CLEANING AND STERILIZATION

(One Shot Machine/One Shot Head Adapter)

Normal Operation

All components of the One Shot cup should be fully submerged in cleaning fluid, i.e. commercially available detergent, bleach or ethanol, used as recommended by the manufacturers, and soaked for 10 minutes. The sample chamber in the disruption head should be filled to the brim with cleaning fluid and left to soak for the same amount of time. The cleaning fluid can then be removed from the disruption head by pipetting and the cup reassembled. Either 8 mL (One Shot Machine) or 10 mL (One Shot Head Adapter) cleaning fluid should then be processed as normal operation with the disruptor set to maximum pressure, followed by the same amount of clean water. The outside of the cup can then be rinsed with clean water also. This process can be repeated as required.

Note: Correct Personal Protective Equipment (PPE) should be worn.

In the event of the machine being left for long periods without cleaning, or perhaps before a new project, the disruption head can be cleaned by dismantling and then soaking and washing manually in suitable fluids and finally rinsing in clean water.

Typically, a cleaning regime could comprise of:

1) Detergent soak (at manufacturers recommended concentration and temperature).

2) Single shot with detergent (at manufacturers recommended concentration and temperature).

3) Hot/cold water wash.

The effectiveness of all steps can be monitored by effluent pH.

The above process has been validated for Escherichia coli and Saccharomyces cerevisiae using both 70% ethanol solution and 1% Virkon solution separately. It is advised that further validation is carried out with selected organisms and detergent if different to above.

Note: All metal and other materials used in the product path have been demonstrated to be resistant to corrosion by Virkon at a concentration of 2%.

Steam Sterilization

The whole of the Disrupter Head assembly including HP Cylinder, One Shot Cup & Lid and HP Seal can be disassembled and autoclaved.

Note: Repeated autoclaving of 'O'-rings may lead to loss of elasticity; it is recommended that these are removed prior to autoclaving and soaked in cleaning solution.

For disassembly and reassembly please refer the One Shot Cell Disrupters – Operator's Manual

Further Notice

It should be noted that cleaning by processing 8-10 mL cleaning fluid as if normal sample has been shown to have inconsistent results – in most instances determined by foaming properties of the detergent used. It is advised that further validation is carried out if this is your preferred cleaning method.