FlashCheck® Bacterial Enzyme Detection Kits

On-Site Results in 20 minutes or Less, No Lab Needed
FlashCheck® Bacterial Enzyme Detection Kits

Introduction

FlashCheck Bacterial Enzyme Detection kits are tools which can be used in the field to identify "hot spots" that may contain dangerous levels of bacteria. Being able to test on site, without the need to send samples to a laboratory, and being able to detect very low quantities of bacteria, allows for early detection and more frequent monitoring and testing at your own facility.

- More accurate than ATP tests, which only confirm organic matter is present - NOT necessarily bacteria
- Faster than Culture or PCR - results in 20 minutes
- Low cost - No Expensive lab equipment required
- Up to 98% accuracy
- Easy to use - No lab technicians required
- Ability to detect biofilm

Test Surfaces of Food, Prep Areas, and Equipment

DeltaTRAK surface and food assays use enzyme detection technology to determine presence of bacteria. As part of normal cellular metabolism, bacteria produce enzymes in significant quantities. Our proprietary substrates identify and link to these specific bacterial enzymes. When linked together, the enzyme causes the chemical bonds in the substrate to weaken and break apart. During this process, one of the substrate's pieces emits light, or fluorescence. This light can be seen by adding a reagent to produce a colorimetric reaction on a swab or test strip or by using a fluorometer.
FlashCheck® Bacterial Enzyme Detection Kits

Real-Time Surface Assay - Total Organism and Gram Negative Bacteria

DeltaTRAK offers screening kits for testing surfaces such as harvesting and processing equipment, slicing blades, conveyor belts, and food preparation areas. Two levels of testing are available: the **Real-Time Surface Assay for Total Organisms** kit tests for bacteria, mold, yeast and biofilm; and the **Real-Time Surface Assay for Gram- Negative Bacteria** tests for the family of Enterobacteriaceae, which includes E. coli, Salmonella, and other harmful bacteria that cause illness. Both screening kits can be used in the field to detect microorganisms within 20 minutes. The FlashCheck surface assay kits provide test strips for collecting samples. A liquid substrate is added to the sample, and, in the presence of specific enzymes, it will cause a chemical reaction. When a developer is added, a colorimetric reaction occurs directly on the tip of the test strip.

Model 50025
Real-Time Surface Assay - Total Bacteria

Model 50026
Real-Time Surface Assay - Gram Negative Bacteria

- On-site testing, no lab needed
- Simple Procedure
- Easy-to-read results
- Confirm presence of bacteria in 20 minutes
- No False Positives

Specifications

<table>
<thead>
<tr>
<th>A positive test will be indicated by a light to dark purple/burgundy color on the membrane, usually in spots or splotches</th>
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<tbody>
<tr>
<td>50 Tests in each kit: 50 Membrane Test Strips, 1 Bottle of Reagent A (buffer), 1 Bottle of Reagent B (substrate), 1 Bottle of Reagent C (developer), 1 Bottle of Positive Control, 1 Digital Timer, Instructions</td>
</tr>
<tr>
<td>Storage Conditions: Store refrigerated. Tests can be transported between 35.6°F to 77°F (2°C to 25°C).</td>
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Real-Time Surface Assay - Total Organism and Gram Negative Bacteria

By following the easy steps below the user can quickly determine the presence or absence of bacteria. On completion of the test a purple color will appear on the strip where bacteria are present. Both kits use the same testing process, but the substrate provided in the Gram Negative Assay is specific to enzymes produced by the gram-negative group of bacteria.

Operational Instructions

1. Add 2 drops of Reagent A to the center of the test membrane.
2. Rub the membrane over the test surface.
3. Add 2 drops of Reagent B to the test membrane.
4. Wait 20 minutes
5. Add 1 drop of Reagent C
6. Wait 1 minute
7. At 1 minute, compare the color on the membrane to the color chart. Record corresponding color number
8. Fill in traceability label for archiving test results
The FlashCheck Real-Time Food Assay is a screening test for the detection of gram-negative bacteria directly from a food product, and provides results within 20 minutes of sampling. It is the ‘First Line of Defense’ for detecting possible contamination before a product is packaged or shipped. A positive test result does not distinguish between different types of gram-negative bacteria, but indicates the potential presence of pathogenic organisms which may be in sufficient quantities to cause spoilage or illness. These include Enterococcus, Fecal coliform, Salmonella, and E. coli. Further testing is necessary in order to identify specific bacteria.

**Specifications**

- On-site testing, no lab needed
- Simple procedure
- Easy-to-read results
- Confirm presence of gram-negative bacteria in 20 minutes
- No False Positives

A positive test will be indicated by a light to dark purple/burgundy color on the swab, usually in spots or splotches

50 Tests in each kit: 50 Test Swab impregnated with dried substrate, 1 Bottle of Reagent A (buffer), 1 Bottle of Reagent B (color developer), 1 Bottle of Positive Control, 1 Digital Timer, Instructions

Storage Conditions: Store refrigerated. Tests can be transported between 35.6°F to 77°F (2°C to 25°C).
Real-Time Food Assay - Gram Negative Bacteria

By following the easy steps below the user can quickly determine the presence or absence of bacteria. On completion of the test a purple color will appear on the swab where bacteria are present.

Operational Instructions

1. Add 2 drops of Reagent A to the tip of the swab
2. Rub the tip of the swab over the food product
3. Wait 20 minutes
4. Add 2 drops of Reagent B to the tip of the swab
5. At 2 minutes, compare the color on the tip of the swab to the chart. Record corresponding number from chart

Chart:

- Positive:
  - 4
  - 5
  - 6

- Negative:
  - 1
  - 2
  - 3
FluoreCheck® Bacterial Enzyme Detection

FlashCheck® Fluorometer

The FlashCheck Fluorometer is a handheld digital assay system for liquid samples such as water, milk, and beverages. It can also test samples of food which have been emulsified into a liquid, or extracted into a liquid from a swab. These meters measure the amount of fluorescence, or light emissions occurring during chemical reactions between bacterial enzymes and proprietary substrates specific to these enzymes.

The FlashCheck Fluorometers are valuable screening tools, simple to operate, and designed for use in the field. They allow for early detection of contamination, because quick results enable users to obtain test data within the same work shift. If there are large amounts of bacteria in a test sample, there would also be significantly more enzymes present. This means the testing process could occur much faster since the rate of chemical reactions and fluorescence would also increase.

Two levels of testing are available. General screening for Total Organisms or Gram Negative Bacteria (Enterobacteriaceae) will provide results in about 20 minutes. Specific screening for S. aureus, E.coli, Salmonella, Enterococcus, and fecal coliform (Listeria available soon) requires a simple 4 hour growth step that can be done on site, with final test results within minutes. These specific tests can detect as low as 1 CFU of bacteria per 100 ml of sample. The correct substrate must be used for each type of bacteria or group of bacteria being tested.

FluoreCheck® Bacterial Enzyme Detection

Detects:

- Total Organisms
- Gram-negative Bacteria
- Salmonella
- S.aureus
- E.coli
- Fecal Coliforms
- Enterococcus
- Listeria (available soon)

Model 50028 - FlashCheck Fluorometer
Low Wave Length

Model 50029 - FlashCheck Fluorometer
High Wave Length

- On-site testing, no lab needed
- Simple procedure
- Easy-to-read results in minutes
- Confirms presence of bacteria at low levels
DeltaTRAK, Inc. is a leading innovator of cold chain management, food safety, and shelf-life solutions. Our product line includes a wide range of temperature, humidity, and pH monitoring and recording devices, data loggers, wireless systems, professional thermometers, and ethylene adsorption products. Our food safety solutions include real-time bacterial enzyme detection for field testing of liquids, produce, food, equipment and other surfaces in food processing and handling environments. DeltaTRAK develops and manufactures high quality, portable test instruments and products designed with a focus on quality assurance and traceability.

In support of our cold chain solutions, we offer management and analysis software for the data logger product lines. DeltaTRAK provides professional services to help validate and deploy our ColdTRAK program and FlashLink Wireless Systems. Our specialists will work with you and your staff to help ensure successful, efficient installation. We also offer customized services tailored to your needs. Our products and services are depended on by large and small businesses around the world.

Our services include:

- NIST Certified Calibration
- IQ/OQ/PQ
- Training and Certification