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## **AIR, Test Code 2300-Endotoxin Analysis**

Endotoxins are produced by gram negative bacteria and found on the outer membrane of the bacteria. Gram negative bacteria are common in the environment and have been associated with various respiratory symptoms and indoor complaints. Fever, headaches, nausea, and difficulty breathing are just some symptoms of exposure to endotoxins. Ventilation systems and humidifiers are a source for gram negative rods. Water damaged building material, metal working machines, and recirculated water systems can also be expected to have gram negative bacteria.

For air sampling, endotoxin free cassettes are available thru Aerobiology. The flow rate should be set at 1.5-2.5 l/min and run for 8 hours. Do not touch the openings around the cassette because you will contaminate the cassette.

1. Calibrate the pump to the recommended setting, 1.5-2.5 L/min.
2. Wearing gloves cassettes can then be attached to the pump.
3. Sample should be taken over an 8 hour period and no longer.
4. Place the cassette in a plastic bag and package for shipping with Chain of Custody.
5. Samples should then be shipped overnight to the lab for analysis.

### **References:**

Dillon, H. Kenneth, L. Hung, J. Miller, Field Guide for the Determination of Biological Contaminants in Environmental Samples., 7.5 (2005).

Macher, Janet, Sc.D., M.P.H., Bioaerosols , 23.1-23.7.4 (1999).