

Appendix 5
Spore Handling Protocol UC Berkeley

APPENDIX 5
LEIGHTON LABORATORY – UC BERKELEY

FIELD TESTING
SPORE BIOEFFECTS MONITORING PROCEDURES

PROTOCOL FOR HANDLING, CODING, EXPOSURE AND PACKAGING OF
SPORE SENSOR STRIPS - 12/08/2001

Handling of pre-exposure strips

1. Always handle the **sterile control strips** with latex gloves. Please mark each control strip with a black “X” at either end to indicate that it is a control strip. The packaging of the sterile strips and the inoculated spore strips is identical, so be careful to distinguish them.
2. The **inoculated spore strips and Steri-Charts** should also be handled with latex gloves prior to exposure.
3. Assign a unique number to each of the strips with an indelible pen at either end of the strip (a black Sharpie works well). The white rectangular strip within the blue package contains the spores. Please avoid touching or writing over this area.
4. Keep track of where you place the strips (using the unique numbers that you write on them and a test map). The strips should be placed in a variety of locations within a test area. Place three strips at each location, side by side, not on top of one another. To assess gas distribution throughout the target zone, place strips in locations such as the following: at the top of the zone, on the bottom of the zone, at various heights on the sides of the zone, within test materials, and so forth. Carefully record the locations of the strips with the numbering system. Use a unique numbering system for each experiment and each strip.
5. When exposing a Steri-Chart, first remove the positive control strip (stamped with red ink) and seal it in its own envelope. Assign a unique number to this envelope that will also correspond to the chart, itself (i.e. SC1-1). Treat each chart as a single unit, and place the five strips of the chart side-by-side at locations in the test zone. Record where each chart is placed and assign numbers to each strip (SC1-2, SC1-3, etc.).
6. If the strips need to be secured to a surface (like a wall), a small piece of double-sided (Scotch) tape works well. Affix the tape to the end of the strip package that is not written on.

Handling of exposed spore strips:

1. Always wear latex gloves when handling spore strips that have been treated. If possible, use sterile forceps to remove the strips from their test locations.
2. Place each set of strips into one letter envelope (i.e. one set of three strips or one Steri-Chart of five strips per envelope). Place each negative control strip into its

- own letter envelope. Completely seal each envelope with scotch tape. **Do not lick the envelopes.**
3. After the spore strips have been exposed, avoid contact of the strips with anything that came from our laboratory (envelopes, grey Steri-Chart packages, Ziplocs, etc.) because all of these items could be contaminated.
 4. You may use letter envelopes purchased from an office supply store to package the post-exposure strips. Plain white envelopes or small manila envelopes are suitable. Store these envelope supplies in a location that is not likely to become contaminated. The first time you send us samples, please also enclose three empty envelopes so we can check the envelopes themselves for contamination. You only need to do this the first time (and any time you buy a new package of envelopes), not every time. Please label the outside of each envelope with what is inside (positive control, negative control, three strips, Steri-Chart, etc.), date of exposure, gas concentration (if desired), and location (floor, ceiling, etc., if desired). In cases where data validation is required, samples may be double blind coded. Please ensure that all sample markings and codes are clearly visible on such double blind samples.
 5. Place the test envelopes within a larger envelope and seal with Scotch tape. Place this envelope in a FedEx shipping envelope and send to us by overnight priority. Please forward the FedEx tracking number by E-mail to:
Leighton@bacillus.berkeley.edu
 6. FedEx Delivery information:
Dr. Terrance Leighton
Department of Biochemistry and Molecular Biology
401 Barker Hall
University of California
Berkeley, California 94720-3202
Telephone: 510 642-1620