

## GENERAL DESCRIPTION

FLASH<sup>®</sup> is high-sensitivity protein test that rapidly detects protein residues left on food contact surfaces after cleaning. Used as part of a HACCP allergen control program, FLASH supports process verification requirements that ensure cleaning methods, validated to effectively remove allergens, are consistently applied.

FLASH has been tested against common allergenic proteins including soy flour, gluten flour, milk powder, egg powder, peanut butter, roasted almonds, raw fish (cod), and raw shrimp.

Part No. 63003-100 (100 tests)

## KIT COMPONENTS

100 protein swabs

30 color comparison stickers

## IMPORTANT USAGE GUIDELINES

FLASH is designed with two levels of sensitivity to accommodate industry needs and for areas in the plant requiring additional sensitivity.

For detection of protein residues down to 20 µG, the swab can be read 10 minutes after activation at room temperature (RT). If greater sensitivity is desired (as low as 3 µG), the FLASH swab can be tested in high temperature incubation (HTI) at 70 °C for 10 ± 4 minutes.

Follow the appropriate test protocol section below (Protocol 1 – RT or Protocol 2 - HTI) for the desired application.

## SAMPLE COLLECTION

- (a) Twist to remove the pre-moistened swab from its collection tube (clear). Be careful not to touch the swab or inside the collection tube with fingers.
- (b) Thoroughly swab a standard 10 x 10 cm (4 x 4 in) area of interest for a typical flat surface. For irregularly shaped surfaces, ensure swabbing technique remains consistent each time you swab. Reinsert the swab into the collection tube using a twisting motion to ensure it is sealed.

**Note:** After sampling, the swab is stable for one hour prior to activation.

## ACTIVATING SAMPLED SWABS

- (a) To activate the swab, hold upright and push the plunger down until it is fully depressed. The reagents will be dispensed through the swab shaft washing the sample off the swab tip and into the collection tube.

- (b) Shake the swab side-to-side for 5 seconds to ensure the entire sample has been rinsed from the swab tip and reagents are thoroughly mixed in the bottom of the collection tube.

**Note:** Confirm swab tip is fully immersed in reagent solution. If not fully immersed, shake swab again for 5 more seconds.

## PROTOCOL 1: ROOM TEMPERATURE (RT)

Immediately following activation and shaking, place swabs in a tube holder or other accessory to allow swabs to be kept upright. Set timer for 10 min and check color result in reagent solution immediately following timer alarm (or no more than 4 min afterward).

## PROTOCOL 2: HIGH TEMPERATURE INCUBATION (HTI)

### Materials Needed:

Sampled FLASH swabs

Digital Dry Bath Heater (120 Volt, Part No. 73061 / 240 Volt, Part No. 73011) set to 70 ± 2 °C with 24-Tube Rack or similar product.

Heat Block, 24-Tube (Part No. 52125) for Digital Dry Bath Heater. Dry Bath Heater can fit 2 Heat Blocks to run a total of 48 samples at one time.

### Steps:

- (a) Prior to activating sampled swabs, ensure digital dry bath heater has been pre-warmed to 70 °C. Follow the dry bath heater instructions to ensure proper temperature settings.
- (b) Once swab has been activated and shaken, remove collection tube from rest of swab.
- (c) Place collection tube only into heat block that is inserted in digital dry bath heater. (Discard rest of swab).
- (d) Set timer for 10 min and check color result in reagent solution immediately following timer alarm (or no more than 4 min afterward).

## INTERPRETING RESULTS



To accurately determine the swab's result, consult the color comparison chart above or on the swab pouch label. In addition, color comparison stickers are provided in each box of FLASH to label the swabs or data record sheets for convenient interpretation.

**Note:** Result must be read at 10 min precisely, but never more than 14 min maximum. **Any further color changes after 14 min are invalid and should be disregarded.**

When protein is present on a surface, the swab's liquid will change from green to purple. The intensity and pace of the color change is dependent on the level of protein in the sample.

Green → Pass Result. No further action is required.

Gray or clear → Warning range (trace amounts of protein present). Re-clean and re-test in accordance with internal procedures.

Light to Dark Purple → Protein is present. Re-clean and re-test.

**Note:** In remote instances, purple may appear within the swab shaft or on the swab tip itself. This occurrence, while extremely rare, is possible but does not affect accuracy or result interpretation.

#### **Room Temperature Protocol Interpretation:**

Room temperature color results are available in as little as 60 seconds. However, a full 10 min must be allotted to confirm true negative readings. If the swab remains green at 10 min, less than 20 µG of protein has been detected.

#### **Incubation Protocol Interpretation**

When heating the swab in a digital dry bath at 70 °C, a color change can be expected at 10 ± 4 min. For true negative results, wait a full 10 min to read the test. If the swab remains green at 10 min, less than 3 µG of potentially allergenic protein has been detected.

#### **WARRANTY**

BioControl Systems, Inc. (BCS) warrants this product to be free from defects in materials and workmanship, when stored under labeled conditions and used as intended until the expiration date stated on the package. BCS agrees during the applicable warranty period to replace all defective products after return to BCS. BCS shall not have obligation under this Limited Warranty to make replacements which result, in whole or in part, from negligence of the Buyer, or from improper use of the products, or use of the product in a manner for which it was not indicated. Buyer shall notify BCS of any products which it believes to be defective during the warranty period. At BCS option, such products shall be returned to BCS, transportation and insurance prepaid. BCS shall replace any such product found to be defective, at no charge. Should BCS examination not disclose any defect covered by the foregoing warranty, BCS shall so advise Buyers and dispose of the product in accordance with Buyer's instructions.

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IF YOU REQUIRE MORE INFORMATION ABOUT FLASH, ITS USE, OR OTHER BIOCONTROL PRODUCTS, PLEASE CONTACT:

#### **CONTROL**

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##### **A. Negative Control**

A negative control is an unused, unsampled FLASH swab that has been activated. After removing a swab from the storage pouch, keep the collection tube on. Hold swab upright, activate, shake for 5 seconds, and read at 10 min.

- (a) Negative control results should appear as any shade of green, gray or clear. Consult the provided color comparison chart for result interpretation.
- (b) Should a negative control result in a purple color, repeat the Negative Control procedure. If the swab still yields purple, contact BioControl Technical Services at 800.245.0113. A negative control after turning purple at 10 ± 4 min at 70 °C may indicate an issue with swab handling.

#### **PRECAUTIONS**

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If accidental activation prior to sampling occurs, do not use device.

Hold swab upright when activating and keep upright while waiting for result.

#### **STORAGE**

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Swabs should be stored between 2 – 30 °C (36 – 86 °F). Protect from direct sunlight.