USP <797> Sample Collection/Shipping Guidelines

Sample: Air, contact/surface, & fingertip samples.

Method: Quantitative culture for bacteria and fungi using appropriate media. The concentrations of viable organisms are expressed as colony forming units per cubic meter (CFU/m^3) of air (air plate) or CFU/plate (contact, fingertip plates).

Collection:

Air samples

1. Viable airborne particles (bioaerosols) are collected with an impaction sampler, such as the Surface to Air Sampler (SAS). A dual-head or single-head sampler is acceptable. SAS 180 and 360 samplers are available for rent from U.S. Micro-Solutions.
2. Microbiological growth media used for sampling must support the growth of bacteria and fungi. For dual-plate sampling, tryptic soy agar (TSA) and Sabouraud dextrose agar (SDA) may be used for bacteria and fungi, respectively. TSA is also an acceptable medium for fungal sampling. For single-plate sampling, TSA is recommended.
3. Required sample volume is 1000 liters (~5.5 minutes at 180 liters of air/minute).
4. Secure plate lid by seating the lid flat on the agar plate and twisting the lid clockwise to engage the LockSure latch.

Surface samples

1. Contact (Rodac) agar plates are used for surface sampling. These include TSA with lecithin and polysorbate 80 for bacteria and SDA with lecithin and polysorbate 80 for fungi. These additives are necessary to neutralize the effects of disinfecting agents. TSA may be used for single plate sampling for bacteria & fungi.
2. Select a flat surface area for sampling.
3. Wearing gloves, remove and hold the agar plate lid with one hand, keeping it sterile.
4. With the opposite hand, press and roll the agar surface in one direction onto the selected area. Wait a few seconds then lift plate straight up. Pressure should be the same for every sample. DO NOT MOVE THE PLATE LATERALLY; this will cause confluent bacterial growth and dramatically reduce the resolution of the colonies.
5. Replace the lid on the plate, taking care not to touch the agar surface.
6. Secure plate lid by twisting the lid clockwise to engage the LockSure latch.
7. Swabs may be used for tight or difficult-to-reach areas.

Gloved fingertip samples

1. TSA agar with lecithin and polysorbate 80 is required; one plate per hand.
2. Collect fingertip and thumb samples by lightly rolling each onto the agar surface.
3. Secure plate lid by seating the lid flat on the agar plate and twisting the lid clockwise to engage the LockSure latch.

Shipping:

1. Clearly label each sample with a Sample Number and complete the Chain of Custody (COC).
2. Place two pieces of Scotch tape on opposite sides of each plate to secure the lid and place it in a plastic bag (preferably sterile). Place bag in a box with sufficient packing material to prevent damage, along with the completed COC form. Insulated boxes are recommended.
3. Ship samples at ambient temperature Monday through Friday for receipt within 24 hours of collection. Friday shipments require a Priority Overnight Saturday delivery label.
4. If samples cannot be shipped within 24 hours, store samples at room temperature. Storing samples in the refrigerator significantly reduces the microorganism counts.

Sample Non-conformance:

- Expired media
- Damaged plates or agar
- Samples shipped over a weekend