

GAP EnviroMicrobial Services Ltd.

**APPROVAL FORM FOR RELEASE OF
ANALYTICAL STANDARD OPERATING PROCEDURE (SOP) FOR ROUTINE USE**

SOP #73: Collection of Bulk, Swab, Tape, Liquid and Air Samples for Fungi and Bacterial Analysis

COMPUTER FILE NAME: 73-SOP-Fungal and Bacterial Sample Collection-6

DATE OF LAST REVISION: REVISION 6, March 13, 2015

NUMBER OF PAGES IN DOCUMENT: 4

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DATE: March 13, 2015

DATE REVIEWED: March 8, 2016

- ❖ **The approval of this document is valid for one year at which time it will be subject to review to determine if any updates or modifications are warranted.**

**STANDARD OPERATING PROCEDURE FOR THE COLLECTION OF BULK, SWAB, TAPE, LIQUID
AND AIR SAMPLES FOR FUNGI AND BACTERIAL ANALYSIS**

1. PURPOSE

This procedure describes the proper process for the collection of all sample matrices including bulk, surface swabs, tape lifts and liquid samples. Tape lifts are not done on bacterial samples.

2. PROCEDURE

2.1. Bulk Sample Collection

- 2.1.1. Wearing gloves, remove a small section of material to be examined with a clean cutting tool. The area should be representative of the sampling area.
- 2.1.2. Place sample into a clean plastic bag (i.e. Ziplock bag).
- 2.1.3. Close bag tightly.
- 2.1.4. Label the bag clearly with all relevant sample information.
- 2.1.5. Fill out a GAP EnviroMicrobial Services Chain of Custody completely including sample number, Date/Time Collected, and analysis requested (i.e. enumeration, genus ID, species ID).
- 2.1.6. Ship to GAP EnviroMicrobial Services Ltd. within 24 hours.

2.2. Swabs Sample Collection

- 2.2.1. Wearing gloves, remove the swab from the media tube by slowly turning the lid.
- 2.2.2. Place swab on area to be tested. The area should be representative of the sample area.
- 2.2.3. Slowly rotate the head of the swab over the area. Be sure to swab area thoroughly. For enumeration of fungi or bacteria per area, swab a measured area (i.e. 10 cm²), otherwise enumeration will be reported as CFU per mL of neutralization buffer contained in the sampling swab.
- 2.2.4. Aseptically transfer the swab back into the media tube by tightening the lid.
- 2.2.5. Clearly label the swab with all relevant sampling information including the sample number.
- 2.2.6. Place swab sample into a clean plastic bag (i.e. Ziplock bag).
- 2.2.7. Place the surface swab into a cooler containing icepacks.
- 2.2.8. Fill out a GAP EnviroMicrobial Services Ltd. Chain of Custody completely including sample number, Date/Time Collected, surface area that was swabbed for enumeration and analysis requested (i.e. genus ID, species ID).
- 2.2.9. Ship to GAP EnviroMicrobial Services Ltd. within 24 hours.

2.3. Tape Lift Sample Collection - **Clear Tape can only be used for collection**

- 2.3.1. Wearing gloves, detach a length of clear tape that is slightly longer than the area to be tested.
- 2.3.2. Without touching the adhesive side of the tape, place the central part over the area to be sampled. The area should be representative of the sampling area.
- 2.3.3. Press the tape firmly in place.

- 2.3.4. Remove the tape slowly by the edges without touching the tape adhesive side.
- 2.3.5. Press the tape firmly onto a glass slide and place the slide into the slide container or clean plastic bag (i.e. Ziplock bag). Or, press the tape onto the INSIDE of a clean, unused bag (i.e. Ziplock bag).
- 2.3.6. Label the slide container or bag clearly with all required information.
- 2.3.7. Place the sample into an envelope for shipment and pack the slide container properly to prevent breakage.
- 2.3.8. Fill out a GAP EnviroMicrobial Services Ltd. Chain of Custody completely including sample number, date/time collected and analysis required.

2.4. Liquid Sample Collection

- 2.4.1. Clearly label the container with all relevant sampling information including the sample number.
- 2.4.2. For most sample types, allow liquid to flow for three minutes before sampling in order that a representative sample can be taken. If this cannot be accomplished, the sample should be taken in a way that will give the most representative results. For liquid *Legionella* sample collection, collect the first water to flow from the tap.
- 2.4.3. Place sterile container in such a way as to collect the sample in an aseptic manner according to the following:
 - Wash your hands prior to sampling
 - Always use a sterile sample bottle provided by GAP
 - Do not touch the inside of the bottle
- 2.4.4. Never rinse the bottle.
- 2.4.5. Do not put the bottle cap down on any working surface while sampling – always hold in one hand.
- 2.4.6. Do not touch the interior cap surface with your fingertips. **Always:**
 - Label the bottle prior to sampling
 - Take bacteriological water samples first
 - If the sample bottle receives any unwanted contamination before or during sample collection, discard the bottle and **re-sample** with a fresh, sterile bottle!
- 2.4.7. Aseptically close lid tightly.
- 2.4.8. Place the sample into a cooler containing icepacks.
- 2.4.9. Fill out a GAP EnviroMicrobial Services Ltd. Chain of Custody completely including sample number, date/time collected and analysis required (enumeration, genus ID, etc.).
- 2.4.10. Ship to GAP EnviroMicrobial Services Ltd. within 24 hours.

2.5. Air Sample Collection (Biotest Centrifugal RCS Air Strips, Zefon AOC's)

2.5.1. Refer to SOP #44 – Operation of the RCS Air Sampler.

2.5.2. Refer to SOP #79 – Operation and Calibration of the Zefon Bio-Pump.

3. REQUIRED PROCEDURE FOR THE COLLECTION OF FUNGI AND BACTERIAL SAMPLES

3.1. Samples should be shipped to the laboratory as soon as possible. Under no circumstances should the sample be allowed to freeze. In addition, samples should not become warm due to the potential for biological growth between sample collection and sample analysis. Samples should be transported in a cooler with ice packs to keep them chilled and in the winter, the samples should be packed in an insulated container, to keep them from freezing. A GAP EnviroMicrobial Services Ltd. Chain of Custody with all relevant information must accompany all submitted samples.

3.2. Blanks

Clients of the laboratory will be provided where applicable, blank sampling media such as airstrips and swabs from the same lot number as their media used for field sampling. Upon return to the laboratory, the field blanks with their field samples will be analyzed in the same manner. This will determine possible contamination during shipping and handling procedures. This information will be provided in their reports.

4 HISTORY OF CHANGES:

4.1 Revision 4, October 22, 2007

4.1.1 Minor formatting changes were made, and the **History of Changes** and **Reference** sections were added.

4.1.2 Revised to reflect company name change.

4.2 Revision 5, June 26, 2008

4.2.1 Revision 5 was reviewed and no changes were required.

4.3 Revision 6 – March 13, 2015

4.3.1 Section 2.3.5 had alternate for tape lift collection added if glass slides unavailable.

4.3.2 Section 2.5 updated with current air sampler SOP's

5 REFERENCES:

5.1 In-house GAP EnviroMicrobial Services Standard Operating Procedure.