

## Useful tips to avoid $^{14}\text{C}$ tracer epidemics

Reasonable precautions should be taken to avoid sample contamination (as well as contamination of the  $^{14}\text{C}$  processing labs and other people's samples). Precautions that should be practiced include ascertaining information about your lab's equipment history; and avoiding samples, equipment, and areas likely to be contaminated. Be wary of shared facilities and borrowed equipment.

To put these practices into action at your lab, follow these useful tips (the DO and DO NOT list):

- Inform your personnel of the importance of the  $^{14}\text{C}$  tracer contamination precautions. Be emphatic.
- Cover heavily used areas with heavy duty aluminum foil. If contamination or suspicion of contamination occurs, the foil can be easily replaced.
- Avoid direct contact of samples, tools, glassware, chemicals etc. with the top of benches and hood areas. Place them in plastic trays. They are cheap (see the MacMaster-Carr catalog) and can be replaced any time.
- Designate separate sets of tools to be used in each lab or area, and avoid sharing them.
- If you can, try to keep equipment and chemicals inside your lab area and space, rather than moving them between labs. You can buy chemicals in small quantities, or split them from a large volume to be used in separate labs.
- Borrowed or shared equipment should also be used wisely. Designate a separate container to be the communication between your lab space and the equipment in question. Ascertain information about the equipment history before using it.
- Maybe, adopt the use of gloves. Replace them when moving from one procedure to another, or between lab spaces.
- Campus cleaners can carry contamination from one building to another through the cleaning tools (baskets, brooms, etc). Do the lab cleaning yourself.
- Last, but not less important. Always use common sense.

Remember that the procedure of "conducting a swipe" offered by the AMS facility was designed to verify suitability of old or used spaces for accommodating new  $^{14}\text{C}$  labs, and for checking suspect equipment (borrowed, purchased used, etc). If contamination is present, users **MUST** take immediate action to remove it, e.g. do not use the area contaminated, replace equipment and tools seriously at risk of contamination, and establish routine procedures to avoid re-contaminating the area. Re-swiping the suspected contaminated area before taking action will not make the contaminant go away.