1. PURPOSE:

1.1 This SOP describes the step-by-step method for the preparation of incinerator.

1.2 The prime intention of disposing biohazard wastes e.g. sharps, laboratory wastes, and viral specimens is to avoid contamination with infectious waste agents known to be infectious to humans.

2. Scope:

2.1 This document ensures that all waste will be collected in specified containers and will be handled and transported by the designated and trained person.

2.2 This procedure applies to all types of waste that will be discarded not only from the laboratory but from the whole centre as well.

2.3 BACKGROUND

2.3.1 Biomedical laboratories are special and have unique work environments that may pose identifiable infectious disease risks to persons in or near them. Correct Biohazard Waste handling is therefore necessary to reduce or eliminate exposure to laboratory staff, other persons and the outside environment to potentially hazardous materials: such as blood or other body fluids, lab wastes and specimens which might be contaminated with agents known to be infectious to humans.

3. Responsibilities:

3.1 Laboratory and centre staff are responsible to dispose off their waste in properly designated containers.

3.2 Person, who is designated for this purpose, is responsible for the handling and disposal of Biohazard waste.

3.3 Laboratory and centre staff are responsible for supervising the process.

3.4 Officers are responsible to implement this SOP.

4. EQUIPMENT AND MATERIALS REQUIRED:

4.1 Waste bins (plastic or stainless steel with lids) /Balti with lid.

4.2 Tips disposal containers with lids

4.3 Biohazard waste bags
4.4 Disposable sharps containers
4.5 10 % household bleach
4.6 Latex gloves

5. Procedure:

5.1 BIOHAZARD WASTE TREATMENT

5.1.1 There are three ways of treating biohazard wastes to render them harmless and biologically inert. These are:

5.1.1.1 Incineration in an approved incinerator.
5.1.1.2 Steam sterilization for a sufficient time and at a sufficient temperature to destroy infectious agents in waste (autoclaving)
5.1.1.3 Chemical disinfection in which contact time, concentration, and quantity of the chemical disinfectant are sufficient to destroy infectious agents in the waste.

5.2 DISPOSAL OF BIOHAZARD WASTE

5.2.1 Precautions:

5.2.1.1 Prior to any treatment, all biohazard wastes, including those to be incinerated, should be enclosed in a puncture-resistant, biohazard bag that is labeled with the biological hazard symbol.
5.2.1.2 Untreated biohazard waste is not to be disposed of in the municipal waste (system). All biohazard waste must be treated by chemical disinfection or autoclaving before in any way being disposed of in the municipal waste.
5.2.1.3 The person handling waste bins, waste bottles or sharps containers must be careful not to touch anything without protective clothing and must use gloves to avoid contracting infections from the waste.
5.2.1.4 The waste bins containing infectious waste, sharps containers, etc., must be clearly labeled:

*Biohazard wastes.
5.2.2  **Laboratory waste**

5.2.2.1 Identify a suitable place to keep the waste bins in the laboratory (away from the passage, doors, but nearer to the working bench).

5.2.2.2 Take two medium size buckets/baltis with lid and label them 1.: Non Infectious waste and 2.: Infectious waste (it will be more appropriate if these containers should be color coded, green for number 1 and red for number 2).

5.2.2.3 All paper waste, syringe covers, needle covers, cotton should be disposed of in the container labeled non infectious waste.

5.2.2.4 Discarded swabs, cotton, and other bio-hazardous and non-sharp objects used for sample collection should be placed in the second container labeled infectious waste.

5.2.2.5 Disposable plastics such as tips, test tubes, etc., used for testing of samples should also be disposed of in the second container labeled infectious waste.

5.2.2.6 Reusable glassware such as cylinders, flasks and beakers should be disinfected by soaking in 10 % household bleach over night before washing.

5.2.3  **Sharps**

5.2.3.1 All sharp implements used in the laboratory need to be handled carefully. They can easily break the skin and increase the risk of infection with infectious agents.

5.2.3.2 Broken glassware must also be handled as sharps.

5.2.3.3 If needles are used, they should never be recapped before disposal. Recapping needles may lead to somebody accidentally pricking him or herself.

5.2.3.4 Dispose of all sharps directly into a sharps disposal container with a secure perforated lid. The lid only allows the implements into the container but not out. The sharps container should be puncture-resistant, leak proof on the sides and bottom, and labeled with a biohazard symbol.
5.2.3.5 When ¾ full, seal the top and arrange for incineration.

5.2.3.6 Incineration destroys the sharps completely hence eradicating the chances of accidental injury to people in the community.

5.2.4 Residual Samples

5.2.4.1 Ensure that all tubes/containers containing residual samples of blood / sera are properly sealed to avoid spillage before keeping in the refrigerator.

5.2.4.2 For this type of disposal there should be a contract with the nearest hospital for incineration or make your own incinerator (follow the SOP for incinerator preparation).

5.4 SPECIAL SAFETY PRECAUTIONS

5.4.1 Anybody handling Biohazard Wastes should always put on laboratory protective clothing and gloves and keep to the laboratory safety practices to avoid viral and other infectious disease transmissions.

5.4.2 Any spills or splashes of infectious material should be immediately cleaned up with absorbent material using an approved disinfectant such as dilute 10% bleach.

6. Reporting:

6.1 In case of any mishap report to incharge of the laboratory / center.