



Microbial Solutions

Dairy, Beverage and Food Industries



Hygiena® Microbial Solutions: Rapid Microbial Detection

Can you rely on your testing methods?

Testing for microbial contamination in your intermediate as well as your final product is a critical part of ensuring consumers receive clean, safe product. Surprisingly, manufacturers frequently overlook the limitations of current release tests, such as subjectivity and long assay times, and still rely on traditional growth-based or indirect methods to confirm product safety. Moreover, many manufacturers have difficulty assessing the unrealized efficiencies available to them, such as reducing their inventory carrying costs and warehousing requirements, and minimizing the risk of damaging their brand...until it's too late.

Why risk your product, your reputation and your bottom line when there are proven methods and modern technology that enable you to release product more quickly and more confidently?

The Innovate™ Rapid Microbial Screening System uses adenosine triphosphate (ATP) bioluminescence-based detection, an accurate, rapid method that is ideal for environments dependent on quick turnaround, such as those in the dairy, beverage and food industries. At the forefront of the industry is the Innovate System, a benchtop instrument that combines high system throughput with a small footprint. The Innovate System works exclusively with proprietary RapiScreen™ reagents, which have been validated on a wide variety of raw materials, in-process formulations and finished goods. In addition, RapiScreen Dairy and Beverage Kits have earned AOAC RI *Performance Tested Methods*SM Certification (License #092301 and 052301, respectively).



Innovate System

The Innovate System is an automated luminometer providing high throughput screening in a compact, benchtop system. Our RapiScreen reagents utilize ATP bioluminescence, the industry standard for rapid microbial screening of ultra-heat treated (UHT) and extended shelf life (ESL) products. Exclusively designed for fast-paced environments that depend on quick turnaround, such as those within the dairy, beverage and food industries, the Innovate System delivers accurate, objective and confident results to ensure your manufacturing operations run at peak efficiency.

Multitasking automation allows simultaneous testing of 96 different samples on a single microtiter plate every 30 minutes. Subsequent assays can be prepared even while the system is in use to keep high-volume operations running smoothly. With reagents formulated for extended stability and on-board reagent temperature controllers, reagents can be stored on the system, improving ease-of-use and reducing waste.

Product	Product No.
Innovate™ System	MCH4000

Innovate Software

The intuitive Innovate software includes on-screen support and a color-coded graphical user interface, providing automated data capture and archiving from the Innovate System. With robust system administrator capabilities and customizable security settings, results can be accessed from either a central or a remote location. In addition, an integrated database allows users to store, sort and query results data and export to common applications and Laboratory Information Management Systems (LIMS).

Product	Product No.
Innovate™ Software	MIS4011



Hygiena Microbial Detection Reagents

The Innovate System works exclusively with the RapiScreen reagent family. RapiScreen technology is based on ATP bioluminescence, where the enzyme luciferase catalyzes the consumption of microbial ATP to produce light. ATP bioluminescence can detect living microorganisms with increased sensitivity, providing an objective result with a faster detection time, as opposed to waiting for potentially visible colonies to grow on agar plates. During the RapiScreen test, samples are treated before the bioluminescence assay to reduce non-microbial sources of ATP. This step uses proprietary reagents to ensure sensitive and reproducible results.

Primary Reagents	Product No.	AOAC Certified
RapiScreen™ Dairy 1000 Kit	KIT4000	#092301
RapiScreen™ Dairy 5000 Kit	KIT4001	#092301
RapiScreen™ Dairy 25000 Kit	KIT4015	#092301
RapiScreen™ Beverage 1000 Kit	KIT4010	#052301



Support Reagents and Consumables

Additional reagent kits required for maintenance and support are produced in the same ISO-certified facility to the same standards as our primary reagent kits.

Support Reagents and Consumables	Product No.
ATP Positive Control Kit	KIT4014
Monthly Maintenance Cleaning Kit for Innovate	KIT4012

Accessories

Accessories	Product No.
Pipette, 20 – 200 µL	MIS4085
Pipette, 100 – 1,000 µL	MIS4086
ATP-free pipette tips, 200 µL (10 x 96 pcs)	MIS4088
ATP-free pipette tips, 1,000 µL (10 x 100 pcs)	MIS4089
Non-sterile pipette tips, 200 µL (10 x 96 pcs)	MIS4091
Non-sterile pipette tips, 1,000 µL (10 x 100 pcs)	MIS4092
Wide-bore pipette tips, 200 µL (10 x 96 pcs)	MIS4090
Microtiter plates PS grey 96	MIS4000
Microwash, 500 mL	KIT4043
Antifoam dropper bottle	MIS4083

Laboratory Services

Hygiena offers a variety of laboratory services to support your product evaluation needs, including product suitability and methods development. Please contact your sales representative for additional information.

Rapid Microbial Screening System

The Innovate System delivers quality control results in less than 1 hour following a preliminary incubation period, enabling Dairy, Food & Beverage manufacturers to confirm rapidly the quality of their product and quickly release them to market.

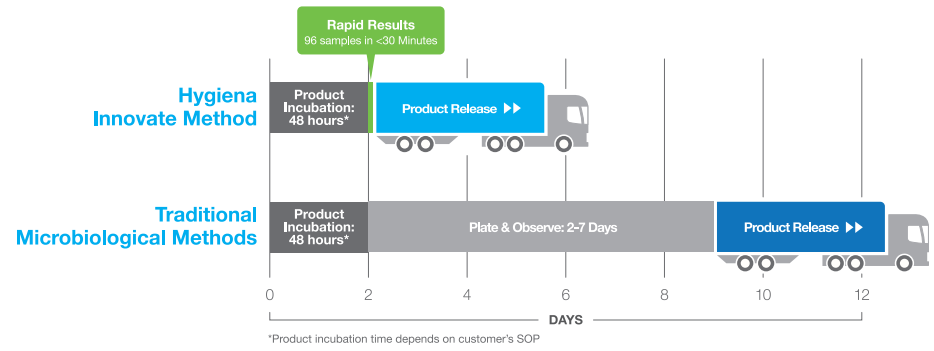
Products Tested

Beverage Kit			Dairy Kit			
2	3	4	5	6	7	8
Fruit Juice	Ketchup	Cold Brew Coffee	Tea Concentrate	Cheese Sauce	Cold Brew w/ Creamer	Almond Creamer
Lemon Juice	Mustard	Sport Drink	Broccoli Soup	Chicken Broth	Meal Replacement Drink	
Cranberry Juice	Orange Juice	Iced Tea		Chocolate Milk	UHT & ESL Milk	
	Strawberry Puree	Tomato Paste		Chocolate Protein Shake	Full-fat Milk	
	Apple Juice	Tomato Soup		Heavy Cream	Low-fat Milk	
	Grape Juice	Vegetable Puree		Half & Half	Nut Milk	
	Exotic Mixed Fruit & Pink Guava Juice	Coconut Water		Flavored Milk	Oat Milk	
				Whole Milk	Soy Milk	
	Classic Mango Juice with added sugar			Nutrition Drink Milk	Non-dairy Creamer	
				Pudding	Almond Milk	
					Infant Formula	

pH scale														
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Strong Acid			Weak Acid			Neutral	Weak Base			Strong Base				

Release Products Days Faster

The Innovate System is designed for fast, efficient and safe product release. From screening raw materials and work-in-process inventory to releasing finished goods, the Innovate System is a great fit for packaged dairy, food and beverage products where there is a low expectation of bio-burden, such as in UHT pasteurized products.



Unmatched Versatility

Cheese sauce. Pulpy juices. Thick puddings. The Innovate System can test them all. No other rapid method covers the range of products and applications we can test. The Innovate System is flexible and easy to use, even with hard-to-test product types that are:

- Clear, opaque or highly pigmented
- Filterable or non-filterable
- Soluble or non-soluble
- High or low pH
- Preserved or non-preserved
- Packaged aseptically or not