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OPERATING MANUAL

TM

GERMINATOR

500 *THE GERM TERMINATOR*



DRY STERILIZER

The **GERMINATOR 500** is designed to decontaminate micro dissecting metal instruments only and should be used exclusively for research purposes. The **GERMINATOR 500** should not be used as a substitute for traditional methods of terminal sterilization. It can sterilize instrument tips, however effective sterilization can not be assured through glass bead sterilization due to the lack of routine monitoring of sterilization efficacy such as the ones found in traditional sterilization methods. It has been designed and built to pass the Validation of Dry Sterilizer Spore Suspension Test: USP XXIII, Part 1211.

The **GERMINATOR 500** incorporates a stainless steel well that is filled with tiny glass beads and heated to 500°F. Dry heat decontamination occurs through heat transfer from the glass beads to the portion of the instrument in contact with the beads. Small instrument tips such as scissors, forceps, scalpels and tweezers are decontaminated in about 15 seconds while larger instruments may take as long as one minute.

The **GERMINATOR 500** can remain on all day without overheating and will not emit an irritating odor.

The 2" diameter x 4" deep stainless steel well easily accepts larger instruments.

Special Markings

Refer to the following warnings, safety precautions, and operating instructions.

WARNING! USE THIS DEVICE WITH EXTREME CAUTION. IMPROPER USE CAN RESULT IN SEVERE BURNS. FOLLOW ALL SAFEGUARDS SUGGESTED IN THIS OPERATING MANUAL IN ADDITION TO NORMAL SAFETY PRECAUTIONS WHEN DEALING WITH A HEATING DEVICE.

REV2-2000/01/12

Safety Precautions

We have taken every precaution in designing this glass bead sterilizer to ensure that it is as safe as we can make it. But, safe operation depends on you, the operator. We recommend you follow these safety rules.

- CAUTION: Metal instrument will become extremely hot if left in the hot glass beads for longer than the recommend time. Use a heat resistant device or other aid to remove instrument if normal decontamination time is exceeded and allow instrument to cool in a clean stainless steel dissecting tray before using.
- CAUTION: The surface of the outer casing will heat up slightly to the touch.
- CAUTION: Insert only CLEAN & DRY instruments into the hot glass beads.
- To avoid the risk of electrical shock, do not remove the cover to the **GERMINATOR 500** under any circumstances. Removing the cover will void the warranty.
- For safety's sake, do not move **GERMINATOR** while it is turned on or when the glass beads are still hot to avoid the risk of severe burns from spilling hot beads. Allow the unit to cool before moving.
- The instruments tips will become hot from being immersed in the hot glass beads. After removing instruments from the hot glass beads, place them in a clean stainless steel dissecting tray and allow them to cool before using.
- When replacing the glass beads, make sure they are cool and the unit is turned off and is unplugged. Do not pour hot glass beads into the trash.
- Use only dry glass beads in the stainless steel well. Never use a liquid!
- Servicing and repairs should be performed only by CellPoint Scientific.
- Unplug unit before prior to cleaning or servicing.
- Use metal instruments only!
- For indoor use only!

Instructions

Set Up

- Remove all packaging material from the **GERMINATOR** and place the unit on a flat stable surface. Be sure unit is far from the edge of a counter and is not in a position where it can be easily bumped or spilled.
- Remove the bag of glass beads from the box and cut a small slit at the top of the bag. Using a funnel, pour the glass beads that are provided into the well to within 1/2" of the rim. Do not overload the well with glass beads.
- Turn the power switch to "ON" and wait until the "STERILIZE" light illuminates. It will take approximately 30 minutes for the "STERILIZE" light to illuminate, thus indicating the beads have reached a minimum decontamination temperature of 450°F (233°C). The glass beads will continue to heat up and stabilize at approximately 500°F ± 15° with minor fluctuations from the on/off cycles of the heating element. These minor fluctuations will have no effect on the decontamination time.

WARNING! DO NOT TOUCH GLASS BEADS; THEY ARE EXTREMELY HOT!

How to Use

- **Important:** Sterilize clean and dry metal instruments only. Remove all debris from instruments prior to insertion into the glass beads. Any matter left on the instruments may get baked-on and will be difficult to remove. Instruments with visible debris will take longer to sterilize and could also cause the glass beads to adhere to the wet and contaminated portions of the instruments.
- Gently insert the portion of the instrument to be decontaminated at least a one inch into the glass beads. Only the portion of the instrument touching the glass beads will be decontaminated. One micro dissecting instrument should be allowed to stand at least 15 seconds before it is removed. Larger instruments such as operating scissors or bone instruments should stand for at least one minute. If inserting more than one instrument into the glass beads, it is recommended that the decontamination time be doubled according to the instrument size.
- The general rule with decontamination or sterilization is the larger the instrument the longer time required to process. Instruments can remain in the glass beads longer than their recommended time, however, they will become very hot. Also, the metal properties of some instruments could degrade if they are left in the glass beads for an extremely long period. Be sure to allow instruments to cool before using.
- The top 1/2 inch of glass beads will lose an excess amount of heat and will tend not to be within the recommended temperature for proper decontamination. Therefore, if you wish to decontaminate one inch of the instrument tip you must insert it at least 1 1/2 inches into the glass beads. In addition, be careful not to force instruments to the bottom of the glass bead well to avoid damage to delicate tips. It is also necessary to periodically stir the glass beads to prevent the growth of heat resistant microorganisms that could survive in the cooler top 1/4 inch of the well

from contaminating your instruments.

- **NOTE:** Do not overload the glass bead well with instruments. Inserting more than two normal size micro dissecting instruments will drop the temperature of the glass beads below its operating temperature in less than a minute and proper decontamination cannot be assured.
- After removing instruments from the glass beads, place instruments in a clean stainless steel dissecting tray and allow them to cool before using.
- When removing the instrument from the glass bead well make sure that none of the beads are attached to or stuck in the instrument. Failure to detect glass beads on your instruments could have an adverse effect on your research site. If necessary, tap the instrument lightly on the side of the glass bead well to remove beads. If beads remain lodged or attached, clean instrument thoroughly of visible contaminant and use a small probe to dislodge beads from the instrument.
- The **GERMINATOR 500** may be left "ON" all day if desired, or as long as necessary. The outer casing will heat up slightly to the touch and should be of no concern. It is recommended that it be left on all day to insure that the temperature of the beads remain constant and ready for use.
- When finished with the unit for the day, turn the power switch off.
- **NOTE:** If the **GERMINATOR 500** has been turned off for more than 30 minutes and the "STERILIZE" light comes on when the unit is turned back on, allow approximately 15 minutes for the temperature to stabilize before using again. This will ensure it is at the proper operating temperature.

WARNING! DO NOT USE HOLLOW METAL INSTRUMENTS IN THE GERMINATOR 500. HEATING HOLLOW INSTRUMENTS THAT ARE NOT RATED FOR USE ABOVE 300° F MAY CAUSE THEM TO EXPLODE AND SPRAY HOT BEADS. BE SURE TO CHECK THE MANUFACTURER'S WARNING.

Care and Replacing the Glass Beads

The glass beads should last about six months under normal use. Inserting dry instruments that are free of tissue and other culture will help extend the life of the glass beads and your instruments. It is time to replace the glass beads when they have become contaminated with debris or the level in the well is low. It is best not to pour new glass beads over the existing beads in the well. Replace the glass beads when the level is low.

To replace the beads make sure they are cool and the unit is turned off and unplugged. Over a trash can quickly invert the unit and pour the beads into the trash. **DO NOT POUR HOT BEADS INTO THE TRASH!** A few of the glass beads may fall into the housing. To remove them, shake the **GERMINATOR** over the trash while holding it upright and then inverted. Repeat this process until all the beads have fallen out of the unit.

To pour the new beads into the well roll up a piece of paper in the shape of a funnel. Place the funnel into the well and pour the beads into the funnel. One 12 oz. bag should fill up the entire well to within $\frac{1}{2}$ " of the well rim.

WARNING! TO AVOID ELECTRIC SHOCK, DO NOT REMOVE THE COVER TO THE GERMINATOR UNDER ANY CIRCUMSTANCES. IT IS DANGEROUS AND WILL VOID THE WARRANTY.



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