

## Efficacy validation of MycoFog™ system with 7.8% hydrogen peroxide using biological indicators.

**MycoFog™ procedure:** please refer to MycoFog™ manual. For a more detailed BI procedure, please refer to BI instructions.

**Incubators are** 150-165 L in volume.

\*Baker-Ruskinn InvivO<sub>2</sub> Workstation is 200L

**Biological indicators (BIs)** are spores of *Geobacillus stearothermophilus* in a culture tube. The spores ( $1 - 2.5 \times 10^6$ ) are inoculated onto a stainless-steel disc and placed into a vial with an ampule of growth ≥medium with growth indicator dye as illustrated in Figure 2. BIs are place in the incubator chamber as exemplified in Figure 1 and noted (with results in) Table 1. At the end of the treatment cycle, the BIs are incubated at 57°C for 7 days and noted for color change (purple to yellow indicates spore growth, not effectively killed). Successful treatment is interpreted as  $\geq 6$ -log reduction in viable organisms.

Table 1

| Performed by | Date      | Incubator Type  | URF | URR | LRF | LRR | ULF | ULR | LLF | LLR | C | Control |
|--------------|-----------|-----------------|-----|-----|-----|-----|-----|-----|-----|-----|---|---------|
| Partner      | Aug 2023  | Thermo Forma    | N   |     |     | N   |     |     |     |     | N | Y       |
| 7.8 BIO      | Sept 2023 | VWR/Sheldon     |     | N   |     |     |     |     | N   |     | N | Y       |
| Partner      | Sept 2023 | PCHBI           | N   |     |     | N   |     |     |     |     | N | Y       |
| 7.8 BIO      | Oct 2023  | VWR/Sheldon     |     | N   |     |     | N   |     |     |     | N | Y       |
| 7.8 BIO      | Dec 2023  | VWR/Sheldon     |     |     | N   |     |     | N   |     |     | N | Y       |
| Partner      | Dec 2023  | Thermo Heracell |     | N   |     | N   |     |     |     |     | N | Y       |
| Partner      | Jan 2024  | *Baker-Ruskinn  |     |     | N   |     |     | N   |     |     | N | Y       |
| 7.8 BIO      | Feb 2024  | VWR/Sheldon     | N   |     |     |     |     |     |     | N   | N | Y       |

Table 1 Key: URF= Upper Right Front, URR=Upper Right Rear, LRF=Lower Right Front, LRR=Lower Right Rear, ULF=Upper Left Front, ULR=Upper Left Rear, LLR=Lower Left Rear, LLR=Lower Left Right, C=Center, Control is and untreated BI (on the lab bench), N=Location tested, no growth, Y=Location tested, growth, BLANK=Location not tested

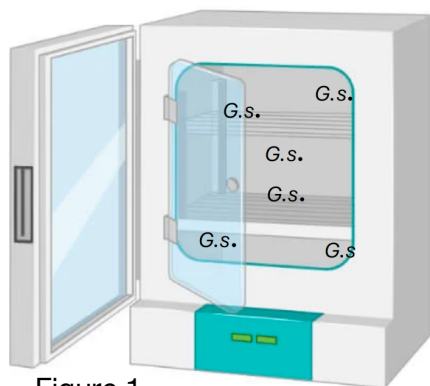


Figure 1  
Cartoon representation of possible location of biological indicators in biodecontamination testing.

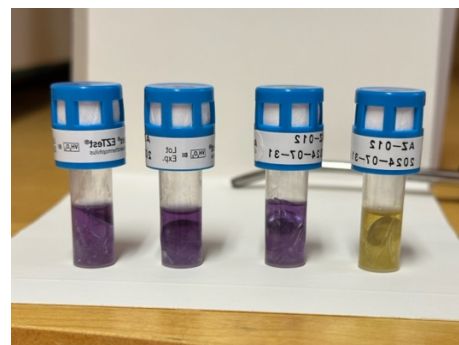
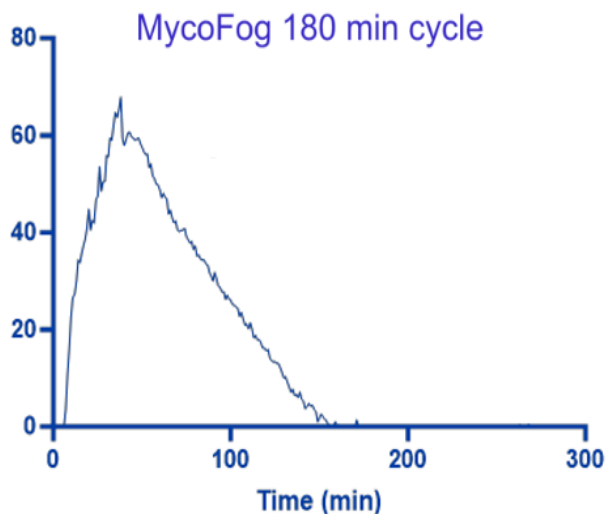


Figure 2

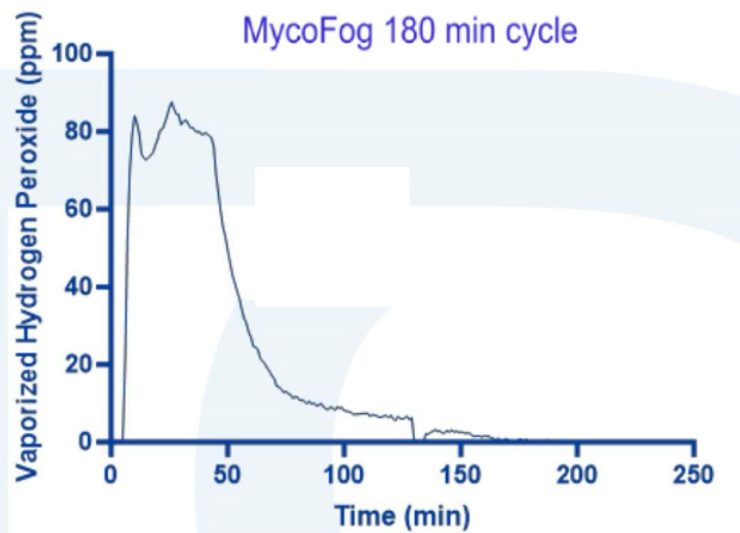
## Safety Validation of MycoFog™ system using an H<sub>2</sub>O<sub>2</sub> gas measuring system.

**MycoFog™ procedure:** please refer to MycoFog™ manual. H<sub>2</sub>O<sub>2</sub> was measured using the Vaisala Inc. HPP272 probe in a Heracell VIOS 160i.



In each case, the level of H<sub>2</sub>O<sub>2</sub> was at the OSHA limit by the end of the run time.

Run 3



Run 4