

AIR, Test Code 1005-Total Bacterial Count with Identification

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A quantitative air culture can be obtained by using an impactor type sampler, such as the Surface Air Sampler (SAS), Andersen and rotary vane pump, BioCulture or other studied impactors. The typical media used for a bacterial culture is a Tryptic Soy Agar (TSA) plate. **See Glossary section of website for a Media Sampling Guide chart for unique target organisms, such as MRSA or Legionella.** TSA can be used for both mesophilic bacteria and thermophilic actinomycete bacteria. Plates are available through Aerobiology for no additional charge.

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1. Calibrate each sampling pump or piece of equipment by following manufacturer's recommendations.
 2. Before each run, thoroughly wipe each sampler stage with rubbing alcohol. Allow to dry. Make sure air passages are not blocked.
 3. Load and immediately unload one set of sampling media in each sampler to serve as field blanks.
 4. Label agar side of plate with identifier. Remove cover from media, load sampling media into sampler, and attach sampler to pump with flexible tubing or if using a SAS sampler screw the top back onto the sampler..

NOTE: Take special care to prevent contamination of media during loading and unloading. Do not touch agar surface.

5. **Sample at known preset flow for an accurately known time, e.g., 5 min.** Rotary vane pump should run at 28.3 lpm. (In heavily contaminated areas, sampling time may be adjusted) **Run sampler for a total of 425 liters per plate (3 plates) for Legionella.**
6. Replace covers on sampling media. Tape plate or place each plate in separate bag, and pack securely for shipment (plates should be media side up).
7. If plates are going to be shipped back to the laboratory send them for overnight delivery in a cooler with an ice pack. If plates are not shipped that day keep the plates in the refrigerator until they are shipped the next day.

References:

Dillon, H. Kenneth, L. Hung, J. Miller, Field Guide for the Determination of Biological Contaminants in Environmental Samples. 5.2.6.6:61, 7.1: 141-143 (2005).
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