Controlling cell culture contamination

Use good aseptic technique

- Wipe down the cell hood's work surfaces between cell lines.
- Use vented cap flasks that allow sterile gas exchange but prevent passage of microorganisms or liquids.
- Work with only one cell line at a time in the hood and use separate bottles of media, solutions, etc. for each cell line.
- Avoid pouring media from cell culture flasks or sterile bottles. Use pipets or aseptic tubing sets to transfer larger volumes.

Clean up the work area and surrounding environment

- Empty waste containers daily.
- Routinely wipe floors and work surfaces to keep down dust.
- Empty and clean water baths on a regular basis.
- Vacuum cooling coils on refrigerators and freezers at least yearly.

Use antibiotics intelligently

When used intelligently, antibiotics are a useful tool in cell culture. However, over-use can lead to increased antibiotic resistance among common culture contaminants.

For example: use them for the first week or two of primary cultures or hybridomas or experiments where cultures will be terminated.

Reduce opportunities for accidents

- Always clearly indicate if solutions or other supplies have been sterilized.
- Carefully label solutions, cultures, etc.
- Assign each worker their own color for labeling tape and marking pen inks.

Routinely monitor for contamination

- Regularly maintain all autoclaves and dry heat ovens.
- Quarantine all cultures coming into the laboratory until they have been tested for mycoplasma.
- Test samples of all in-house filter-sterilized solutions for sterility each time they are prepared.
- Buy only from sources that employ filtration and mycoplasma testing.

Strategically use your frozen cell repository

- Test stored cultures for contaminants at least every 3 to 4 months (more often for critical applications).
- If regular testing is not feasible, discard cultures every 3 months and replace them from the repository with cultures from the same lot or batch that have been previously tested.

CORNING

Not only can cell culture contamination result in a loss of time, money, and effort, it can also lead to inaccurate experimental results, loss of valuable products, and, ultimately, personal embarrassment.

Contamination cannot be totally eliminated but it can be managed.
For more detailed information, download Corning publication CLS-AN-020 from **www.corning.com/lifesciences** or contact your Corning representative to request a copy.