

Website: www.aerobiology.net

WIPE, Test Code 1068-Mycobacterium Culture

Mycobacterium can be found in soil, house dusts, plants, water, and any environmental source. These organisms cause illness in immune comprised individuals especially AIDS patients. The opportunistic mycobacteria are most commonly associated with pulmonary disease but can be known to cause skin infections at trauma or surgical sites. Mycobacterium marinum has been linked to cutaneous skin lesions from lakes and rivers. Mycobacterium avium and intracellulare also known as M. avium complex (MAC) have been detected in rivers, groundwater, soil, surface water and drinking water. These organisms have been known to cause pulmonary disease in immune compromised individuals. In last two decades it has been recognized that MAC infections are more common nowadays because of AIDS patients. M. fortuitum and M. chelonae are two rapidly growing species of mycobacterium they take anywhere from three to five days to grow. M. fortuitum is known for surgical site infections, cellulites, chronic pulmonary disease and most common species associated with nosocomial outbreaks. M. chelonae is known to cause disease in individuals taking steroids or immunosuppressive medications causing multiple draining skin lesions.

**Contact the laboratory if you are sampling for Mycobacterium tuberculosis.

A bacterial culture can be performed on a surface by using a sterile transporter swab or wipe. In addition to moist areas, dry areas can be sampled using a Stuarts transporting swab.

- 1. Crush the ampoule in the bottom of the sterile tube and place swab in tube to moisten.
- 2. Remove both swabs of the double system and sample the affected surface by rolling both swabs vigorously over the area. Indicate on the chain of custody the surface area sampled in either in² or cm².
- 3. Label all samples appropriately and submit to the laboratory for analysis in a timely manner. *Swabs should be refrigerated if the samples are not immediately sent to the lab. A cold pack and cooler should be used during the warm months.



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).

Hurst, Christon, Ronald Crawford, Guy Knudsen, Michael McInerney, Linda Stetzenbach, Manual of Environmental Microbiology., 17: 194 (2002).

Macher, Janet, Sc.D., M.P.H., Bioaerosols, 7.4.1.2, 18.1.4.2 (1999).

Murray, Patrick R., Ellen Baron, Michael Pfaller, Fred Tenover, Robert Yolken, Manual of Clinical Microbiology, 7th Edition., 399-403 (1999).