

	HOLISTA TRANZWORLD PRIVATE LIMITED 2/91, MARAVANMADAM, ANTONIYARPURAM, TUTICORIN -628 101	Doc No : HTPL-SOP20
	Food Safety and Quality Management System	Issue/Rev : 1.0
	Lab Test Procedure SOP	Date : 19.09.2022

6. SAMPLING AND TESTING OF HAND SWAB

SCOPE:

To test the personnel's hand swab for microbiological parameters such as SPC, coliform and *Staphylococcus aureus*.

DILUENT, CULTURE MEDIA AND REAGENTS :

- Plate Count Agar (PCA)
- Violet red bile agar (VRBA)
- Baird Parker Agar (BP)

APPARATUS, INSTRUMENTS AND GLASSWARES:

- Laminar airflow chamber
- Autoclave
- Hot air oven
- Sterile petri plates
- Colony counter
- Weighing balance
- Dilution bottles
- Screw cap tubes
- Sterile swab sticks
- Water bath
- Test tubes
- Sterile spatula
- Micropipette
- Sterile tips

PROCEDURE:

SAMPLING:

- Take 100 ml saline solution in screw capped bottles.
- Sterilize in autoclave at $121^{\circ}\text{C} \pm 0.5^{\circ}\text{C}$ for 15 lbs for 15 min.
- Select the persons to be sampled as per the quality plan.
- Aseptically open the sterile swab cover and grasp the end of the sterile swab stick, being careful not to touch any portion that might be inserted into the bottle.

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- Open the bottle with dilution water, moisten the swab head, and press out the excess solution against the interior wall of the bottle with a rotating motion.
- Place the sterile 5cm x 5cm template on the sampling surface.
- Hold the swab handle to make a 30° angle contact with the surface.
- Rub the swab head on worker's hand slowly and thoroughly over approximately 5 cm x 5 cm (25 cm²) of surface area three times, reversing direction between strokes.
- Return the swab head to the bottle, rinse briefly in the solution & replace the screw cap.
- Mark the outside of the bottle with person's name, section, time, shift & date of collection.
- Keep the swab bottles refrigerated until analysis.

TESTING:

- 1 ml samples were tested for standard plate count & coliform as per the respective test procedures and the number of colonies were multiplied with 4 in order to express the result/ cm².
- For *Staphylococcus aureus*, pipette 0.1ml of sample into dried Bared Parker (BP) agar plate.
- Carefully spread the inoculum as quickly as possible with sterile L rod (sterilized by alcohol flaming). Use a fresh L rod for each plate.
- Leave the plates closed for about 15 mins at ambient temperature for the inoculum to be absorbed into the agar.
- Invert the plates and incubate at 37°C ± 1°C for 48 h.
- After incubation check for typical colonies of *Staphylococcus aureus* (Black or grey colonies, shining and convex surrounded by a clear zone).

REPORTING

Report the results as CFU/ cm² for SPC and Present or Absent for Coliform and *Staphylococcus aureus*.