USE OF RESEARCH AUTOCLAVES

I. INDIVIDUALS USING THE AUTOCLAVES MUST READ THESE DIRECTIONS AND SIGN AT THE BOTTOM THAT THEY WILL COMPLY WITH THE AUTOCLAVE RULES! A COPY WILL BE MAINTAINED IN EACH AUTOCLAVE ROOM AT ALL TIMES!

II. TRANSPORTING PACKAGED MATERIAL TO THE AUTOCLAVE

- When transporting material to be autoclaved, use a cart with guard rails.
- Ensure the use of a secondary, leak-proof closed container to collect any spillage should any accident happened to the cart during transport.
- Use the most direct but not heavily populated route possible to transport the cart.
- Surface decontaminate the container prior to and after transport, unless there is no risk of contamination. Transporting autoclaved waste to outside waste bin should be done is a similar manner.

III. AUTOCLAVE USER LOG

- **MUST BE FILLED OUT COMPLETELY BY EACH USER**.
- This log identifies the users, nature of the load (media, waste, pipet tips, etc.), cycles used and exposure times.

IV. FUNDAMENTALS OF LOADING TO ENSURE SUCCESS

- Prior to autoclaving, place two strips of the temperature sensitive tap side by side across red biohazard bags, and using a black sharpie please write the contact name, date, and lab number across the tape. Place two pieces of autoclave tape to form an “X” across the biohazard symbol.
- **SPECIAL NOTE ON SHARPS**:
    - When autoclaving Sharps containers, tape the opening shut with sufficient autoclave tape to ensure it is sealed.
    - Using a black sharpie please write the contact number, date, and lab number across the tape.
- **USE THE FOOT PEDAL TO OPEN AND CLOSE THE AUTOCLAVE DOOR!**
- Load the items in the autoclave in the best arrangement to result in the least resistant passage of air exchange through the load, from the top of the chamber to the bottom.
- When autoclaving flat items, place packages on their edges to enhance steam penetration, place a rack or other item against these items to prevent them from slipping.
- Ensure containers do not touch each other, this will ensure all surfaces are sterilized.

- No items should touch the top or sides of the autoclave container as the container is pushed inside.
- A load of liquid filled containers should be of similar size, shape, content and volume, as exposure time is based on these characteristics.
- Run material to be sterilized separate from those to be decontaminated.

V. UNLOADING AN AUTOCLAVE

- ***THE GREATEST RISK OF PERSONAL INJURY OCCURS DURING THE PROCESS OF UNLOADING THE AUTOCLAVE!***
- Wear all necessary personal protective equipment, including lab coat, glasses, and heat-resistant gloves to remove hot containers.
- The chamber pressure gauge of the autoclave should be zero before opening the autoclave door.
- USE THE FOOT PEDAL to crack door slightly and stand back to allow steam to escape.
- To minimize the risk of accidents caused by steam escape, the person who opens the autoclave door should lean away from the door as it opens.
- Slowly open autoclave door. Opening the autoclave door too quickly may result in glassware breakage and/or steam burns to the skin.
- Remove items from the autoclave using the heat-resistant gloves and personal protective equipment.
- If immediately removing items from the autoclave room, load onto the lab cart. Bring the lab cart to the chamber, using heat resistant gloves; otherwise, set items on the counter to cool before removal. Use the appropriate "AUTOCLAVED" cards to indicate that items have been autoclaved if you don't remove them from the room immediately.
- For autoclaved biohazardous materials, allow to cool to room temperature before labeling and disposing in the waste containers provided inside the autoclave room.
- After every use, it is advised to close the autoclave door but do not seal the door as this will shorten the life span of the rubber gaskets on the door. USE THE FOOT PEDAL to operate door at all times.
- Verify that the temperature sensitive tape has changed, as black, diagonal lines should have appeared. If no change appears on the tape, the load is required to be re-autoclaved after placing new tape on the material.
- Also verify the cycle log recorder to check the temperature and time attained. If minimum time and temperature is not attained on the second cycle, users should contact the Faculty in charge of Autoclave for your department. For Biology and the autoclaves in NSB 5215 and 5203 that person is Dr. Pierce. For Chemistry and the Autoclave in 5108 that person is Dr. Paumi. This way there will be contact person in the College that coordinates repairs to minimize confusion. Dr. Pierce or Dr. Paumi be in charge of contacting the manufacturer (Getinge) customer service (800-660-1687) to request that a technician service the autoclave.

VI. DISPOSING OF AUTOCLAVED BIOHAZARDOUS WASTE

- Once the waste has been successfully autoclaved, the waste is no longer considered biohazardous. It is now important to alter the hazard awareness signage and symbols to reflect this.
- When waste bags have cooled to room temperature, use a large felt marker to further deface the biohazard symbols.
- Place a sterilized product label which indicates ***"Autoclaved materials".*** These labels will be located by the autoclave. Use a black sharpie to record the date, user name and contact information clearly on the label.
- Once this has been accomplished the defaced and labeled autoclaved waste bags should be placed inside the trash cans provided for this purpose. These should be lined with black plastic trash bags designed for domestic applications.
- It is highly recommended to place only one or two biohazardous bags inside a single plastic trash bag (domestic applications) to prevent overloading the bags, leading to the risk of breakage. Ensure the black bag is securely tied.
- Waste may now be disposed of to the appropriate municipal waste stream.

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Signature of individual Date

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Signature of professor (if grad student above) Date