

INSTRUCTIONS FOR USE

Puritan[®] ESK[®] Environmental Sampling Kit



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Puritan® ESK® Environmental Sampling Kit

INTRODUCTION

Swab surface and equipment sampling is one of the most common practices and often used in food, pharmaceutical and other industrial plants for microbial examination.

PRODUCT DESCRIPTION

ESK® is a simple, easy to use sampling kit recommended for environmental monitoring, hygiene control, sanitization program and bioburden determination. Swab samples taken by ESK® from surfaces and equipment prior and after cleaning help to evaluate the effectiveness of cleaning practices and the sanitary agents used.

Each sterile ESK® kit is composed of a peel pouch pack containing a pre-moistened polyester tipped swab and a polypropylene vial containing specified volume of rinse solution. The pre-moistened swab is tightly secured inside the screw cap and designed to sample a variety of surfaces, equipment, and hard-to-reach areas.

ESK® SOLUTION INFORMATION

ESK® comes with one of four commonly used transport solutions to choose from, depending on your sampling goals and environments.

Neutralizing Buffer (NB) is recommended for use in microbiological examination of surfaces for food and dairy products. Its usage may vary depending on the method of sampling. A swab has been incorporated into the cap to facilitate sampling of surfaces and equipment with hard to reach places. Neutralizing Buffer medium has the ability to inactivate the bacteriostatic effect of chlorine as well as quaternary ammonium compounds. After cleaning surfaces and food equipment with disinfectants, swab samples are taken and placed into Neutralizing Buffer to examine the effectiveness of the sanitation program. The ability of this buffer to inactivate such disinfectants in the sample will allow bacteria to survive and recovered if present.

The presence of bacteria after routine sanitization suggests that the sanitization program is not effective.

Staphylococcus aureus is commonly found in post food processing contamination, which is generally due to human contact or food contact with contaminated surfaces. The presence of large numbers of *S. aureus* in food indicates poor food handling or poor sanitation program.

Buffered Peptone Water (BPW) is a non-selective pre-enrichment broth that promotes the recovery of Salmonella species that may be sub lethally injured by food processing techniques.

When Salmonella species are present in food, certain food processing conditions such as heat, desiccation, preservatives and pH changes may injure bacteria cells. Therefore, pre-enriched nonselective buffered peptone water medium allows for injured cells to repair and facilitate the recovery of Salmonella species. Peptone in the medium contains carbon, nitrogen, vitamins and minerals which injured cells consume to recover. The preassembled swab in the cap allows for swabbing surfaces and facilitates sampling equipment with hard to reach places.

Healthy Salmonella cells from the BPW can be inoculated onto a selective enriched medium for isolation and identification.

Lethen Broth (LB) is recommended for the neutralization of quaternary ammonium compounds when testing for effectiveness of disinfectants in food processing and cosmetic equipment. The addition of polysorbate 80 to the medium neutralizes the surface disinfectants. Lecithin is added to neutralize quaternary ammonium compounds.

In food and cosmetic industry all work stations, equipment and utensils used in daily processes are cleaned using different disinfectants. In order to determine the effectiveness of these disinfectants after each daily clean up, swabs are used to take sample of cleaned equipment and transferred into a tube containing Lethen Broth medium. The polysorbate 80 neutralizes the surface disinfectants and the lecithin neutralizes compounds such as chlorine or fluorides and facilitate for bacteria to grow.

The preassembled swab in the cap allows for swabbing surfaces and facilitates sampling equipment with hard to reach places.

Using Lethen Broth allows manufacturer to determine the effectiveness of their cleaning program.



Butterfield's Solution (BS) is recommended by the Food and Drug Administration (FDA) for use as diluent in water, food, dairy and pharmaceutical industries. When the number of bacteria in a sample is too high and difficult to enumerate, serial dilutions are prepared in vials containing Butterfield Solution. A sample from each tube is transferred to a culture plate, incubated and read after 24-48 hours. The plate with bacteria count between 30-300 is selected, enumerated and multiplied by the corresponding dilution factor to obtain the number of bacteria in the original sample.

ESK® SAMPLING KITS

Broth/Liquid Name	Item No.	Product Description	Tip length x diameter	Vial diameter x length	Fill Volume, Medium	Packaging pack (case total), weight
Buffered Peptone Water	25-83004 PD BPW	Polyester tip, polystyrene handle with Buffered Peptone Water	17.5 x 5.2 mm 0.69 x 0.2"	16 x 100 mm	4 mL, Buffered Peptone Water	50/1 (50/cs), 3 lb
	25-83004 PDB BPW					6/50/1 (300/cs), 18 lb
	25-83010 PD BPW				10 mL, Buffered Peptone Water	50/1 (50/cs), 3 lb
	25-83010 PDB BPW					6/50/1 (300/cs), 19 lb
Butterfield's Solution	25-83004 PD BS	Polyester tip, polystyrene handle with Butterfield's Solution	17.5 x 5.2 mm 0.69 x 0.2"	16 x 100 mm	4 mL, Butterfield's Solution	50/1 (50/cs), 3 lb
	25-83004 PDB BS					6/50/1 (300/cs), 18 lb
	25-83010 PD BS				10 mL, Butterfield's Solution	50/1 (50/cs), 3 lb
	25-83010 PDB BS					6/50/1 (300/cs), 19 lb
Lethen Broth	25-83004 PD LB	Polyester tip, polystyrene handle with Lethen Broth	17.5 x 5.2 mm 0.69 x 0.2"	16 x 100 mm	4 mL, Lethen Broth	50/1 (50/cs), 3 lb
	25-83004 PDB LB					6/50/1 (300/cs), 18 lb
	25-83010 PD LB				10 mL, Lethen Broth	50/1 (50/cs), 3 lb
	25-83010 PDB LB					6/50/1 (300/cs), 19 lb
Neutralizing Buffer	25-83004 PD NB	Polyester tip, polystyrene handle with Neutralizing Buffer	17.5 x 5.2 mm 0.69 x 0.2"	16 x 100 mm	4 mL, Neutralizing Buffer	50/1 (50/cs), 3 lb
	25-83004 PDB NB					6/50/1 (300/cs), 18 lb
	25-83010 PD NB				10 mL, Neutralizing Buffer	50/1 (50/cs) 3 lb
	25-83010 PDB NB					6/50/1 (300/cs), 19 lb

**HOW TO USE PURITAN® ESK®**

Samples can be collected using a variety of techniques depending on the sample type, size, and the site. Samples should be transported to the testing laboratory in an appropriate manner for optimum results.

1. Using aseptic technique to peel open the pouch.
2. Determine the surface to be sampled. Sterile square sampling templates are available commercially and may be used when sampling flat surfaces.
3. Carefully remove the cap with the pre-moistened swab attached from the vial.
4. Hold swab at a 30° angle and wipe over the sample area in a back and forth motion. Rotate swab while wiping.
5. Return the swab to the vial containing the rinse solution and screw on the cap until tightly secured.
6. Transfer the sample to the laboratory for analysis as soon as possible. Samples that are not processed immediately should be refrigerated at 2-4°C, up to 24 hours until processed.



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