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Laboratory Preparedness and Response Branch Biological Response Section Standard Operating Procedure

Environmental Sample Collection

Purpose

The Sampling protocol provides instructions to sample collectors from the Disease Investigation Branch (DIB), Disease Outbreak Control Division (DOCD) and the Food and Sanitation Branch when collecting samples from environmental surface(s) to ensure that representative samples are collected in aseptic conditions using appropriate tools and to ensure that sample quality is maintained and preserved in appropriate media for laboratory analyses.

Scope

This sampling protocol describes the material and methods that will be used and/or will supplement the sampling protocols used for collecting samples from environmental surface(s) of food preparation areas, food processing areas and related equipment, and, fixtures in food establishments and food distribution facilities.

The following procedures are used to collect samples for biological testing from small, non-porous surfaces or objects (keyboards, hard-to-reach areas within machinery, mail sorters, ventilation grilles, etc.).

Materials for Sampling:

Items Needed
Sterile gloves
Sterile 8-12 ply gauze pads, 10 cm × 10 cm (4 in × 4 in) or sponges or swabs
Whirl-pak-type bags, 15 cm × 22.5 cm (6 in × 9 in) or equivalent
Dey-Engley (DE) broth or Butterfield’s Phosphate Buffer (BPB) or Buffered Peptone Water (BPW)
Black or Blue Permanent Marker (for labeling)
Red Biohazard Waste Bags for used gloves and waste
Transport container with gel packs

Sampling Protocol:

- Sample environmental surfaces with sterile gauze pads or sponges. For surfaces to be sampled with a swab, each test area should measure 1" × 1". For surfaces to be sampled with a sponge, each test area should measure 4" × 4".
- Label the whirl-pak bag and use sterile gloves to collect samples.
Label:
 - Sample number or identifier outside the sealed container.
 - Sample location
 - Type of sample
 - Time and Date of sample
 - Initials of sampler
- Put on sterile gloves.
- Moisten the gauze pads with the BPW or DE or BPB and swab multiple areas approximately <100 cm of the area to be sampled. (Technique: make enough S-strokes to cover the area to be sampled). Do not let the swab dry completely. If there is a need to collect from another area, change gloves.
- Place the swab/sponge in a sterile Whirl-pak bag, or equivalent, that contains enough DE or BPW or BPB broth (approximately 15 ml.) to cover the swab/sponge.
- If the collection time is greater than 6 h, the use of a cooler with frozen gel packs is recommended for sample storage prior to shipment.
- Transport swabs/sponges in an insulated transport container with frozen gel packs to keep the samples cold, but not frozen. If samples cannot be processed immediately, refrigerate at $4 \pm 2^{\circ}\text{C}$.
- Specimen(s) must be accompanied by a chain-of-custody form.
- Start sample analysis within 48 ± 2 h of collection.

Revision History:

January 6, 2020

1. Deleted specimen screw cap sterile containers.
2. Added sponges or swabs to material #1 and equivalent to material #3.
3. Added "Don sterile gloves".
4. Updated signatories due to change in management

REVIEW/REVISION LOG
Environmental Sample Collection
Standard Operating Procedure (SOP)

	SIGNATURE	PRINTED NAME	DATE
Revised by:	<i>Remedios G. Gose</i>	Remedios Gose, MSPH, RM(NRCM)	1/6/20
Validated by:	<i>Cheryl Lynn Daquip</i>	Cheryl-Lynn Daquip, M(ASCP) ^{CM} Microbiologist V	1/6/20
Approved by:	<i>Edward P. Desmond</i>	Edward Desmond, Ph.D. SLD Laboratory Director	1/17/20

Effective date:	V1: 5/26/17	V2:		
Retirement date:				
Replaced by procedure/date:				

Circle one	SIGNATURE	DATE	DESCRIPTION OF CHANGE*
Reviewed/Revised	Remedios Gose, MSPH, RM (NRCM) LPRB Chief		
Reviewed/Revised	Edward Desmond, Ph.D. SLD Laboratory Director		
Reviewed/Revised			
Reviewed/Revised			
Reviewed/Revised			
Reviewed/Revised			
Reviewed/Revised			

*Indicate "annual review, no changes" if appropriate.