

## *IACUC Guideline*

### *Microbiological Monitoring (RODAC Plates)*

---

The purpose of this Standard Operating Procedure is to describe a program that will adequately measure the efficacy of disinfection of animal quarters and equipment in each laboratory animal facility.

Proper sanitation and disinfection are important to any program of animal care. The Animal Welfare Act and the Guide for the Care and Use of Laboratory Animals include provisions for appropriate sanitation and disinfection of animal quarters and equipment. In this regard it is essential that the efficacy of disinfection procedures be monitored to assure adequate inactivation of potentially pathogenic microbes. The Guide lists microbiologic monitoring as a direct way of measuring the efficacy of the disinfection of laboratory equipment.

#### Procedures for Microbiological Monitoring with RODAC Plates

1. RODAC plates (Replicate Organism Detection and Counting) can be ordered from a variety of sources such as Pharmacal Research Laboratories, Inc., 800-243-5350. The Laboratory Animal Program (LAP) office is currently supplying the RODAC plates in stacks of 10 plates for animal facilities requiring microbiological monitoring.
2. RODAC plates contain Trypticase Soy Agar with Lecithin and Polysorbate 80.
3. RODAC plates must be refrigerated upon arrival and stored inverted.
4. When ready to use, remove the lid and gently touch to the surface of area/equipment that needs to be sampled.
5. Replace the lid quickly as contaminants in the air can affect RODAC plate results.
6. The lid should be taped shut and the bottom of the plate numbered. A numbered list of the areas sampled, corresponding to the exposed numbered plates must be kept.
7. Areas to be sampled should be cleaned, disinfected, and dried prior to touching the RODAC plate to the surface.
8. For irregular surfaces a sterile, cotton-tipped swab is moistened with sterile water and swabbed over or inside of such surfaces. The swab is then gently rubbed over the surface of the RODAC plate.
9. Sampling must take place within 2 hours of cleaning and disinfecting.
10. One plate out of ten could be used as a positive control by sampling a dirty surface such as the floor prior to cleaning and disinfecting. This plate should grow bacteria/fungi.
11. Plates must be brought to the LAP office for incubation the same day as sampling takes place. RODAC plates must be refrigerated until being transferred to the LAP office.
12. RODAC plates must arrive at the LAP office Monday, Tuesday, or Wednesday to facilitate 24 and 48 hour counting of colonies.

13. LAP veterinary staff will incubate submitted RODAC plates at 35 degrees Celsius and observe the plates for growth at 24 and 48 hours. Any colonies will be counted at both time points.
14. LAP veterinary staff will report results to the facility manager or designee.
15. Results will be reported as follows:
  - 0-5 colonies: None or very slight colonies (considered excellent)
  - 6-15 colonies: Slight (considered good)
  - 16-30 colonies: Moderate (borderline acceptable)
  - 31-50 colonies: Significant (poor)
  - >50 colonies: Heavy (unacceptable)
  - TNTC : Too Numerous to count (unacceptable)
16. The efficacy of disinfection will be monitored at each facility that requires testing at least twice annually with the exception of the farm facilities.
17. Examples of disinfected/sanitized items to RODAC plate would be hood work surfaces, racks, walls, floors, cages, wire tops, and micro-isolator lids.
18. Examples of items that are either hand washed or washed in a household type dishwasher to RODAC plate would be water bottles, sipper tubes, and feed bowls.