



SwabSURE INFO SHEET

INTENDED USE

SwabSURE Pathogen Detection Kits are intended for the detection of important food pathogens on food contact surfaces in food handling and manufacturing environments where regular disinfecting/sanitising is performed. Routine Sampling for Pathogens is a fundamental part of Good Manufacturing Practice (GMP) and essential for adhering to a HACCP (Hazard Analysis Critical Control Points) plan.

PRINCIPLE OF THE TEST

SwabSURE Pathogen Detection Kits consists of:

The pre-moistened neutralising swab (TS/6-61BP250) captures any bacteria present on the test surface (including on dry surfaces). The proprietary plant and chemical mix counteract any disinfectant residues that are still present on the test surface reducing the loss of target micro-organisms optimising recovery and enhancing colour generation within the selective media. The swabs have a score line breakpoint at approximately 45mm from the end of the swab. This allows the swab head to be detached when it is inserted into the tube of specific growth medium ensuring the whole sample is tested.

SwabSURE Pathogen Detection Kit contains a specific medium containing growth promoters, selective agents and a specific indicator system for easy identification. Once sampled, incubate as follows:

| MEDIA | INCUBATION CONDITIONS | COMMENTS |
|----------------|--------------------------------------|---|
| Listeria* | Aerobic, 25 ± 1 °C for 24 – 48 hours | Can be incubated at higher temperatures – see webpage for precautions/ limitations. |
| Salmonella | Aerobic, 36 ± 1°C for 18 – 24 hours | N/A |
| Ecoli/Coliform | Aerobic, 36 ± 1°C for 18 – 24 hours | N/A |

KIT CONTENTS

SS-L01 Chromogenic Listeria Detection Broth (1ml) with 100 neutralising pre-moist TS/6-61BP250 swabs.

SS-L02 Listeria Detection Broth (3ml) with 100 neutralising pre-moist TS/6-61BP250 swabs.

SS-L03 Salmonella Detection Broth (3ml) with 100 neutralising pre-moist TS/6-61BP250 swabs.

SS-L04 Ecoli/Coliform Detection Broth (1ml) with 100 neutralising pre-moist TS/6-61BP250 swabs.

ACCESSORIES

Swabs are also sold separately – TS/6-61BP250 premoistened neutralising swabs. 250 swabs with 2 years' shelf life.





ADDITIONAL REQUIREMENTS BUT NOT SUPPLIED

| | |
|--------------------------|---|
| Listeria P (mono) | Incubator set to 36±1°C |
| Listeria species | Incubator set to 25±1°C |
| Salmonella | Incubator set to 36±1°C |
| Ecoli/Coliform | Incubator set to 36±1°C |
| TS/15-T40 | Sterile 10 x 10cm template to ensure test sampling validity |
| Racks | hold tubes during incubation |

OPTIONAL CONFIRMATION PROCEDURE

The results on SwabSURE can be taken as presumptive positive tests with further confirmation using by several techniques:

Sub-culturing the SwabSURE Broth onto an appropriate selective agar plate medium for the pathogen being sought. Here are some common media that are recognised in international standard methods such as AOAC, USFDA, ISO etc

| SwabSURE KIT & CODE | ISOLATION MEDIA | CHROMOGENIC | IDENTIFICATION TEST IDEAS |
|---------------------------------|-----------------------------|------------------------|---|
| Listeria mono/ivanovii – SS-L01 | N/A | ALOA | Latex/Lateral flow/Molecular /Biochemical Strip |
| Listeria species – SS-L02 | Oxford, Palcam | ALOA | Latex/Lateral flow/Molecular /Biochemical Strip/Catalase* |
| Salmonella – SS-L03 | XLD, DCLS, Bismuth, Hektoen | Salmonella Chromogenic | Latex/Molecular/Biochemical Strip |
| E.coli/Coliform – SS-L04 | VRBA, mENDO, TBA | TBGA/ Ecoli Coliform | Kovacs/Latex/Molecular/ Biochemical Strip |

*For suspected Enterococci

After incubation on solid media at 35 - 37°C for 24 – 48 hours, plates should be examined for colonies resembling the pathogen being sought then confirmed with an identification test.

RAPID CATALASE TEST – SWABSURE LISTERIA (SS-L02) CONFIRMATION:

Listeria spp. produce the enzyme catalase, while *E. faecalis* does not. The performance of a 2 minute catalase test will differentiate between positive SwabSURE tests growing *Listeria* spp and false positive tests growing *E. faecalis*.

1. Gently add 100 - 200µL of 3- 6% Hydrogen Peroxide to positive SwabSURE Listeria tests. Do Not Mix.
2. Allow to stand for up to 2 minutes.
3. Examine for the development of bubbles on top of the media in the SwabSURE tube.

Positive – Development of bubbles on the top of the media in the SwabSURE tube.

Negative – no bubbles on the top of the media in the SwabSURE tube.





RAPID KOVACS INDOLE TEST – SWABSURE ECOLI/COLIFORM CONFIRMATION:

E. coli can be confirmed by the presence of indole where the chromogen has generated turquoise/blue colouration. Adding Kovacs will confirm faecal indicator organism by the appearance of a red layer at the liquid surface.



Red Layer

1. Gently add 2-3 drips of Kovacs/Ehrlichs Reagent to a positive (turquoise/blue) SwabSURE Ecoli/Coliform tests. Mix.
2. Then add another 2-3 drops. Do not mix.
3. Allow to stand for up to 5 minutes.
3. Examine for the development of a red layer at the surface of the liquid (the blue colour will clump and settle like in the picture).
4. Where *E.coli* is at low level or still growing (so turquoise/blue is pale) the indole production is only partially complete so the test may take upto 45 minutes so don't disturb the vial until time has elapsed.

Positive – Red layer as displayed in picture.

Negative – No red layer generated after 45 minutes.

PERFORMANCE CHARACTERISTICS

Comprehensive sensitivity and specificity data is available for all SwabSURE pathogen detection kits upon request.

As a general guide to product sensitivity refer to the following table:

| Target Organism | Direct Inoculation (1) | Wet Surface (2) | Dry Surface (3) |
|-----------------|------------------------|-----------------|-----------------|
| Listeria | <5 cfu | <5 cfu | <10 cfu |
| Salmonella | <5 cfu | <5 cfu | <10 cfu |
| Coliform | <5 cfu | <5 cfu | <10 cfu |

Notes:

(1). Organisms inoculated directly onto swab.

(2). Organisms recovered from a standard 100cm² wet surface.

(3). Organisms recovered from a standard 100cm² surface, dried and then recovered.

