|  |
| --- |
| Incinerator Burner |
| **Principle** | This procedure provides instruction for using the INCINERATOR BURNER.The incinerator burner sterilizes by using infrared radiation (heat). A wire loop or needle containing organic material is inserted into the ceramic funnel tube housed in a heat-dissipating metal container. After five-to-seven seconds, the material is incinerated. The design of the incinerator, coupled with placing the loop deep into the chamber, minimizes splattering and aerosolization. Incinerator burners lack an open flame, making them safer than Bunsen burners. |
| **Policy Statements** | This procedure applies to Microbiologists/virologists who perform culture set-up and/or plate reading |
|  |  |  |  |  |
| **Materials** | Bacti-Incinerator IV or III; Cardinal Health product number MS 004002 |
| **Special Safety Precautions** | Microbiologists/virologists are subject to occupational risks associated with specimen handling. Refer to the safety policies:1. [*Biohazard Containment*](file:///G%3A%5CLAB%5CMicro%20Procedure%20Manuals%5CMC%20200%20%20%20%20Safety%5CMC%20201%20%20%20Biohazard%20Containment%20R.doc)
2. [*Safety in the Microbiology/Virology Laboratory*](file:///G%3A%5CLAB%5CMicro%20Procedure%20Manuals%5CMC%20200%20%20%20%20Safety%5CMC%20202%20Safety%20in%20the%20Microbiology%20Lab%20Policy%20R.docx)
* [*Biohazardous Spills*](file:///G%3A%5CLAB%5CMicro%20Procedure%20Manuals%5CMC%20200%20%20%20%20Safety%5CMC%20204%20Biohazardous%20Spills%20R.docx)
 |
| **Quality Control** | 1. Initial Calibration:
* Plug the incinerator into a grounded electrical outlet.
* Look for a red glow inside the heating element.
* Ensure that the incinerator does not generate any smoke, flame, or persistent noxious odor.
1. Routine Quality Control:
* Inspect the heater element daily to determine whether or not the core is worn.
* Inspect for small cracks in the ceramic casing and residue buildup during both heated and cooled conditions. In the heated condition, *small cracks will appear as yellow-orange fissures*.
* Replace the heater element if any defects are present.
* Cracks do not impair functionality, but may pose an electrical safety risk.
* Damaged incinerators should be referred to Bio-Med (Mpls: 5-6383, StP: 6-6297). St Croix report should be filed.
 |
| **Procedure** | Routine Operation:1. The optimum sterilizing temperature (815°C) will be reached ten minutes after power is turned on to the unit.
2. Plug electrical cord into a grounded electrical outlet.
3. An indicator light will come on when the power switch is placed in the “on” position.
4. Gently insert the inoculating loop or needle deep into the heated ceramic core. Avoid scraping the sides of the chamber to maximize useable lifespan of the ceramic core.
5. Allow the loop to remain in the incinerator for at least five seconds, but no longer than ten seconds. Bacterial, fungal, and mycobacterial organisms will be destroyed within five seconds.
6. It is not necessary to obtain a glowing loop or needle to ensure sterility.
7. The incinerator unit should be turned on at the beginning of the workday, left on throughout the day, and then turned off at the conclusion of the workday.
8. If the unit is not going to be used for more than four hours, it should be turned off to conserve the life of the heater element.

Failure to Heat:1. Check to see that the incinerator is plugged in and switched on.
2. Check for loose or disconnected wires after unplugging the unit.
3. Check for cracks or fissures in the heating element that may indicate the heating element needs to be replaced.
4. Refer incinerator to Bio-Med for repair requests (Mpls: 5-6383, StP: 6-6297), file a St Croix report.

Instrument Smoking:1. Check for loose of disconnected wires after unplugging and cooling the instrument
2. Check for cracks or fissures in the heating element. If present, change the heating element.
3. Look inside the tube of the heating element and examine for debris lodged inside the chamber. If debris is present, allow it to burn off.
4. Refer incinerator to Bio-Med for repair requests (Mpls: 5-6383, StP: 6-6297), file a St Croix report.
 |
| **References** | 1. Isenberg, H.D. (1998). *Essential Procedures for Clinical Microbiology*, pg. 702-703. Washington, D.C.: ASM Press.
 |
| **Training Plan/ Competency Assessment** | **Training Plan** | **Initial Competency Assessment** |
| 1. Employee must read the procedure
2. Employee will observe trainer performing the procedure.
3. Employee will demonstrate the ability to perform procedure, record results and document corrective action after instruction by the trainer.
 | * 1. Direct observation
 |
|  |  |
|  |  |
| **Historical Record** |  |  |  |  |
|  | **Version** | **Written/Revised by:** | **Effective Date:** | **Summary of Revisions** |
| 1 | N. Sheridan | 10/1990 | Initial Version |
| 1.1 | K. Renner | 06/01/2006 | Procedure updated and reformatted |
| 1.2 | Tina Gronquist | 07/28/2014 | Updated into online format |
|  | 2 | Becky Carlson | 4/4/2015 | Re-numbered from MC 803 |  |  |
| 2 | Susan DeMeyere | 8/8/2017 | Update logo. |
| **Archived by:** |  | **Archived Date:** |  |