Value Chain**

KPM Analytics provides control solutions at multiple stages, ensuring that seeds, grains, and flours meet the quality expectations of customers. These advanced technologies also help breeders and millers maximize their yield by optimizing production processes.

By implementing quality control at each of these stages, millers are better equipped to produce flours that precisely meet their baker's expectations. This meticulous attention to detail ensures that the flour has the right properties, resulting in a final product that is perfectly suited for baking, whether for artisanal breads or large-scale industrial production.



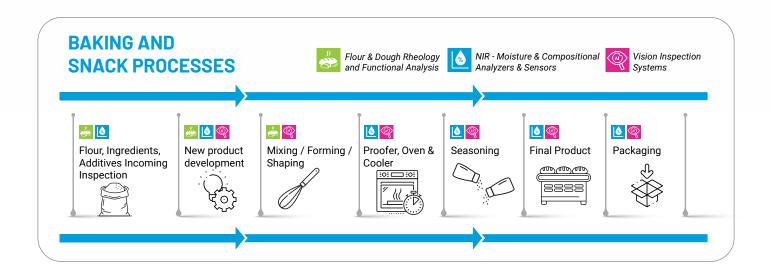
#### EXPERTISE EXTENDS TO MANAGING A WIDE VARIETY OF CEREALS, LEGUMES, OILSEEDS, RICE AND MORE



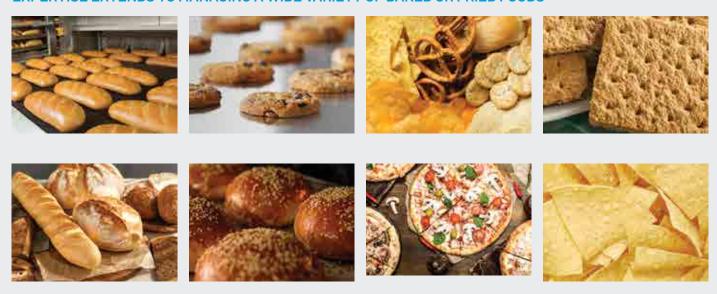
## **Enhancing Baking and Snack Food Production**

From raw ingredients to finished snacks or bakery products, KPM's quality control solutions empower producers to quickly evaluate critical properties and overall quality at nearly every phase of the process. Our comprehensive approach ensures consistent product quality while efficiently managing costs and reducing waste.

By implementing rigorous quality control from receipt of raw materials to final packaging, our solutions enable you to meet precise specifications, ensuring that you satisfy your production needs and your customers' expectations. This focus on precision and efficiency helps you deliver superior products, optimize your production and stand out in a competitive market.



#### EXPERTISE EXTENDS TO MANAGING A WIDE VARIETY OF BAKED OR FRIED FOODS



## Moisture & Compositional Analyzers & Sensors



#### OPTIMIZING INGREDIENT OUALITY AND PRODUCTION CONTROL WITH NIR TECHNOLOGY

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.

NIR testing is essential for guaranteeing the quality of incoming ingredients and maintaining control during production. By ensuring wheat, flour, and other ingredients meet specified parameters, NIR technology minimizes the risk of disruption due to inferior supplies, thus reducing waste and reprocessing costs. Throughout the production of bakery products or snacks, precise management of moisture and fat content ensure the desired taste, texture, and shelf life of the products, ultimately leading to reliable and high-quality food products that satisfy customers and boost profitability.



#### **AGRICULTURE**

 Our robust NIR calibration provides valuable data for whole grain analysis and plant breeding programs, enabling the selection of cultivars based on protein content and overall flour quality as specified by millers and bakers.



#### **MILLING**

 NIR equipment supports millers throughout production, ensuring the product meets their customer expectations at every stage—from incoming grain, milling to the addition of improvers- thus ensuring final flour quality before shipping.



#### **BAKING AND SNACKING PROCESSING**

 NIR technologies help the baking and snack industries manufacture products to the highest standards—from raw materials and in-process stages to the final product.







## AgriCheck Rapid Whole Grain & Flour 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.

#### **AgriCheck**

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



#### **AgriCheck Plus**

- All kinds of whole grain, oilseeds, feed products, and high moisture samples.
- Able to measure ground products, flour and pastes.

## 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.



 $KPMLink^{\otimes}$  is a cloud based networking software that connects multiple  $SpectraStar^{\mathsf{TM}}$  XT series analyzers within a company to centralize product configuration, calibration, and test results.

## QuikCheck Moisture & Oil NIR Analyzer



The QuikCheck at-line or lab NIR analyzer offers fast and accurate moisture and oil (fat) analysis for various non homogeneous solids and ground products, including snack foods, seasonings, whey powders, minerals, and mores. It integrates easily into quality assurance labs or production facilities to ensure the quality of finished food and industrial products.

- 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.



## MCT700 Series Food-Grade Moisture, Fat, & Color Sensors

The MCT700 Series Food-Grade Moisture, Fat, & Color Sensors (MCT700 Series), comprised of the MCT700, MCT750, and MCT790, offers rapid, continuous analysis for manufacturing operators to monitor incoming raw materials or process control on the production line. The in-line, non-contact sensors accurately measure moisture, oil, color, temperature and other parameters. With this analysis, operators can maintain consistent product quality, increase throughput, and minimize waste.

- High-speed measurement capturing up to 100 readings per second.
- Stainless steel housing; IP67 and IP69 options available.
   IP67-rated user interface enclosure.
- Designed for demanding conditions in food and snack food manufacturing.

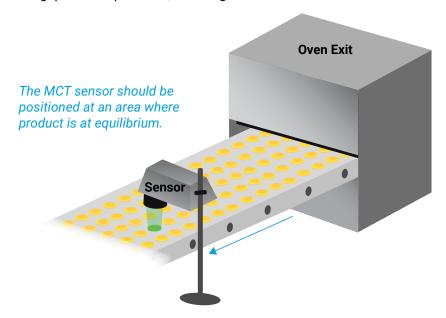


	MEASURED PARAMETERS				ENCLOSURE RATING
	Color	Moisture	Fat (Oil)	Temperature	
MCT790	<b>✓</b>	<b>✓</b>	<b>✓</b>	✓ (optional)	IP69 (Sapphire sensor window)
MCT700		<b>✓</b>	<b>✓</b>	✓ (optional)	IP67 (Kel-F sensor window)
MCT750		<b>✓</b>	<b>✓</b>	✓ (optional)	IP69 (Sapphire sensor window)

#### **HIGH-SPEED GAITING ANALYSIS**

The MCT700 Series allows the analysis of segmented products on a conveyor at full-line speeds. Through this process, the MCT700 sensor will only provide measurements when the product is under the sensor, making the system suitable for applications with a non-continuous product flow. High-speed gating capabilities make the MCT700 Series ideal for measuring moisture and fat content in high-throughput food operations, including:

- Cookies/Biscuits
- Snack Cakes
- · Candy Bars/Granola Bars
- Individually-Packed Noodles
- · Freeze-Dried Portioned Products









## Traversing Moisture & Fat Analysis with the Guardian-HD

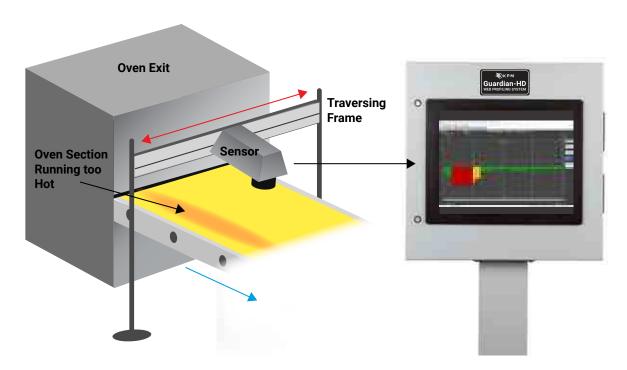
The MCT700 Series can be outfitted with a Guardian-HD traversing frame to measure moisture, fat, and product temperature across a full conveyor belt width.



#### BALANCE OVENS, CONTROL FRYERS, AND INSPECT PRODUCTS BEFORE PACKAGING

The Guardian-HD-equipped MCT700 Series sensor can be installed at various stages of the process to ensure production consistency such as at the entry or exit of the oven or fryer, or before packaging.

In the example shown, the sensor scans the entire width of crackers exiting the oven, assisting operators in balancing oven performance and maintaining product consistency. The display reveals a moisture reading that detects an overly dry area on the belt, indicating that a section of the oven is operating too hot.



# Flour & Dough Rheology and Compositional Analysis



#### ENHANCING PRODUCTION EFFICIENCY AND OUALITY

Since 1920, equipment from CHOPIN Technologies, a KPM Analytics brand, has 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 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 and other food industries, complete their quality control programs.

Compositional and rheological analysis of flour and dough is essential for understanding their physical and mechanical properties. These analysis enable bakers to select the best flour, optimize recipes, and enhance production processes for consistent, high-quality baked goods. For millers, it ensures flour quality, optimizes milling processes, and helps develop tailored flour blends. Breeders benefit by developing wheat varieties with superior flour characteristics, enhancing overall performance in baking applications.



#### **FLOUR ANALYSIS**

 Comprehensive evaluation of flour composition and properties to ensure consistency, maintain quality and predict their performance.



#### **DOUGH ANALYSIS**

 In-depth analysis of dough properties at critical production stages provides valuable insights into its behavior and quality, optimizing mixing, proofing, and baking processes for consistent and superior results.



#### **GRAIN MILLING & SAMPLE PREPARATION INSTRUMENTS**

 Rapid preparation of all types of grain to produce flour in order to carry out tests.







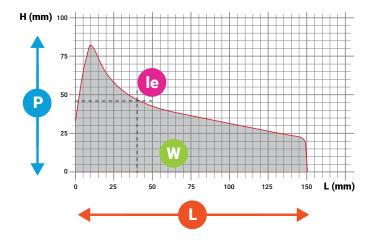
## **Alveograph® Test Series**

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.





- 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 Series Universal Flour & Dough Analyzer

Simulate the constraints dough undergoes during the production process, using standardized protocols to evaluate flour quality and baking performance. It provides objective data to support better decision-making in milling, formulation, and bakery operations.



#### Mixolab 200:

Comprehensive flour and ingredient analysis for quality control and research applications.



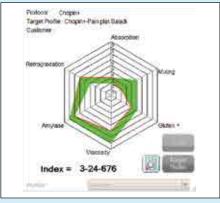
Combines flour and dough analysis into a single, simple solution for lab or at-line use.

- Comprehensive rheology testing for flours, dough, & various ingredients
- · Customizable protocols for starch, vital gluten, enzymes, & more
- Fast at-line dough consistency testing for process monitoring (Mixolab 300 only)
- New MixoPRO software simplifies QC testing & data analysis

## Mixolab Profiler for White Wheat Flours

The Mixolab Profiler allows products to be classified based on six quality criteria of the Chopin+ protocol: water absorption, mixing, gluten+, viscosity, amylase, and retrogradation.

Create specific target profiles to better screen and detect underperforming flours.

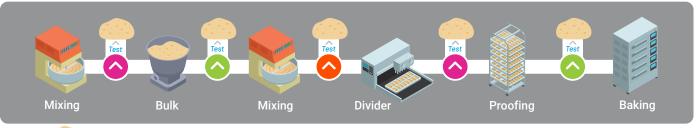


INDEX TYPE	(VALUES FROM 0-9)		
ABSORPTION	Ability of flour to absorb water		
MIXING	Stability of flour during kneading		
GLUTEN+	Resistance of gluten to heat		
VISCOSITY	Dough viscosity during heating		
AMYLASE	Starch gel stability at high temperature, strongly impacted by amylase activity		
RETROGRADATION	Cooked product shelf life		

Example Mixolab Profile for a target flour specification.

#### MAKE AT-LINE DOUGH CHECKS OBJECTIVE, ACCURATE, AND REPEATABLE

Dough evolves throughout production. The Mixolab 300 enables objective testing directly on line samples. Instant Consistency Mode gives results in 2 minutes, while Full Test Mode provides a complete dough profile. This helps bakeries monitor key stages, detect deviations early, and quickly adjust to maintain consistent product quality.



**Key:** Test sample dough from production



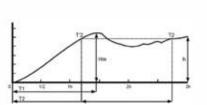




## SDmatic 2 Starch Damage Analyzer

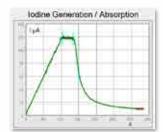
A simple and precise instrument to measure damaged starch in flours, which multiplies the flour's water absorption capacity.

- Enables bakers to control dough stickiness and product volume.
- Assists millers in optimizing milling settings (rolls, parallelism, wear).
- Fully automated, enzyme-free analysis (amperometric method - Medcalf & Giles).
- Compliant with international standards.



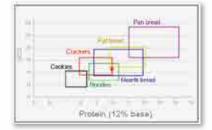
Dough Development Curve





Starch damage test results.





Compare results with reference products.

## **Rheo F4 Dough Proofing Analyzer**

The industry's only fully automated analyzer for key measurements of dough behavior during proofing (fermentation):

- Build a database of flour quality protocols to ensure consistency, assess enzyme impact, develop new product formulations, and more.
- Automate testing to evaluate both flour and dough quality (at-line analysis).
- In a single test: dough development, gas production, porosity, and tolerance.
- Determine optimal proofing time, reducing time and energy costs.
- Save proofing data for benchmarking future flour formulations.

## Flour Milling & Sample Preparation Devices



#### CD1 Mill

- Fixed settings ensure repeatable and reproducible testing, making the CD1 Mill ideal for producing flour with controlled biochemical composition.
- The only laboratory mill compliant with Alveograph® test from wheat grain (ISO 27971).



#### EM10 Oven

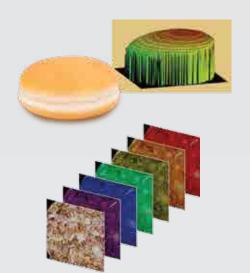
- Multi-compartment reference oven for highly precise moisture content analysis of cereals and flours.
- Accurate temperature control: ± 0.1 °C, with adjustable range from 30 °C to 150 °C (86 °F to 302 °F).

## **Vision Inspection Systems**

#### OFFERING A BETTER VISION FOR FOOD QUALITY INSPECTION

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.

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 material.



- 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.



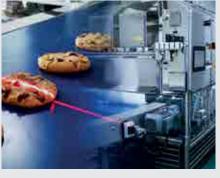
#### **MACHINE LEARNING & AI**

- · Automating learning and classification.
- · Anomaly detection.
- Sorting, sizing and sorting system.
- Foreign material detection.



#### 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.
- Ensuring regulatory compliance/humane treatment.
- Lab/at line product quality inspection.



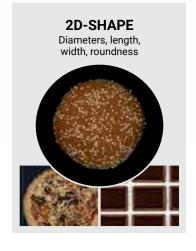




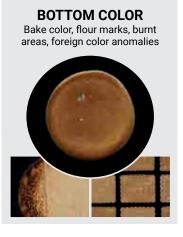
## **Vision Inspection Solutions for the Baking & Snack Industry**

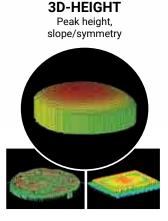
Since 1999, KPM's EyePro vision inspection systems have been trusted by global and regional baking companies to deliver the highest quality products to their customers. These systems can be integrated into your process or used to enhance quality checks, making quality control more manageable with objective measurements and inspection capabilities. When manual measurement of important features are impossible, especially at full line speed, KPM's Vision Inspection solutions guarantee that physical quality specifications are met.

#### **VISION INSPECTION MEASUREMENT CAPABILITIES**

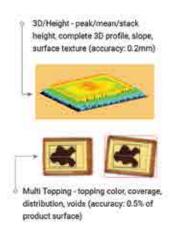


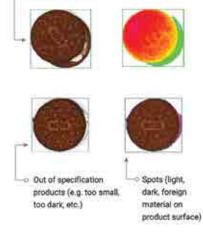
## **TOP COLOR** Bake color, topping conformity, spot detection



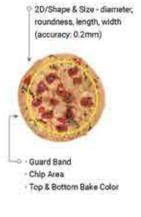


#### **COMMAND PRODUCT QUALITY**





Misshapen products



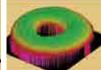
#### **DEFECTS EXAMPLES**



Buns, Rolls, **Hot Dogs** 

- Misshape
- Out of Spec
- Spots
- Blisters/Blotchy **Topping Defects**
- Scoring/Split/ Imprint Defects

#### **Bagels**



- Misshape
- Out of Spec
- Spots
- **Topping Defects**
- Doubles/ Overlapping

#### Tortilla



Misshape

**Edge Defects** 

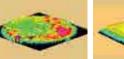
Out of Spec

Toast Marks

Spots

Holes

Defects



Cookie

- Misshape
- Out of Spec Spots
- Topping Defect

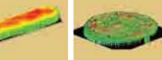
**Baguette** 

Out of Spec

**Topping Defects** 

Scoring Defects

Spots



Pizza

- Misshape Misshape
  - Edge Defects
    - Out of Spec
    - Spots

    - · Topping Defects



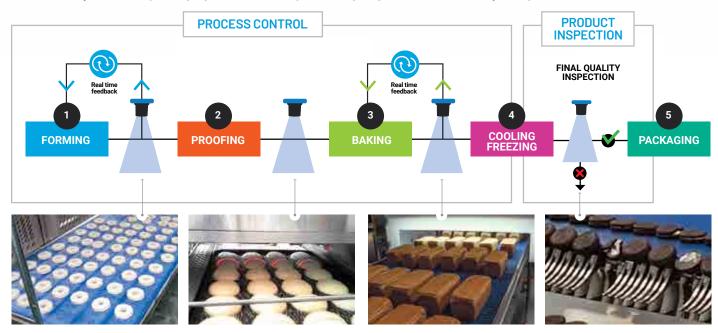
## **How Vision Inspection is Used Throughout the Production Line**

Vision technology can be used to provide accurate product counting at any location along the production line, serving as a data input to any OEE (Overall Equipment Efficiency) or SPC (Statistical Process Control) third-party software. 2D/ shape, 3D/height, and color can be checked not only during final inspection but also after each phase of the production process, to ensure that every step works optimally and helps identify the causes of any possible defects. Single or multiple vision control stations continuously monitor key product attributes after each production process steps.

#### ADVANCED VISION PROCESS CONTROL FOR OPTIMAL PRODUCT QUALITY AND EFFICIENCY

Combining process control modules with product inspection and rejection of the final product provides the best possible results in terms of process understanding, improvement, and product quality.

Vision Process Control solutions are installed at key production stages where data visualization and optional direct feedback integration can automatically act to keep process performance on target. Final Product Inspection solutions are installed just before packaging to ensure that products going out the door meet your specifications.



#### AUTOMATIC FEEDBACK LOOPS FOR REAL TIME ADJUSTMENTS

The system continuously monitors key product features and automatically adjusts, in real time, on the basis of the obtained results and the settings of the upstream processing equipment. The combination of vision technology and real-time feedback control improves the product consistency and at the same time reduces the waste due to incorrect production equipment operation.

- Distributed Vision Process Control (VPC) modules monitor the output of production process steps singularly, allowing you to fully understand and optimize your process.
- The data, collected by a Centralized Control Station, can either be displayed in real time or analyzed at a later stage (through generation of customized off-line reports).
- Feedback Loops allow to you to modify key process parameters automatically and in real time, on the basis of the information collected by the Vision module; in this way, you will be able to achieve the best product quality and line efficiency.
- Furthermore, Vision gives also the capability to control and drive other parts of the process, such as scoring or topping deposition.



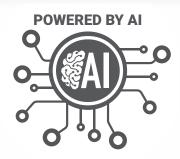




## **Customized Vision Inspections Solutions**

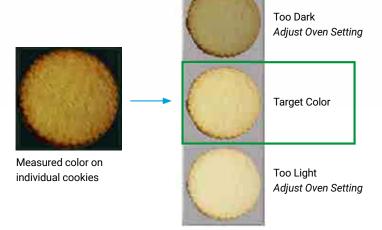
#### PRODUCT-BASED SPECIFICATION "MODELS"

Vision-based quality control systems recognize and analyze many attributes simultaneously for each product that passes under the system at full line speed. These attributes, such as size, shape, and color, for example, are inspected for any deviations from your established quality specifications and, if a product doesn't meet those criteria, rules are engaged to instruct the system how to handle the situation. This is what we refer to as the Product Model, and it's the information from the model that enables the automated inspection process.



#### **AUTOMATIC OVEN CONTROL**

 At the oven exit, it is possible to integrate our exclusive Real-Time Oven Feedback module, which uses the measured bake color to automatically adjust the oven settings.



#### **AUTOMATIC TORTILLA PRESS CONTROL**

 After the press on a flour tortilla line, it is possible to integrate our exclusive Real-Time Press Feedback module, which uses the measured diameters to automatically adjust the press settings.





#### VISION-BASED ROBOT GUIDANCE

 KPM Vision Inspection Solutions can be integrated into a specific robot guidance applications. Our team will work in partnership with your qualified robot system integrator in order to provide a complete solution based on our state of the art vision inspection technology. This allows a customer to deploy vision inspection (and advanced data analysis and reporting) as well as robot guidance, using just one vision module.



## **EyePro Q-Bake Vision Inspection System**

KPM's EyePro vision systems are specifically tailored for high-volume baked goods and snack food producers. We design and manufacture high tech equipment to help food producers improve product quality, maximize productivity, optimize processes and reduce waste. These systems are able to provide 100% product inspection, process control and product handling.

- In-Line and overline, customizable systems.
- Integrates seamlessly into existing production lines.
- 100% inspection with rejection, up to 100 objects/second.
- Multiple defect rejection and product handing options.
- Vision Process Control systems for production optimization.
- · Variable speed inspection conveyor included.
- Operator Interface included for full control at the line.
- Supports multiple camera and lighting types.
- Optional bottom and side cameras enable complete 2D & 3D measurement capabilities.
- Built-in library with 100+ measurements and growing.
- Generates production metrics (uptime, throughput, etc.).
- · Hygienic and sanitary design options.









Every Q-Bake system features a product-specific software, that takes into account all measurements of interest for the specific product, based on our experience and expertise. It is possible to implement new measurements, when the customer requires. The user can set the limits of tolerance for each single measurement and enable/disable the parameter for the purposes of rejection.

The supervision station displays real-time information (statistics, tables, trend charts, histograms) and automatically generates warnings when process parameters move outside operator-defined limits. The data can also be added to a database for further analysis and correlation, assisting in improving the production process and the quality of the finished product.



Reiection Bin





## **EyePro Q-Bake Vision Inspection System**

#### VISION SYSTEMS COMPONENTS

Thanks to a modular hardware and software architecture, it is possible to configure a Q-Bake vision inspection solution to meet specific customer needs, and to his production line.

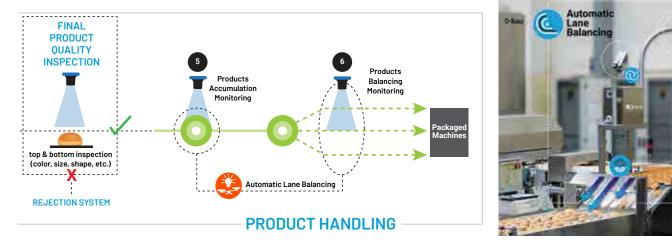
# Optional Integrations: • Metal detector with dual stage rejection mechanism • In-line checkweigher • In-line NIR

#### **VISION MODULE:**

- 2D, 3D & color measurements of the top, color measurements of the bottom.
- Rejection module: multiple options available, please inquire.
- · Stainless steel frame.
- Conveying system with modular belts.
- Control unit: industrial PC, industrial touch screen, stainless steel electrical cabinet.
- Inspection software with real-time statistics displayed on an integrated touch screen.
- Data collection & reporting software.

#### PRODUCT HANDLING WITH VISION-BASED LANE BALANCING

Product Handling solutions use vision technology for Automatic Lane Balancing to ensure that packaging machines are fed by a continuous flow of evenly laned products, If you combine Product Inspection and Product Handling, you will be able to measure and check your products, reject the faulty ones, lane the good ones and optimize their flow to the packaging machines.





## TheiaVu® E-Series Offline Vision System

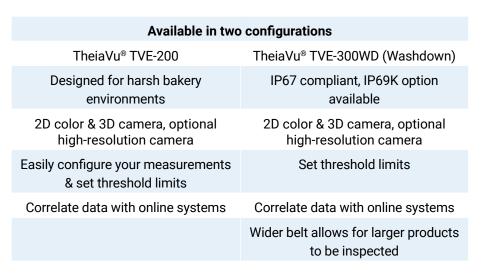
TheiaVu® E-Series provides objective measurements to ensure product consistency and quality.

Simply place the product on the moving conveyor and product attributes can be measured objectively and consistently with minimal operator intervention. The system can be set up to inspect a range of products based on the product size and height, including cookies, buns, bread, pretzels, muffins, etc.

TheiaVu® E-Series is simple to use and replaces manual measurement and data collection. With this single tool, you can collect color, height, diameter, and many other measurement features for your product. Additionally, the data can be used with online vision systems to set and verify product specifications.

Used in the lab or at-line in your bakery, TheiaVu® E-Series systems produce critical measurement data for pre-baked doughs, production samples and final products for quality and process control

- Pre-Bake: Inspect dough before baking to define key attributes.
- R&D: Objectively profile new products to define product specification.
   Compare and contrast different recipes for products to optimize product quality.
- **Detailed Feature Measurements:** Obtain objective data to help determine the repeatability tolerances of your production process.
- Quality Control: Before packaging, inspect final products for quality control.





TheiaVu® TVE-300WD (Washdown)



TheiaVu® TVE-200

# **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 instruments, 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.



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**







#### U.S.A.

- Boston, Massachusetts
  - · Orem, Utah

#### Canada

· Ottawa, Ontario

#### U.K.

London

#### **France**

Paris

#### Poland

Warsaw

#### Germany

Frankfurt

#### Italy

- Rome
- Trento

#### China

- Beijing
- Zhenzhou

#### Malaysia

• Kuala Lumpur





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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