

BULK, Test Code 1099 -Cryptococcus & Total Fungal Count with Identification

Cryptococcus is a fungus that grows as yeast in culture. *Cryptococcus* can be found in construction dusts and contaminated bird droppings. Certain species can cause meningitis in immune compromised individuals.

Cryptococcus is commonly used as a surrogate for *Histoplasma capsulatum*, a microfungi that is endemic in the soil in the US but particularly the Ohio River valley. *Histoplasmosis* is often associated with underlying immune disorders or children under the age of two. *Histoplasma* is difficult to culture in an environmental microbiology laboratory because it takes approximately six to eight weeks to grow and during that time the saprophytic fungi found in environmental samples overgrow the culture and makes detection difficult.

Histoplasma thrives in nitrogen rich matter, in particular bird droppings and guano and the spores are readily aerosolized and disseminated.

Bulk samples are indicated when obvious microbial growth is apparent and when enumeration of the organisms may be relevant in cases of workplace-related illness. This is considered the primary sample and should always be submitted when possible, over a swab. The assessment of microorganisms may be useful in evaluating the hygienic status of a particular environment and the viable culture allows for genus and speciation.

1. Samples should be collected when the material is porous and swabbing is not practical. Given the choice of sending the primary reservoir and swabbing the material, the bulk sample is always preferable.
2. 25 to 50 grams is the preferred amount needed for the culture. The sample can be placed in a Ziploc® bag for transportation. Heavily contaminated material should be double bagged.
3. Bulk samples can be shipped by overnight, ground or by regular mail. Submit in cooler with ice pack during warmer months.

References:

Dillon, H. Kenneth, L. Hung, J. Miller, Field Guide for the Determination of Biological Contaminants in Environmental Samples., 5.2.6.1: 57-58 (2005).

Macher, Janet, Sc.D., M.P.H., Bioaerosols , 12.1-12.1.4.2 (1999).