

**INSTRUCTIONAL MANUAL**  
**CAT. 62420-Series**

**Bacti-Cinerator IV**  
**Inoculating Loop and Needle Sterilizer**



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## Introduction


The BACTI-CINERATOR sterilizes inoculating loops and needles by using infrared heat. It sterilizes without the spattering of microorganisms and is gasless and flameless. For added stability, the base of the BACTI-CINERATOR is weighted. For convenience, it is designed to provide storage for six loop holders.


## Symbols Used

**T** Time Lag Fuse

**SN** Serial Number

 Attention! Consult Instruction Manual

 HOT! Easily touched higher temperature parts.

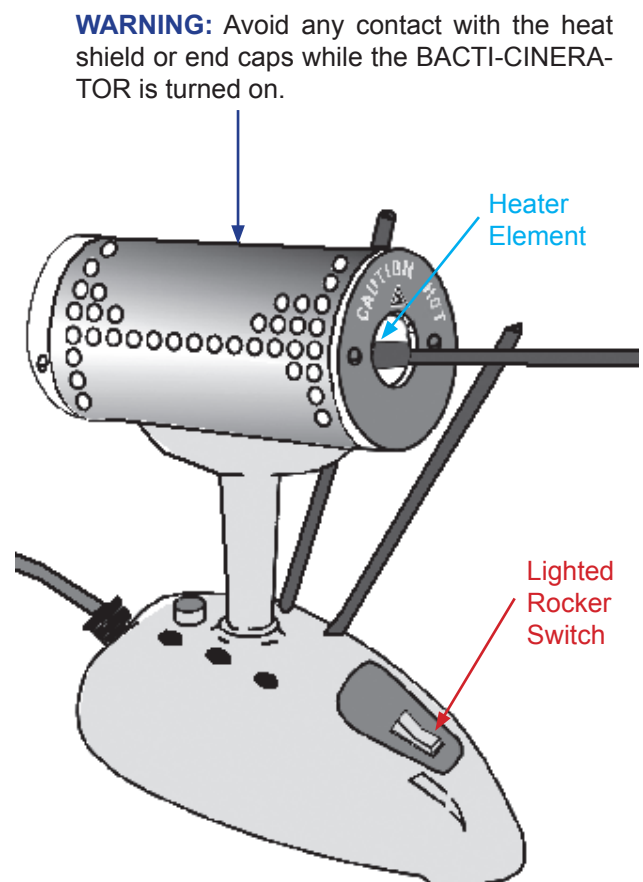
 Protective Conductor Terminal

## Operating Procedure

1. Remove the protective packaging.
2. Plug the electrical cord into the appropriate electrical outlet. **WARNING:** The unit must be properly grounded. DO NOT use a two-prong adapter to plug the BACTI-CINERATOR in to the electrical outlet.
3. The **Lighted Rocker Switch** (see drawing to right) will come on when the switch is in the "ON" position.
4. Once the unit is switched on, wait approximately 10 minutes for the optimal sterilizing temperature (1500°F/816°C) to be reached.

**NOTE:** The BACTI-CINERATOR can be turned on at the beginning of the workday and left in the "ON" position throughout the day. Having the unit on indefinitely does not pose an electrical or fire hazard. Also, turning the BACTI-CINERATOR to the "OFF" position during extended periods of non-use will conserve the life of the **Heater Element** (see drawing to right).

5. Gently insert the loop or needle, attached to an insulated loop holder, into the **Heater Element**. DO NOT scrape the sides of the **Heater Element**. Scraping the sides of the **Heater Element** will reduce the life of the unit. Insert the loop toward the rear of the heating element to avoid spattering. The loop should remain within the heater element a minimum of five seconds. It is not necessary to obtain a glowing loop to ensure sterility. **NOTE:** All the demonstrable microorganisms will be destroyed within five seconds.



## Precautions and Maintenance

- Use only Littlefuse as a replacement for the protective fuse.
- Only insulated loop holders should be used when inserting inoculating loops or needles into the heater element.
- DO NOT use for scalpels, forceps or any sharp objects. The use of such objects can cause element malfunction and void the heater element warranty.
- Periodic visual inspection of the heater element should be performed to determine if the heater element core is worn. Inspect for small cracks and residue buildup in both the cool and heated conditions. **NOTE:** In the heated condition, cracks can be seen as small, intensely yellow-orange fissures. If any defects are noted, the heater element should be replaced before element malfunction occurs.
- DO NOT allow the inoculating loops and needles to stay in the heater element for extended periods of time. This causes the loop holder to become extremely hot and increase the wearing of the loops and needles.
- **The cooling shield can reach temperatures of up to 400°F. Avoid contact with flammable materials.**
- Use unit in accordance with these operating instructions, as protection provided by the equipment may be impaired if instructions are not followed.



DO NOT immerse the BACTI-CINERATOR in water or other cleaning solution. Clean using a damp (not wet) cloth. Failure to follow the cleaning procedure described herein could result in hazards to users.

As with any AC powered electric device, care must be taken to prevent liquid from entering the BACTI-CINERATOR in order to avoid electrical shock hazard, fire hazard, or damage to electrical components.

## General Cleaning Instructions

1. Turn off the BACTI-CINERATOR and let cool one hour.
2. **IMPORTANT:** Unplug the BACTI-CINERATOR from the power source. **Never** clean the BACTI-CINERATOR while connected to the main supply.
3. Use a mild detergent for general cleaning of all outside surfaces. A cloth dampened with isopropyl alcohol may be used to clean the unit.
4. Avoid excess moisture around the heating element and the power cords as this can lead to an electrical shock hazard.

## How to Install a Replacement Heater Element



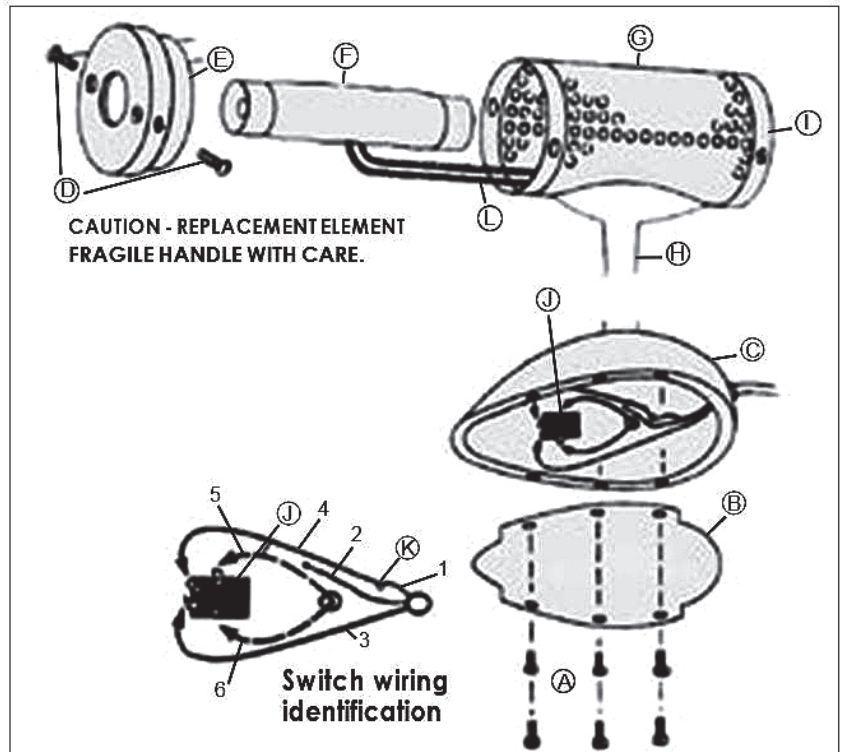
Only qualified personnel should perform all repairs.

BEFORE replacing the heater element, be sure to:

1. Turn Switch off.
2. Unplug the BACTI-CINERATOR from the power source.
3. Allow BACTI-CINERATOR to cool for at least one hour.

### Installation

1. Remove the screws (A) securing the cover plate (B) to the base.
2. On the inside of the unit, remove the 2 heater element lead wires (5 & 6) from the lighted rocker switch (J).
3. Remove the 2 screws (D) releasing the front cap (E) from the cooling shield (G) and slide the front cap off.
4. To remove the heater element (F), pull the element out while allowing the element leads (L) to be drawn up through the base post (H).
5. To install the new element, reverse the procedure, feeding the element lead wires down through the base post (H), situating the element into the rear cap (I) tubular housing.
6. Make certain the element opening is facing towards the front cap (E) before attaching the screws (D) through the front cap (E) and cooling shield (G).
7. Attach the heater element leads (5 & 6) to the lighted rocker switch (J).
8. Check all electrical connections. Replace cover plate (B); make sure all leads are inside the base; fasten screws (A). Plug the electrical cord into the power source and turn switch "ON". Allow 10 minutes before use.



### Components

- (A) Cover Plate Screws
- (B) Cover Plate
- (C) Base
- (D) Front Cap Screws
- (E) Front Cap
- (F) Heater Element
- (G) Cooling Shield
- (H) Base Post
- (I) Rear Cap
- (J) Lighted Rocker Switch
- (K) Fuse Holder
- (L) Heater Element Leads

### Wires

- (1) Power Cord to Fuse
- (2) Power Cord to Ground
- (3) Power Cord to Lighted Rocker Switch
- (4) Fuse to Lighted Rocker Switch
- (5) Heater Element to Lighted Rocker Switch
- (6) Heater Element to Lighted Rocker Switch

## Specifications

### Electrical requirements

#### *Domestic*

120V AC, 60 Hz, 1.1 Amps, 135W

#### *International*

220V AC, 50 Hz, 0.6 A, 135W

240V AC, 50 Hz, 0.6 A, 135W

100V AC, 50Hz, 1.6A, 160W

*Weight* – Approximately 3.35 lbs.

*Dimensions* – Approximately 10" High x 4" Wide x 8-1/2" Deep

*Case Material* – Aluminum Alloy

*Ambient Operating Conditions* – Temperature: 5° to 40°C (41° to 105°F)

*Relative humidity* – 10-95% non-condensing

*Atmospheric Pressure* – 645 mm Hg - 795 mm Hg

Indoor Use Only

Main supply fluctuations not to exceed 10% of nominal

*Installation Category* – 2

*Pollution Category* – 2

*Type of protection against electrical shock* – Class 1

### *Fuse*

100V, 120V Models – 5 x 20, 2.0 Amp Time Lag Fuse  
Littlefuse 218002 T2.0AL

220V, 240V Models – 5 x 20, 1.0 Amp Time Lag Fuse  
Littlefuse 218001 T1.0AL

### *Heater Element Material Compounds*

#### High Temperature Felt

Material – 25-55% Aluminosilicate Fibers, 10-20% Silica Amorphous, 45-55% Water

Chemical Family – Vitreous Aluminosilicate Fibers

Melting Point – >3200° F

#### Ceramic Molding Material

Material – 50-70% Silicon Dioxide (Fused), 0-10% Silica Diokide (Cristobalite), 9-22% Zirconium Orthosilicate. 0-6% Aluminum Oxide, 0-17% Silicone Resin, 0-14% Wax, 0-3% Cobalt Aluminate, 0-2% Performance Additives

Flex Strength – 1083-1979 PSI

Service Temperature – 2282° F

## Accessory List

Catalog #	Description
2420-10	Bacti-Cinerator IV, 115 Volt
62420-20	Bacti-Cinerator IV, 220 Volt
62420-40	Bacti-Cinerator IV, 240 Volt
62420-52	Replacement Switch
62420-51	Replacement Bacti III Heater Element, 115V
62420-53	Replacement Bacti III Heater Element, 220V
62420-54	Replacement Bacti III Heater Element, 240V
62420-55	Replacement Bacti IV Heater Element, 115V
62420-56	Replacement Bacti IV Heater Element, 220V
62420-57	Replacement Bacti IV Heater Element, 240V

### *Inoculating Loop/Needle*

Nichrome wire. An 8" aluminum handle with a 3" nichrome wire, 25 gauge. Loop O.D. is 4mm; loop I.D. is 2.5 mm. Available with a loop or a needle.

Catalog #	Description
72952-10	Inoculating Loop, 12 pk
72952-20	Inoculating Needle, 12/pk

### *Calibrated Loops*

The 0.01 ml loops are calibrated to A.P.H.A. Standards and are made from 19 gauge B&S platinum wire with 5% rhodium. The 0.001 ml loops is made from 26 gauge B&S platinum with 15% iridium.

Catalog	Contained Volume	Loop Diameter	Length
62430-10	0.01 ml	4 mm	25 mm
62430-20	0.01 ml	4 mm	70 mm
62430-30	0.001 ml	1.45 mm	70 mm

### *Inoculating Needle*

Made from 26 gauge B&S platinum wire with 15% iridium to provide rigidity with thinner wire for delicate work. Both ends are ground smooth.

Catalog #	Description
62432-01	Inoculating Needle, 70 mm

## Accessory List, *continued*

### *Inoculating Loops*

Our high quality inoculating loops are made from platinum wire. The 15% iridium adds necessary rigidity permitting thinner wire for delicate work. The loop section is welded and smoothly finished to form a "perfect circle".

Catalog #	Loop Dia. mm	B&S Gauge mm	Length mm
62433-02	2	24 (0.5106)	45
62433-03	3	24 (0.5106)	45
62433-05	5	24 (0.5106)	45
62434-02	2	26 (0.4038)	45
62434-03	3	26 (0.4038)	45
62434-05	5	26 (0.4038)	45
62436-03	3	24 (0.5106)	70
62436-05	5	24 (0.5106)	70
62437-02	2	26 (0.4038)	70
62437-03	3	26 (0.4038)	70
62437-05	5	26 (0.4038)	70
62438-02	2	28 (0.3206)	70
62438-03	3	28 (0.3206)	70

### *Inoculating Loop and Needle Holders*

Made from durable, heat resistant brass with a fiberglass insulating sleeve over the gripping area. The threaded collet type collar holds all wire gauge

Catalog #	Description
62440-06	Loop & Needle Holder 6 in. (152 mm)
62440-08	Loop & Needle Holder 8 in. (203 mm)