



InSite® *Salmonella* Environmental *Salmonella* Test

Product No. IS050 (50 tests)



Introduction

Description and Intended Use

The InSite® *Salmonella* device is used after cleaning as a screening test for *Salmonella enterica* on food contact surfaces and other processing equipment containing stainless steel, plastic, rubber, ceramic or sealed concrete surfaces. A color change of medium from purple to bright yellow is considered presumptive positive.

InSite *Salmonella* devices should be used by trained personnel.

Scientific Principle

InSite *Salmonella* medium contains a balanced blend of proprietary selective agents and metabolic substrates for selective growth and differentiation of *Salmonella enterica* from other contaminants in a sample. The medium permits selective growth of *Salmonella*, while restricting the growth of other Gram-negative and Gram-positive bacteria. As the selected population grows, the medium becomes acidic; an incorporated pH indicator detects the pH change, and the color of the medium changes from purple to bright yellow. A visual color change of the medium from purple to bright yellow after 24 – 48 hours at 37 ± 1 °C indicates a presumptive positive test for *Salmonella*. Results cannot be considered negative until 48 hours of incubation.

Required Materials (Not Provided)

Dry Block Incubator (at 37 ± 1 °C) (Product No. INCUBATOR or INCUBATOR2)

Important Tips Before Starting the Test

- The foam tip swab is pre-moistened. Condensation may be visible inside the swab tube—this is normal.
- A naturally occurring precipitate may be seen in some devices—this is normal. To alleviate, gently shake the device to dissolve the precipitate, either before or after incubation. This will not affect test performance.
- Use aseptic techniques: Do not touch the swab or the inside of the sample device with your fingers.

Test Procedure

1. Holding the swab tube firmly, twist and pull the top with the swab out of the swab tube, and thoroughly swab a standard area of interest (e.g., 10 x 10 cm or 30 x 30 cm area for a typical flat surface like stainless steel). See the [AOAC RI Performance Tested MethodsSM Certification](#) section for details about matrices used in the AOAC validation studies.

Important swabbing technique tips:

- Apply sufficient pressure to create flex in the swab shaft.
- Swab in a crisscross pattern vertically, horizontally and diagonally in both directions.
- Rotate the swab while collecting the sample to maximize sample collection on the swab tip.
- For irregular surfaces, maintain a consistent swabbing technique during each test; swab a large enough area to collect a representative sample.

2. Place the swab back in the swab tube and close the device firmly. Do not activate the test device.
3. For best results, incubate the device for 6 hours at 37 ± 1 °C.

Alternative pre-enrichment times may be used:

- Omit pre-enrichment by skipping step 3 and immediately activating the device according to Step 4.
Note: Omitting pre-enrichment reduces the efficiency of *Salmonella* recovery and increases the probability of false-negative results.
- Extend the pre-enrichment time longer than the recommended 6 hours.

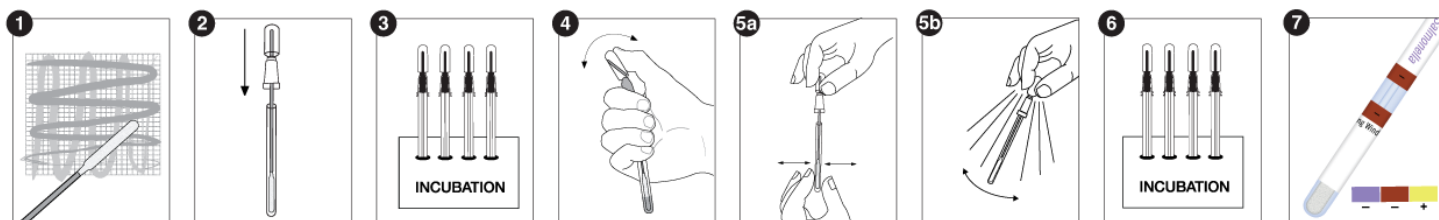
Note: Extending the pre-enrichment time increases the probability of false-positive results.

4. Remove the InSite *Salmonella* device from the incubator. To activate the device, hold the swab tube firmly, and use your thumb and forefinger to break the Snap-Valve by bending the bulb forward and backward.
5. Squeeze the bulb 3 to 4 times, expelling all the liquid into the tube, and gently massage the bottom of the tube by squeezing the tube 3 times. Then, shake for 3 seconds.

Note: This will help release cells from the swab and displace air bubbles.

6. Incubate for 18 – 42 hours at 37 ± 1 °C.
7. Observe the color change and record the result.

Note: A presumptive positive result can be read as early as 24 hours after sample collection. Results cannot be considered negative until after 48 hours of incubation. Refer to the [Interpretation of Results](#).





Additional Information

Interpretation of Results



Results in the Viewing Window of the InSite Device
(This diagram shows the label laid out flat.)

Results	Medium (viewing window)	Swab Tip
Positive	Yellow	Yellow
Negative	Brown	Yellow
Negative	Purple	Yellow
Negative	Purple	Purple

Interpretation of Color Results

Hold the swab tube vertically and compare the color of the medium in the label viewing window to the color chart printed on the label. If the color of the medium changes from purple to bright yellow within a total test time of 24 – 48 hours at 37 °C, the sample is considered presumptive positive for *Salmonella*. Results cannot be recorded as negative until the sample has been incubated for a total of 48 hours after sample collection. Use of a negative control is recommended.

Note: It is important to interpret the color change of the medium only and to disregard the color influence from the foam swab. Only bright yellow medium should be interpreted as a positive result for the presence of *Salmonella* in a sample.

Confirmation

Presumptive positive samples can be confirmed by streaking samples onto commonly used selective *Salmonella* agar plates or by any recognized confirmatory procedure. Typical *Salmonella* colonies on selective agar plates could then be further analyzed using biochemical, immunological or molecular methods.

Some strains of *Citrobacter*, *Escherichia coli* and *Raoultella* are known to produce false positive reactions in many *Salmonella* tests, including InSite *Salmonella*. Acidic substances such as sanitizers may also cause a positive color change.

**AOAC RI Performance Tested MethodsSM Certification**

The detection of *Salmonella enterica* using the InSite *Salmonella* device has earned AOAC RI PTM Certification (License #022302) from the AOAC Research Institute.



The validation studies included swabs of the following environmental surfaces:

Matrix	Swabbing Area
Stainless Steel	30 x 30 cm (12 x 12 inch)
	10 x 10 cm (4 x 4 inch)
Rubber	10 x 10 cm (4 x 4 inch)
Plastic	10 x 10 cm (4 x 4 inch)
Ceramic	10 x 10 cm (4 x 4 inch)
Sealed Concrete	10 x 10 cm (4 x 4 inch)

Storage and Stability

- Store at 2 – 8 °C (35 – 46 °F)
- Do not use past the expiration date on the label.

Disposal

Disinfect before disposal. InSite devices can be disinfected by autoclaving, incinerating or bleaching (soak in 20% bleach for 1 hour). Then, they can be placed in the trash. Alternatively, InSite devices may be discarded following local disposal procedures.

Safety and Precautions

- Intended for *in vitro* use only.
- Use good laboratory practices when performing this assay and when handling samples and materials.
- Components of InSite devices do not pose any health risk when used correctly. Used devices confirming positive results may be a biohazard and should be disposed of safely in compliance with Good Laboratory Practice and Health and Safety Regulations. *Salmonella* is a dangerous human pathogen. When handling samples that possibly contain *Salmonella* (presumptive positive tubes), extreme care should be taken to contain enriched samples.
- For further safety instructions, refer to the Safety Data Sheet (SDS) available at www.hygiena.com/documents.

Hygiena Liability

As with any culture medium-based test, InSite *Salmonella* results do not constitute a guarantee of quality of food, beverage products or processes tested with these devices. Hygiena will not be liable to the user or others for any loss or damage, whether direct or indirect, incidental or consequential from use of these devices. If this product is proven to be defective, Hygiena's sole obligation will be to replace product, or at its discretion, refund the purchase price. Promptly notify Hygiena within 5 days of discovery of any suspected defect and return product to Hygiena; contact Customer Service for a Returned Goods Authorization Number.

Contact Information

For more information, visit www.hygiena.com/contact. For technical support, visit www.hygiena.com/support.