

STANDARD OPERATING PROCEDURE

Sentinel Free Filter Testing (SiFT)

Optimize Your Health Monitoring with Sentinel Free Filter Testing (SiFT)

Sentinel Free Filter Testing (SiFT) offers a significant advancement in animal health monitoring, particularly in its alignment with the 3R principles (Replacement, Reduction, and Refinement). This method provides numerous benefits over traditional dirty bedding sentinels.

SETTING UP

Each rack to be tested will need a clean autoclaved cage (the same type of cage used for housing your animals) to be seeded with soiled bedding from each occupied cage on the rack to be screened (up to 128 cages). These are known as soiled bedding collection cages (SBC's). Inotiv's SiFT filters are supplied irradiated and care should be taken not to contaminate them whilst opening the pack and placing them in the SBC's. We advise using clean forceps or tweezers to place filters. 2 pieces of SiFT filter should be placed in each soiled bedding collection cage. Samples will be collected after 6 and 12 weeks of exposure to soiled bedding, during the routine cleanout.

MATERIALS NEEDED FOR EACH RACK TO BE TESTED

- 2 SiFT Filters
- 1 x 50 mL sterile Universal tube (supplied)
- Forceps/tweezers that can be easily cleaned/sterilised (Not supplied)
- Gloves (to be changed between samplings or sanitized with 70% ethanol)

COLLECTION OF SOILED BEDDING

- The soiled bedding collection cage(s) (SBC) should be clearly labelled so that it is associated with the animals/rack under surveillance.
- The SBC should match the cage type used to house the animals under surveillance.
- If the cage that is used to collect soiled bedding is static, it must have a static cage lid to allow for air exchange
- The SBC should be kept on the same rack to represent the location/source of soiled bedding from animals under surveillance. We recommend being consistent with the placement of the SBC (e.g. Bottom left of rack/side).
- Gloves must be sanitized with 70% ethanol between taking samples from SBC's from different racks and the change station disinfected.
- Forceps/tweezers must be cleaned/sterilized prior to each use.

PROCEDURE

- a. Before collection of the first round of soiled bedding, using clean forceps/tweezers, remove the filter material from the packaging and place 2 filters into a clean cage (the Soiled Bedding Collection (SBC) Cage).
- b. Transfer **at least 15ml** of soiled bedding from each **occupied** colony cage and place it into the SBC with the SiFT filters.
- c. Once soiled bedding has been transferred from all occupied cages on the rack, shake the SBC to thoroughly mix the soiled bedding, then place on its respective rack. Cages should be shaken (with lid in place) in an elliptical (or stir-fly) motion for 1 minute to ensure good mixing and contact with SiFT filter and the soiled bedding
- d. **Each SBC cage containing the SiFT filters must be shaken at least once per week.**
- e. On the next cage cleanout a clean SBC should be started and both SiFT filters from the old SBC should be transferred to the clean, labelled SBC and then seeded with dirty bedding again as described in steps b and c.
- f. Repeat seeding and shaking through week 6. Before seeding for week 7, remove one SiFT filter from the SBC and transfer to the supplied sterile 50ml universal tube, using clean forceps/tweezers, ideally in a change station. The tube should be labelled clearly with the Room, rack ID and species with indelible marker. The tubes with the SiFT filter from week 6 can then be stored in a cool, dry location until the next collection (Do not refrigerate or freeze – this risks the formation of condensation along with freezing and thawing which are all detrimental to sample quality). Continue with the seeding of the remaining SiFT filters for weeks 7 through 12.
- g. After week 12 seeding and shaking, remove the remaining SiFT filter from each SBC into its respective 50ml tube (containing the corresponding 6 week filter from the same rack being screened).
- h. Gloves must be sanitised with 70% ethanol between taking samples from SBC's from different racks and the change station disinfected
- i. Once collected, all samples can be submitted to Inotiv and sent at ambient temperature. Ship directly to our health monitor lab in Desio Italy (see below). Please contact us with any questions related to submission.

While SiFT is a powerful tool, it's crucial to remember that no single screening method is foolproof. Each approach has its limitations, and relying solely on one method can introduce risks. To create a robust health monitoring program, Inotiv recommends incorporating SiFT alongside other screening strategies. This comprehensive approach will help you mitigate risks and address your specific biosecurity and research needs.

Please contact us if you would like to learn more about how
Inotiv can help you design a tailored health monitoring program that integrates SiFT
with other effect screening methods or if you would like to request a SiFT kit.

Please contact us if you have any questions.

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