



www.redbag.com

Red Bag Solutions  
3431 Benson Avenue, Suite 100  
Baltimore, MD 21227  
443-524-4245 / fax 443-524-4250  
info@redbag.com  
www.redbag.com

SSMSummaryOpEfficiency020422.doc

### **Operational Summary for SSM-150**

Regulated medical waste is put in the process tank portion of the SSM-150. The hatch is then secured and the start button is pushed. The process tank is then pressurized with approximately 300 degree F. steam to 30 PSIG. Superheated water of approximately 250 to 260 degrees F. goes into the process tank. After approximately 60 gallons, the pump macerator starts and continuously recirculates the water and medical waste through the system until the computer determines all the particles are of a sufficiently small size. At that time the computer starts the calculation of the sterilization time to insure that the waste is processed to an equivalent time of 250 degrees F. for 30 minutes.

The steam and liquids are cooled down with cold tap water to below 195 degrees F. before being discharged into the separation apparatus where it is further cooled with tap water to below 125 degrees F. to be discharged into the sanitary sewer system. The technician then opens the processing tank hatch, refills the tank and secures the hatch. He then empties the separator and pushes the start button for the next cycle to begin.

### **Summary of Efficacy Testing For the SSM-150**

Spore efficacy testing with *Bacillus stearothermophilus* was conducted on the WPS SSM technology by the Sterilizer Monitoring Service, Department of Oral and Craniofacial Biological Sciences, Baltimore College of Dental Surgery Dental School, University of Maryland at Baltimore. In a blind study, testing confirmed both the sterilization workings of the technology and that the medium used in the testing process remained viable and supported growth.

The efficacy of the SSM-150 to inactivate Polio virus type 1 (Sabin) was conducted by the Virology Laboratory, Division of Microbiology, Department of Pathology, Johns Hopkins Medical Institutions, Baltimore, Maryland in March 1998. Testing confirmed both the sterilization workings of the technology to inactivate the virus and that the medium used in the testing process remained viable and supported growth.

Efficacy testing for biological indicators of *Mycobacterium phlei*, *Candida albicans* and *Staphylococcus aureus* was conducted by BBI Clinical Laboratories, Inc. of New Britain, CT from an on-site working unit at Johns Hopkins University School of Medicine. In a blind study, testing confirmed both the sterilization workings of the technology and that the medium used in the testing process remained viable and supported growth.

Efficacy testing for biological indicator of *Giardia* Parasites conducted by BioVir Laboratories, Inc. of Benicia, CA from an on-site working unit at Johns Hopkins University School of Medicine. All processed samples failed to react using the FITC labeled antibody.

Emissions of hydrocarbons from an on-site working unit at Johns Hopkins University School of Medicine was tested by the Environmental Health Officer, Health, Safety & Environmental Department, Johns Hopkins Medical Institutions. The study showed that the potential for exposure to hydrocarbons from the use of the SSM-150 is well below any of the regulated levels and pose no hazard to the staff working in the area.

Waste discharge water analysis following EPA protocols and other recognized methodologies was conducted on an on-site working unit at Franklin Square Hospital by Gascoyne Laboratories, Inc. of Baltimore, MD. All parameters were well below Baltimore City Code effluent limitations.

Waste discharge water analysis for volatile and semivolatile organics, and pesticides was conducted following EPA protocols and other recognized methodologies on an on-site working unit at Franklin Square Hospital by Phoenix Environmental Laboratories, Inc. of Manchester, CT. All parameters were well below EPA effluent limitations.