

# Food and Beverage

The Spectrum of Automatic Sampling



Food Grade | Hygienic | 3-A Standard



# Sample. Monitor. Measure.

**WITH PROVEN SAMPLING EXPERTISE SINCE 1924**, Sentry® products and services provide food and beverage producers and processors with the critical insights to optimize process control and product quality. We deliver true representative sampling techniques to customers around the globe. Empowering them to accurately sample, measure and reduce food safety risk.



# Sample First – Food Safety Starts With Your Sample



**SAMPLE  
FIRST**

In the world of food testing, the analytical techniques to measure the threats are precise, often down to the sub-parts-per-trillion level. Yet, food testing commonly starts with an unreliable sample. It is captured using a rudimentary spigot or scoop sampling method. Representative sampling that is reliable and repeatable – from validation of raw ingredients to quality testing at each key processing stage – is the only way to ensure confidence in your food testing results.

Ready access to safe, quality food is a basic human necessity. People around the world rely on food processors and producers to provide safe nutrition throughout the food supply chain. Overwhelmingly, the threats to food quality and safety are vast. And, those threats can go undetected when using poor sampling techniques.

- **Production quality** – mixture, moisture, pH balance, acidity and more
- **Authenticity** – truth-in-labeling, export adulteration and GMO conformity
- **Microbial contamination** – bacterial, foodborne viruses or pathogens
- **Chemical contamination** – pesticide residues, environmental toxins and much more

## ASSOCIATION MEMBERSHIPS

**IAFP** – International Association for Food Protection

**IAOM** – International Association of Operative Millers

**IFT** – Institute of Food Technologists

**PEMA** – Process Equipment Manufacturers' Association








**PMMI** – The Association for Packaging and Processing Technologies

**PTNPA** – Peanut and Tree Nut Processors Association

# Sentry Sampling Spectrum

The threat to food safety can be low or high-risk depending on your food or beverage processing environment. Or, different risk levels at each process zone within your production plant. The Spectrum of Sentry Samplers covers all your needs from low and medium-risk food grade and hygienic standards to high-risk 3-A standards.

Automatic Sampler	Food Grade		Hygienic			3-A Standard	
	Powder & Solid	Liquid & Slurry	Powder & Solid	Liquid & Slurry	High Viscosity Liquid & Slurry	Powder & Solid	Liquid & Slurry
Sentry A	●						
Sentry ISOLOK SAE	●						
Sentry ISOLOK SAH	●						
Sentry ISOLOK SAK	●						
Sentry PR	●						
Sentry RPG	●						
Sentry RX	●						
Sentry SA/A	●						
Sentry ISOLOK SAA		●					
Sentry SAL-B		●					
Sentry HPR			●				
Sentry HRX			●				
Sentry B1			●			●	
Sentry ISOLOK M4KSA				●			●
Sentry ISOLOK MSA				●			●
Sentry ISOLOK MSC				●			●
Sentry ISOLOK MSD				●	●		
Sentry ISOLOK MSE				●	●		

Food Grade	Hygienic	3-A Standard
<p><b>Sentry ISOLOK SAK Sampler</b> Powder &amp; Solid</p> 	<p><b>Sentry ISOLOK MSE Sampler</b> High Viscosity Liquid &amp; Slurry</p> 	<p><b>Sentry B1 Sampler</b> Powder &amp; Solid</p> 
<p><b>Sentry ISOLOK SAA Sampler</b> Liquid &amp; Slurry</p> 	<p><b>Sentry HPR Sampler</b> Powder &amp; Solid</p>  <p><b>Sentry HRX Sampler</b> Powder &amp; Solid</p> 	<p><b>Sentry ISOLOK MSA Sampler</b> Liquid &amp; Slurry</p> 

# Food Grade | Hygienic | 3-A Standard

All food and beverages undergo some form of processing, and those processes need to follow good manufacturing practices (GMP), as well as local, national and international food safety regulations. A food safety sampling and analysis program provides controlled, real-time data and is aligned with regulatory requirements. Such as, the hazard analysis and risk-based preventive control (HARPC) provisions under the U.S. FDA Food Safety Modernization Act (FSMA).



- **Food grade** samplers include 316 stainless steel contact surfaces and FDA compliant seals.

- **Hygienic** samplers closely follow the strict standards of various certifying agencies and technical reports, including PMMI's One Voice for Hygienic Equipment Design. These automatic samplers meet or exceed minimum food protection and sanitation criteria for materials, design, fabrication and construction. All product contact surfaces dismantle for easy cleaning and inspection without tools.

- Samplers that meet **3-A Standards** for sanitary design are marked with a 3-A Symbol and have passed third-party verification inspection. The USDA, FDA and state regulatory authorities accept the 3-A standard.



## Sentry ISOLOK M4KSA Sampler Protects Dairy Industry for Over 40 Years



**The Sentry ISOLOK® M4KSA sampler** helped protect the milk and dairy industry since 1976. For over 40 years, dairy producers have trusted this 3-A standard sampler to capture a true representative sample without adding contamination risk to their process streams. In fact, the Sentry brand has roots in the dairy industry dating back to 1914 with our founder as the chief engineer for the Carnation® Milk Products Co.

**3-A Standard**  
**Sentry ISOLOK M4KSA Sampler**  
Liquid & Slurry



# Automatic Sampling Applications

Representative sampling is the act of capturing a limited volume of material that accurately reflects the characteristics of the entire lot, batch, or process stream. The process stream, conditions, material characteristics, safety hazards, certification standards and regulatory requirements all play a role in defining your sampling application.

**Automated sampling** means safely obtaining a sample in a process line, chute, hopper, bin, conveyor or tube without the need for direct human interaction. Production can run continuously while protecting operators, ensuring the integrity of the sample, and increasing sample efficiency. Additionally, by incorporating an electronic sampler controller into your existing equipment and systems, sampling occurs without any operator engagement.

## COMMON SAMPLING APPLICATION CRITERIA

Process Stream	Process Conditions	Sample Type	Material Characteristics
Conveying	Area Classification	Gas	Abrasiveness
Blending/Mixing	Composition	Liquid	Density
Filling	Corrosiveness	Powder	Hardness
Pipes/Tubes	Flammability	Slurry	Moisture Content
Storage Vessels	Flow Rate	Solid	Particle Size
Tanks	Pressure	Steam	Particle Shape
	Sanitation	Water	Material Compatibility
	Temperature		Stratification
			Viscosity

## AUTOMATED SAMPLING WITHIN A PROCESS:

- **Increases lot-to-lot repeatability** – quality control testing using representative sampling is the foundation for consistent quality, taste and texture. There is little variation from one batch, or lot, to the next.
- **Increases process efficiency** – operators do not waste time manually obtaining samples, which can yield contaminated, inaccurate results. Obtaining composite samples easily and safely ensures sample integrity with no human interface. And, with automated sampling during production, there is no downtime.
- **Reduces process waste** – sampling of the food product during production eliminates the waste of using packaged, final product as samples. Catching quality or safety incidents early in the process allows plant managers to pinpoint detection at the original source. Stopping contamination and/or upstream mixing or blending equipment failure is vital to prevent full batch or lot production waste.
- **Increases profitability** – implementing an automated sampling solution provides immediate ROI. By preventing just one food recall, the automated sampling solution pays for itself many times over.



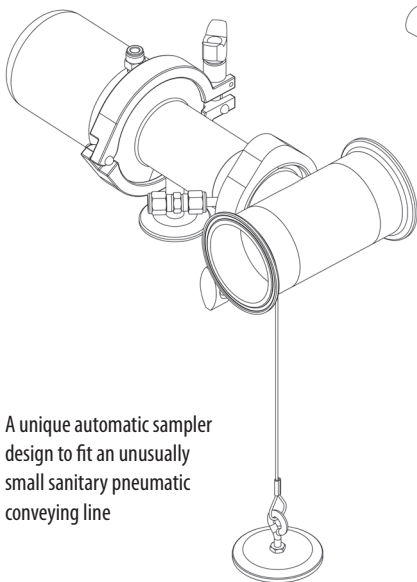
# Custom Engineered Solutions

## For Your Most Challenging Applications

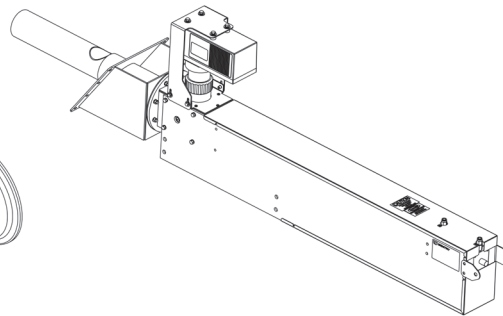
Every food or beverage production environment is different. Capturing a representative sample varies widely from a grain milling operation or nut processing plant to a coffee producer or brewery. Customizing the right sampling solution based on your application is commonplace for the leading brand of industrial sampling. Our engineers are experts in their field and have a deep understanding of all the regulatory and certification requirements that food producers face on a daily basis.



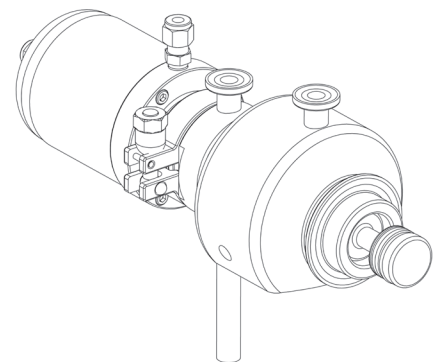
Brian, Employee-owner



A unique automatic sampler design to fit an unusually small sanitary pneumatic conveying line



The Sentry RPG sampler optimized to integrate with moisture analyzer or to operate manually



The Sentry MSC sampler upgraded with flush and purge parts for dairy and brewing applications



Sarah, Employee-owner

## Sentry ProShield Lifecycle Services

Controlling your food quality sampling processes also means reliable customer support throughout the life of your equipment. Rely on full services and support for continuous optimal performance. Our experienced technical staff of expert engineers is available to provide on-site service and training as well as technical support and troubleshooting for all your products.

- **Customer service** – general inquiries, warranty claims, order management
- **Field service** – when a problem needs immediate attention
- **Replacements parts and consumables** – easily order your replacement parts and/or consumables
- **Technical support** – trouble shooting, training and technical manuals

# The Sentry Advantage

**Running an efficient operation** requires careful analysis of controlled, real-time data achieved through reliable, accurate and repeatable process monitoring and measuring. By effectively conditioning, sampling and measuring gas, liquid, slurry, powder, solids, steam, or water within their production environments, our customers obtain the critical insights they need to control and optimize processes.

Driving operational efficiency by obtaining and analyzing critical data is at the heart of what we have been doing since 1924. Our proven representative sampling techniques matched with comprehensive analytical systems take the guesswork out of interpreting results, delivering the intelligence needed to make strategic operational decisions with confidence.

## INDUSTRY-LEADING EXPERIENCE

Our experts are well-respected throughout our industries for their technical competencies and unparalleled engineering capabilities, which allow us to consistently offer the reliable technical solutions and support our customers demand.

## WORLD-CLASS SAMPLING APPLICATION EXPERTISE

Our advanced technical knowledge and experience is employed not only to simply meet standards, but in many cases, sets the industry standards by which all others operate.

ISO 9001:2008 | 3-A | ASME | ATEX | CE | CRN | CSA | DOT | EPRI | NACE | NDE | PED | TPED

## EMPLOYEE-OWNED

As an employee-owned company, our team fully appreciates the value of every customer and the importance of every relationship. With a vested interest, we take pride in everything we do, deliver on our promises and stand behind our commitments.

## COMMITTED TO LONG-TERM PARTNERSHIPS

We continually invest in finding more and better ways to serve our customers. Over the years, we have expanded our Sentry brand by introducing new products, new services and acquiring companies with strong reputations, expertise, technologies or reach, and successfully uniting each company's competencies with our own. With sampling remaining at our core, we will continue to extend our breadth of expertise to deliver more value throughout the process value chain.



## Any Application. Anywhere.

Serving customers  
in over 50 countries across  
six continents worldwide.



[sentry-equip.com](http://sentry-equip.com)

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