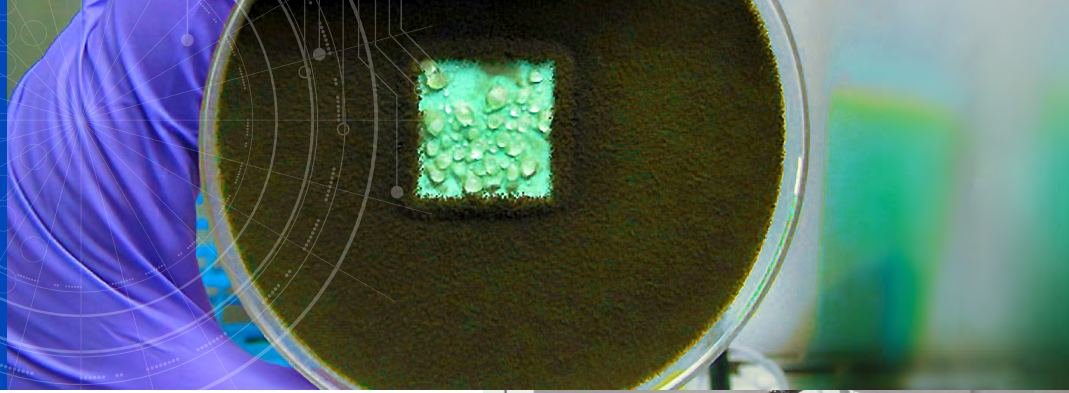




SOUTHWEST RESEARCH INSTITUTE



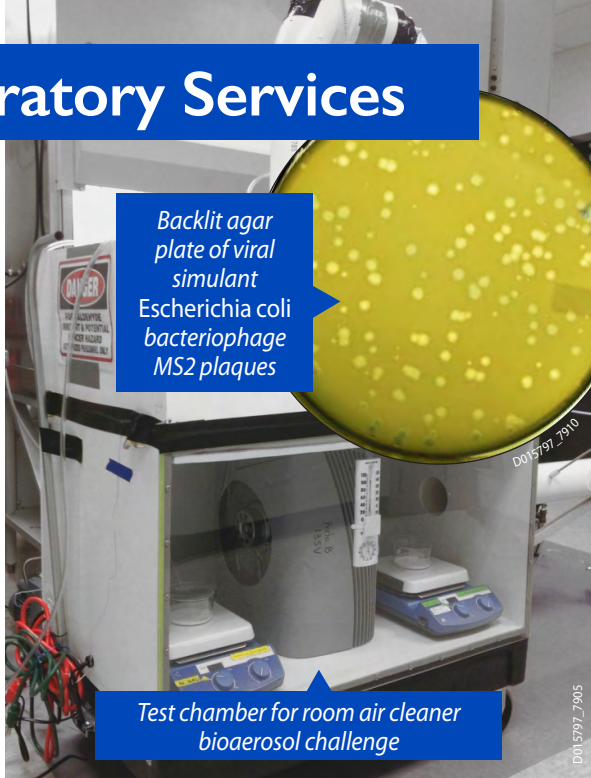
# Microbiology and Virology Laboratory Services

Southwest Research Institute® (SwRI®) offers advanced research capabilities in biological science, combining chemical expertise with biological strategies for innovative problem solving. Using the latest technologies in state-of-the-art laboratories, SwRI scientists provide multidisciplinary, integrated approaches to meet client requirements.

## Laboratory Capabilities

The SwRI Microbiology and Virology Laboratories function at Biological Safety Level 2 (BSL-2) and are equipped with Class II, Type A2 biological safety cabinets. SwRI scientists and technicians have expertise in a wide variety of technical areas, including:

- Good Laboratory Practices (GLP)
- Bacterial/fungal/viral growth analysis, assays, and experimental design
- Detection, quantification, and identification
- Antimicrobial disinfectant and biocide efficacy
- Aerobic and anaerobic environments
- Microbial-induced corrosion
- Microbial fuel analysis
- Biological dyes
- Enzyme utilization and deployment
- Biofilms and bioaerosols
- Controlled biological systems
- Food microbiology
- Field and environmental sampling and collection
- Cytotoxicity



Backlit agar plate of viral simulant Escherichia coli bacteriophage MS2 plaques

Test chamber for room air cleaner bioaerosol challenge

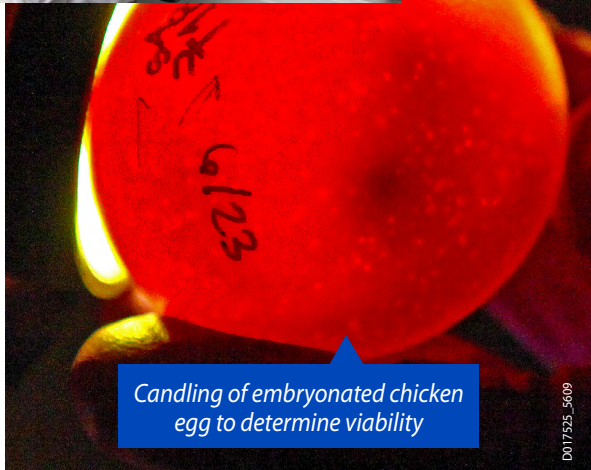
Inset: Incubation of embryonated chicken eggs upon arrival at SwRI laboratory



## Staff Expertise

SwRI scientists are exploring new developments in sustainability of decontamination methods, controlled release biocides, and microbial-induced corrosion. Standard methodologies including EPA, FDA, ASTM, IP, AOAC, and CLSI are followed as requested by clients.

Technical staff members have significant field and laboratory expertise with pathogenic and non-pathogenic *Bacillus* species and their bacteriophages; BSL-2/3 design, operation, procedures, and training; and ELISA (enzyme-linked immunosorbent assay), plaque, and end-point assays. Other laboratory evaluations include growth analysis (various media, concentrations, and environmental parameters) and enzyme utilization studies.



Candling of embryonated chicken egg to determine viability

D015797\_7910

D015225\_5685

D017525\_5609



S. aureus  
#6538  
TSA  
2/16/12

Isolation plate of Staphylococcus aureus used as a standard organism for evaluating disinfectant efficacy



Inset: Performance of AOAC Official Method 955.15, Testing Disinfectants against Staphylococcus aureus, using stainless steel cylinders. Note the clear (negative) test tube at the left of the rack, while most of the rest exhibit a turbid (positive) growth response, indicating resistance to the tested disinfectant.



Daily procedural operations under cell culture and viral designated biosafety cabinets



Assortment of culture vessel styles used for mammalian and nonmammalian cell growth, maintenance, and amplification

**We welcome your inquiries.**  
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## SOUTHWEST RESEARCH INSTITUTE

Southwest Research Institute is a premier independent, nonprofit research and development organization using multidisciplinary services to provide solutions to some of the world's most challenging scientific and engineering problems. Headquartered in San Antonio, Texas, our client-focused, client-funded organization occupies 1,200 acres, providing more than 2 million square feet of laboratories, test facilities, workshops, and offices for nearly 2,600 employees who perform contract work for government and industry clients.

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