

¹⁴C Lab Swipes

Written: ELoomis 2005; updated 9/17/08 WKoz

Daily Swipes are done on any day stock ¹⁴C is handled rad-lab (or van).

Weekly Swipes are a more thorough check for contamination in the lab, done usually on the weekend.

Daily Swipes need not be done the same day as weekly swipes.

What's needed:

- ¹⁴C logistics binder

- Vials with caps and vial rack (minimum of 5 vials for daily swipes, 10 for weekly)

- Whatman GF/F filters and forceps (to be used only for swipes)

- 5% count off solution

- Universol ES Scintillation Cocktail

In ¹⁴C logistics binder, check swipe log to find out where in the numbering sequence to start for the set of swipes about to be done. Though there are only five-ten swipes done each time the numbers start at the beginning of a season or cruise and continue consecutively. The log also swipe locations and described and results are recorded.

Set appropriate number of vials in rack; label lids accordingly (ie. DS6, DS7 etc.)

Using swipe forceps (forceps coming in contact with Countoff solution should be kept separate), submerge a single GF/F filter in count off solution (recommend pouring a small amount of count-off into the lid to make this easier).

Referring to swipe log, swipe appropriate area thoroughly using both sides of filter. Try and cover as much surface area as possible; a textbook swipe is a 12"X12" area.

Place filter in appropriate vial, pushing filter to bottom of vial. After you have done all swipes (note that final vial for both daily and weekly swipes is a filter dipped in Count-off and put directly in a vial as a blank), squirt 5ml of Universol solution into each vial, cap, shake and put into the LSC to count with the standard 300s protocol.

Examine results, check that none are over 2x the blank value, then record the DPM number in the swipe log. For readings greater than 2x your blanks, clean the area thoroughly with Count-off and Kimwipes (or 10% HCl and Kimwipes, allowing wipe to dry in hood before discarding), then redo that swipe.

Record all extra swipes and LSC file name in the in the swipe log.

Enjoy a rad free rad lab or van!

Example Swipe Locations:

Daily

Floor in front work space
Sill and sash of hood
Refrigerator handle
Filtration manifold knobs
Blank

Weekly

Floor in front of work space
Sill and sash of hood
Refrigerator handle
Floor in doorway
Lab door handle
Deck incubator end cap
PI incubator lid
LSC lid handle and keypad/board
P200 pipet
Blank

Note that you CANNOT do TOO many swipes! If you're uncertain about a possible spill or want to do more than the locations listed PLEASE DO!