## 1.0 CONVENTIONS

This section describes the conventions used throughout this manual, as follows:

<table>
<thead>
<tr>
<th>Convention</th>
<th>Application</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Italic</em></td>
<td>Reference to a section, figure, or table</td>
<td>(See Figure 3-1, Priming Cassette)</td>
</tr>
<tr>
<td></td>
<td>Function or mode specific instructions</td>
<td><em>Primary Only</em>: Attach an empty container.</td>
</tr>
<tr>
<td>[ALL CAPS]</td>
<td>Keys or touchswitches on the device are described all caps in brackets</td>
<td>[OFF CHARGE]</td>
</tr>
<tr>
<td>ALL CAPS</td>
<td>Screen displays and device labels (as appropriate)</td>
<td>TURN TO RUN</td>
</tr>
<tr>
<td>Bold</td>
<td>Emphasis</td>
<td>...sets are supplied Sterile and are for...</td>
</tr>
</tbody>
</table>

### 1.1 Warnings Cautions, and Notes

Alert messages used throughout this manual are described below. Pay particular attention to these messages.

**WARNING**

A WARNING MESSAGE CONTAINS SPECIAL SAFETY EMPHASIS AND MUST BE OBSERVED AT ALL TIMES. FAILURE TO OBSERVE A WARNING MESSAGE IS POTENTIALLY LIFE THREATENING.
The following features are included in the Pump X3:

- Micro/Macro 0.1-999 ml/hr flow rate range
- Large LCD screen
- Lockout switch
- Panel back illumination on AC power
- Wide range of standard and specialty administration
- Microprocessor control
- Microprocessor control
- Quick select in programs
- Volume and rate increase
- Continuous infusion to quickly increase rate and volume
- Standard (milliliter, partid, syringe and fixed use
- Selfs
- Parenteral, blood and nonparenteral (central) fluid
- Backpumping
- Backpumping
- Fault and low protection
- Delery

**Note:** Figures are rendered as graphic representations in accompanying documents.

This symbol directs the user to consult a caution or procedure.

**Caution:** A note highlighting information that helps explain hazard or failure.

**Warning:** A note emphasizing information that contains information that could result in serious patient or user harm. The following text is a multi-line volumetric pump that includes:

- Large LCD screen
- Lockout switch
- Panel back illumination on AC power
- Wide range of standard and specialty administration
- Microprocessor control
- Quick select in programs
- Volume and rate increase
- Continuous infusion to quickly increase rate and volume
- Standard (milliliter, partid, syringe and fixed use
- Selfs
- Parenteral, blood and nonparenteral (central) fluid
- Backpumping
- Backpumping
- Fault and low protection
- Delery

**Note:** Figures are rendered as graphic representations in accompanying documents.

This symbol directs the user to consult a caution or procedure.

**Caution:** A note highlighting information that helps explain hazard or failure.
2.1 User Qualification

The Plum XL3 infusion system is for use at the direction or under the supervision of licensed physicians or by licensed or certified healthcare professionals who are trained in the use of the Plum XL3 and the administration of parenteral or enteral fluids and drugs.

3.0 GETTING STARTED

This section describes the instrument installation procedures for the Plum XL3 Micro/Macro.

3.1 Unpacking

CAUTION: Product damage may occur unless proper care is exercised during unpacking and installation. Do not use the Plum XL3 if it appears damaged in any way. The battery may not be charged upon receipt.

Inspect the Plum XL3 packaging for visible shipping damage. If any damage is found, contact the delivering carrier immediately.

Carefully remove the Plum XL3 from the shipping carton. Retain the packing slip and save all packing material in case the Plum XL3 is damaged or fails the self-test and has to be returned to the manufacturer.

Inspect the Plum XL3 thoroughly for damage.

CAUTION: If the Plum XL3 appears to be damaged; contact Abbott Laboratories.

3.2 Self-Test

CAUTION: Do not place the Plum XL3 in service if it fails the self-test.

Connect the AC power cord to AC power, then confirm the AC power indicators illuminate (next to the OFF CHARGE setting). Place a primed administration set into the cassette door of a pumping unit (see Section 5.0, INSTRUCTIONS FOR USE). Close the cassette door.

After the cassette door is closed, turn the control dial to SET RATE.
COMPONENTS

Power Cord
Audio Switch
Eqippotential Post
Lockout Switch
Test Port
Pole Clamp
Attachment
Mini pole
Indicator
Pump Operating Indicator
AC Power Indicator
Control Dial
LCD Screen
Cassette Door
Door Handle

The front and back of the pump X3 are shown below.

Component 4.0

Note: If an alarm occurs during the self-test, note the
OFF CHARGE setting.

AC power for a minimum of six hours in the
administration set; then reconnect the pump X3 to
the battery. The voltage range is 24 VAC ± 10%.

Failure, verify infusion pump settings.

The procedure above for the remaining two pumpers
the screen indicating the pump is in use; repeat
from AC power and confirm that the battery displays
on the LCD screen.

Support Operations:

1. Support Operations Technical
2. Support Operations Technical
3. Support Operations Technical
4. Support Operations Technical

The LCD screen displays all the
symbols directly, except that the

In this line load is shown after

SECONDARY PRIMARY ACCUMULATION

TRIM TO CLEAR SECTION ACCUMULATION
NO CONFIGURATIONS:

430-4247-001 (Rev. 6/97)
4.1 Control Dial Settings

**OFF CHARGE** stops all active functions. The battery charges in any dial setting when the Plum XL3 is connected to AC power. Store the Plum XL3 in the OFF CHARGE setting and plugged into AC power.

**SET RATE** sets the delivery rate for the primary or secondary line using the ◆ or ◣ key. The rate range is 0.1 to 99.9 mL/hr in 0.1-mL increments, then 100 to 999 mL/hr in 1-mL/hr increments.

*Note:* Use the [QUICKSET] key to quickly raise the rate to the next higher entry in this sequence: 0, 5.0, 25.0, 50.0, 75.0, 100, 125, 150, 200, 500, 999.

**SET VTBI** sets the volume to be infused/delivered (VTBI) from the primary or secondary line using the ◆ or ◣ key. The VTBI range is 0.1 to 99.9 mL in 0.1-mL increments, then 100 to 9999 mL in 1-mL increments.

*Note:* Use the [QUICKSET] key to quickly raise the VTBI to the next higher entry in this sequence: 0, 10.0, 25.0, 50.0, 100, 150, 250, 500, 1000, 2000, 3000, 4000, 9999.

**RUN** starts fluid delivery at the rate set by the user. **RUN** is the only setting that delivers fluid. The pump operating indicator light on the front panel flashes during pumping.

**HOLD/RESET** stops fluid delivery. Fluid containers can be changed in this setting. If the pumping unit is in an alarm condition, **HOLD/RESET** silences the audible alarm. Alarm messages are retained until control dial is returned to the **RUN** setting.

**CLEAR VOL** clears the total volume delivered. To avoid unintentional erasure of volumes, an alert sounds to allow the user to change the setting before the volumes are cleared (see Section 6.7, Clear Volume).

4.2 Operating Keys

**PRI-SEC** selects the fluid line to program. Press the [PRI-SEC] key when the control dial is in **SET RATE** or **SET VTBI** to toggle between the primary and secondary line.

**QUICKSET** adjusts the fluid delivery rate up or down while pumping is in progress. Hold the [QUICKSET] key while pressing the ◆ or ◣ key to increase or decrease the delivery rate.
```
4.3 Additional Features

TROUBLESHOOTING

To the alarm lips in section 7.0.

Silence: A low battery alarm. Enter
recondition is not connected. To
after two minutes if the alarm
flash. The audible alarm flashes
and the LCD screen continue to
display and audible alarms. Turn alarm display
(TEMPORARY modes

Silence: Emergency secondary infinite

Prime/Prime is also used to
into the secondary line:
the primary line and explain the ar
HOLD/RESET to pump fluid from
the control dial is in
Press the [BACKPRIME] key when
secunclent in the cassette.
[BACKPRIME] clears any al

3000, 4000, 9999,
100, 150, 250, 500, 1000, 2000,
sequence: 0, 10.0, 250, 50.0,
next higher entry in the
key causes the up to change to the
MODE, pressing the [QUICKSET]
will be instrument in

100, 125, 150, 200, 500, 999,
sequence: 0, 5.0, 250, 50.0, 75.0,
next higher entry in this
key causes the rate to change to
MODE, pressing the [QUICKSET]
will be the X3 in SET RATE

Increment.

[x] Quickset

[ ] Prime

[ ] Back

[ ] Silence

[ ] Lockout

[ ] Audio Switch

[ ] Additional Features

[ ] Additional Features

[ ] Additional Features
```
5.0 INSTRUCTIONS FOR USE

This section describes the Plum XL3 Micro/Macro setup and cassette use.

5.1 Setup

To set up the Plum XL3, plug the power cord into an AC power outlet, unless temporary battery operation is desired.

**Note:** Use AC power whenever possible. Store the Plum XL3 connected to AC power to ensure a fully charged battery for emergency use.

Set the audio switch to the desired volume level, HIGH or LOW.

The Plum XL3 may be safely and conveniently mounted on an IV stand.

**CAUTION:** The XL3 system is designed to operate normally in the presence of most encountered EMF conditions. In the event of extreme levels of interference, such as encountered next to an electrosurgical generator, cellular telephones, or two-way radios, it is possible that the normal operation of a sensor or microcomputer might be disrupted. Operation of the infusion device under such conditions should be avoided.

5.2 Cassettes

The Plum XL3 is compatible with the wide range of PlumSets administration sets. Become familiar with the components illustrated in the following figure before preparing the cassette.
Open the upper clamp.

Mark the drip chamber to the score.

Pump into the outlet with a twisting motion.

Expose the outlet of the IV.

5.2.1 Preparing the Cassette

Fill the drip chamber to the score.

Close the upper clamp on the administration set.

For priming, then proceed as follows:

Use assemble technique to prepare the cassette.

Push in the flow regulator to close.
5.2.2 PRIMING THE CASSETTE

To prime the cassette, proceed as follows:

- Invert the cassette.

- Turn the flow regulator until a drop of fluid is seen in the pumping chamber.

- Turn the cassette upright, then prime the remainder of the administration set.

- Push in the flow regulator to close it.

- Confirm that there is no flow.

5.2.3 LOADING THE CASSETTE

To load the primed cassette into one of the three pumping units, proceed as follows:

- Open the cassette door by lifting the door handle.

- Holding the primed cassette by its fingergrip, slide it into the cassette door guides until it firmly seats in the door. Close the cassette door.

- Confirm that there is no flow.

5.2.4 SECURING THE TUBING

**WARNING**

ARRANGE TUBING, CORDS, AND CABLES TO MINIMIZE THE RISK OF PATIENT STRANGULATION OR ENTANGLEMENT.

Press the tubing from the cassette into the grooves between the pumping units or into the grooves at the far sides of the platform under the pump modules (refer to the following illustrations).
Without removing or repositioning the cassette, remove the cap from the reseal port (if used). Secondary port for placing the cassette.

To prepare the secondary line, use aseptic technique and proceed as follows:

1. Verify the valve adapter to the secondary line port is intact.
2. Insert the sterile adapter into the syringe. A sterile adapter must be used with an appropriate secondary port. (See section 6.4, Backflushing.)

Review the backflushing function (see the following guidelines):

Before preparing the secondary line, observe the air bubble function. The bubble function should be present, if not, replace the cassette.
6.0 PROGRAMMING

The Plum XL3 Micro/Macro has the following delivery mode from each pumping unit, A, B, or C:

- Primary only delivery
- Secondary only delivery
- Piggyback delivery

When a rate and a VTBI are entered for the primary line and no settings are entered for the secondary line, the Plum XL3 will deliver primary only. Likewise, when a rate and a VTBI are entered for the secondary line and no settings are entered for the primary line, the Plum XL3 delivers secondary only. When a rate and a VTBI are entered for the primary and secondary lines (piggyback delivery), the Plum XL3 completes secondary delivery before it begins primary delivery.

Note: The Plum XL3 retains all previous therapy settings and fluid delivery data in its memory until the settings are cleared by the user. Check the primary and secondary settings during the initial setup to confirm that all settings are correct. Confirm the proper clearing of the total volume delivered before use.

6.1 Primary Only Delivery

To program the Plum XL3 for primary only delivery, proceed as follows:

Turn the control dial to SET RATE.
Turn the control dial to SET VTDL.

Optional: Set the panel lookout.

Primary delivery begins.

Turn the control dial to RUN.

Set the PR-SEC] Key to set the volume to be delivered.

Proceed as follows:

6.2 Secondary only delivery
6.3 Piggyback Delivery

To program the Plum XL3 for piggyback delivery, proceed as follows:

1. Press the \( \Box \) or \( \Box \) key, or the [QUICKSET] key to set the volume to be delivered.

2. Turn the control dial to RUN. Secondary only delivery begins.

3. (Optional): Set the panel lockout switch to locked to prevent unauthorized tampering of the device (see Section 6.8, Lockout).

4. Press the \( \Box \) or \( \Box \) key, or the [QUICKSET] key to set the primary rate.

5. Turn the control dial to SET VTBI.

6. Press the \( \Box \) or \( \Box \) key, or the [QUICKSET] key to set the volume to be delivered.

7. Turn the control dial to SET RATE.

8. Press the [PRI-SEC] key to select the secondary line.

9. Press the \( \Box \) or \( \Box \) key, or the [QUICKSET] key to set the secondary rate.
Primary only: Remove the container attached to the secondary inlet port, then cap the port (if appropriate).

To resume delivery, turn the control dial to RUN.

6.5 Changing Containers

To change a container, use aseptic technique and proceed as follows:

Turn the control dial to HOLD/RESET.

With the cassette door closed, spike the new container.

Note: If opening the cassette door, close the primary and secondary clamps before removing containers (to prevent mixing).

Turn the control dial to SET VTBI, then set the volume to be delivered.

To resume delivery, turn the control dial to RUN.

6.6 Titration

Titration is the incremental adjustment of the fluid delivery rate while pumping (primary or secondary) is in progress.

To titrate fluid delivery, hold down the [TITRATE] key and press the or key to increase or decrease the delivery rate.

6.7 Clear Volume

CLEAR VOL erases the total volume delivered from memory.

Note: The total volume delivered is the total amount of fluid, both primary and secondary, delivered to the patient.
1. Turn the control dial to RUN.

2. Correct the alarm condition:
   - If HOLD/RESET:
     - Turn the control dial to OFF.
   - If VOLTAGE:
     - Set VOLT.
     - Set PT.
     - Set HI/LO.

Press the [SILENCER] key. Observe the alarm message that displays.

Silence

If the alarm condition persists, proceed as follows:
- Clear an alarm message during alarm condition by using the associated controls.

Alarms

7.1

To hold/Reset:
- Turn the control dial to OFF.
- Press the CLEAR button.
- Volume is cleared.

Lockout

6.8

To clear total volume, turn the control dial clockwise to zero.
### The following tips help correct the alarm conditions that may occur:

<table>
<thead>
<tr>
<th>MESSAGE</th>
<th>POSSIBLE CAUSE</th>
<th>CORRECTIVE ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIR IN LINE</td>
<td>Air detected distal to cassette</td>
<td>Remove and reprime cassette</td>
</tr>
<tr>
<td>AIR IN LINE BTACKPRIMING</td>
<td>Air detected proximal to cassette</td>
<td>Backprime to expel all air</td>
</tr>
<tr>
<td></td>
<td>Container empty</td>
<td>Change container and backprime to expel air</td>
</tr>
<tr>
<td>CHECK SETTINGS</td>
<td>Rate or VTBI not set</td>
<td>Turn to SET RATE or SET VTBI to check setting or enter values</td>
</tr>
<tr>
<td>DOOR</td>
<td>Cassette door open</td>
<td>Turn to OFF CHARGE, close cassette door, then restart</td>
</tr>
<tr>
<td>CASSETTE</td>
<td>Cassette improperly loaded</td>
<td>Turn to OFF CHARGE, reload cassette, then restart</td>
</tr>
<tr>
<td></td>
<td>Cassette improperly primed</td>
<td>Turn to OFF CHARGE, reprime cassette, then restart</td>
</tr>
<tr>
<td></td>
<td>Cassette failed valve leak test</td>
<td>Turn to OFF CHARGE, open and close cassette door, then restart. If condition recurs, replace PlumSet</td>
</tr>
<tr>
<td>LOCKED (flashing)</td>
<td>Control dial turned while lockout switch is on</td>
<td>Set lockout switch off. Set unit for desired operation. Set lockout switch on</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MESSAGE</th>
<th>POSSIBLE CAUSE</th>
<th>CORRECTIVE ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOW BATTERY</td>
<td>Approximately 30 minutes of battery power remains</td>
<td>Connect to AC power</td>
</tr>
</tbody>
</table>

**Note:** Pressing the [SILENCE] key mutes the audible alarm for 15 minutes from the time the LOW BATTERY alarm occurred.

**Note:** When the battery discharges, pumping stops and the alarm sounds continuously for one minute before the device shuts down completely.

<table>
<thead>
<tr>
<th>OCCLUSION</th>
<th>Clamp closed</th>
<th>Open clamps</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tubing kinked</td>
<td>Unkink tubing</td>
</tr>
<tr>
<td></td>
<td>Possible clotted catheter</td>
<td>Check IV site</td>
</tr>
</tbody>
</table>

| TURN TO RUN      | Control dial is not in OFF CHARGE or RUN setting and no key is pressed for five minutes | Turn control dial to RUN, OFF CHARGE, or HOLD/RESET |

System Operating Manual 33 430-94217-001 (Rev. 11/95)
The nearest Abbott Laboratories Technical Support Operations is Abbott Laboratory Technical Support Operations, 750 Jarvis Drive, Moraga, Hill, California 95037. Technical Support Operations can be reached at 1-800-241-4007. Address: Send all authorized, prepaid returns to the following:

Abbott Laboratories Technical Support Operations, 750 Jarvis Drive, Moraga, Hill, California 95037.

For technical assistance, contact Abbott Laboratories Technical Support Operations at 1-800-241-4007.

To verify the malfunction, proceed as follows:

1. The display on the screen.
2. Record the error number.
3. Displayed on the screen.

Possible Cause Corrective Action

---

Diagram:

- [Diagram of electrical components]

---

Table:

<table>
<thead>
<tr>
<th>Possible Cause</th>
<th>Corrective Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>KVO open</td>
</tr>
<tr>
<td>Primary</td>
<td>VTBI complete</td>
</tr>
<tr>
<td>Program new VTBI</td>
<td></td>
</tr>
</tbody>
</table>

---

Service:

- Remove the pump X2 from the device.
- If the malfunction recurs, previously set settings to restore the control dial to its default.

Charge:

- Turn the control dial to OFF.
8.0 PRECAUTIONS

For optimum operation of the Plum XL3 Micro/Macro, observe the following precautions.

8.1 Artifacts

Nonhazardous, low level electrical potentials are commonly observed when fluids are administered using infusion devices. These potentials are well within accepted safety standards, but may create artifacts on voltage sensing equipment such as ECG, EMG, and EEG machines. These artifacts vary at a rate that is associated with the infusion rate. If the monitoring machine is not operating correctly or has loose or defective connections to its sensing electrodes, these artifacts may be accentuated so as to simulate actual physiological signals. To determine if the abnormality in the monitoring equipment is caused by the infusion device instead of some other source in the environment, set the infusion device so that it is temporarily not delivering fluid. Disappearance of the abnormality indicates that it was probably caused by the electronic noise generated by the infusion device. Proper setup and maintenance of the monitoring equipment should eliminate the artifact. Refer to the appropriate monitoring equipment system documentation for setup and maintenance instructions.

8.2 Healthcare Professional and Patient Related

Product checkout should be performed by qualified personnel only.

Arrange tubing, cords, and cables to minimize the risk of patient strangulation or entanglement.

Consult the drug container labeling to confirm drug compatibility, concentration, delivery rates, and
8.5 Battery Operation

The drop chamber to fill the reservoirs and connect the secondary port of the pump to the reservoirs. Before connecting the secondary port of the pump to the reservoirs, the reservoirs should be charged in accordance with the manufacturer's instructions. If the reservoirs are not charged, filling the reservoirs may cause the pump to malfunction. If the reservoirs are not charged, filling the reservoirs may cause the pump to malfunction. If the reservoirs are not charged, filling the reservoirs may cause the pump to malfunction.

8.4 Seals and Accessories

Seals and accessories can be used with the system. Only pumps or accessories that are compatible with the system should be used. Before using any pumps or accessories, consult the manufacturer's instructions. If the pump does not meet the manufacturer's specifications, it may not be fully charged. When charging the pump, charge it to AC power for at least six hours. The battery may not be fully charged when using the battery. Always use the correct charge setting with the control panel. When charging the battery, use the correct charge setting. After charging the battery, the battery may not be fully charged. When charging the battery, use the correct charge setting. After charging the battery, the battery may not be fully charged.
To avoid pressurization when backpriming into a syringe or a vial, the user must ensure that these containers have sufficient empty space to accept the backprimed fluid.

8.6 General

Possible explosion hazard exists if used in the presence of flammable anesthetics.

Product damage may occur unless proper care is exercised during unpacking and installation. Do not use the Plum XL3 if it appears damaged in any way.

Do not place Plum XL3 in service if it fails the self-test (see Section 3.2, Self-Test for detailed information).

The XL3 system is designed to operate normally in the presence of most encountered EMF conditions. In the event of extreme levels of interference, such as encountered next to an electrosurgical generator, cellular telephones, or two-way radios, it is possible that the normal operation of a sensor or microcomputer might be disrupted. Operation of the infusion device under such conditions should be avoided.

The screen displays VTBI in 0.1-mL increments from 0.1 to 99.9 mL. 100 to 9999 mL are displayed in 1-mL increments. Any fraction of a milliliter delivered is not displayed, but is retained in memory.

Keep the cassette door securely closed while the Plum XL3 is not in use, to avoid cassette door damage.

To avoid mechanical or electronic damage, do not immerse the Plum XL3 in any cleaning fluids or cleaning solutions.

Certain cleaning and sanitizing compounds may slowly degrade components made from some plastic materials. Using abrasive cleaners or cleaning solutions not recommended by Abbott Laboratories may result in product damage. Do not use compounds containing combinations of isopropyl alcohol and dimethyl benzyl ammonium chloride.

Never use sharp objects such as fingernails, paper clips, or needles to clean any part of the Plum XL3.

Do not sterilize by heat, steam, ethylene oxide (ETO), or radiation.

To avoid device damage, cleaning solutions should be used only as directed in Section 9.1, Cleaning and Sanitizing. The disinfecting properties of cleaning solutions vary; consult the manufacturer for specific information.
consult the manufacturer for specific information.

Do not sterilize by heat, steam, ethylene oxide (ETO).

Never use sharp objects such as fingernails, paper
cuts, or needles to clean any part of the Pump XT3.

alcohol and diethyl benzyl ammmonium chloride.

Certain cleaning and sanitizing compounds may

CAUTION: following cleaning and sanitizing guidelines. For proper maintenance of the Pump XT3, observe the

9.1 Cleaning and Sanitizing

9.0 CLEANING, MAINTENANCE, AND

STORAGE
Establish a routine weekly schedule for cleaning the Plum XL3. To clean the Plum XL3, proceed as follows:

Turn the control dial to OFF CHARGE, then disconnect the Plum XL3 from AC power.

Use the recommended LifeCare Germicidal Towelette to clean the exposed surfaces of the Plum XL3. The exposed surfaces of the Plum XL3 may also be cleaned with a lint-free cloth dampened with one of the other recommended cleaning solutions listed as follows or mild, nonabrasive soapy water.

Note: The Abbott LifeCare Germicidal Towelette (List 11937) is a pre-moistened wipe containing a quaternary ammonium chloride germicidal detergent. The towelette has been found to be effective against a broad spectrum of bacterial, fungal, and viral pathogens. For additional information on the LifeCare Germicidal Towelette, call Abbott Customer Service 1-800-ABBOTT3 (1-800-222-6883).

<table>
<thead>
<tr>
<th>Cleaning Solution</th>
<th>Manufacturer</th>
<th>Preparation</th>
</tr>
</thead>
<tbody>
<tr>
<td>LifeCare® Germicidal</td>
<td>Manufactured for</td>
<td>Per manufacturer's recommendation</td>
</tr>
<tr>
<td>Towelette (subject to</td>
<td>Abbott Laboratories</td>
<td></td>
</tr>
<tr>
<td>availability)</td>
<td>S. M. Edison Co.</td>
<td></td>
</tr>
<tr>
<td>Super Edisonite®</td>
<td>Calgon Vestal Laboratories</td>
<td>Per manufacturer's recommendation</td>
</tr>
<tr>
<td>Vesphere II® se</td>
<td>Calgon Vestal Laboratories</td>
<td>Per manufacturer's recommendation</td>
</tr>
<tr>
<td>Manu-Klenz®</td>
<td>Calgon Vestal Laboratories</td>
<td>Per manufacturer's recommendation</td>
</tr>
<tr>
<td>Formula C™</td>
<td>Diversey Corporation</td>
<td>Per manufacturer's recommendation</td>
</tr>
<tr>
<td>Household bleach</td>
<td>Various</td>
<td>Per hospital procedures; do not</td>
</tr>
<tr>
<td></td>
<td></td>
<td>exceed one part bleach in ten parts water</td>
</tr>
</tbody>
</table>

On a routine basis, clean all of the elements behind the cassette doors using LifeCare Germicidal Towelettes or cotton-tipped swabs saturated with cleaning solution. The cassette doors may be unlatched from their door handles to facilitate cleaning.

To unlatch a cassette door from its handle, tilt the device back, open the cassette door, then push the door release tab to open the door fully.
9.3 Storage

Storage guidelines:
- Store the Pump X3 away from excessive heat, cold.
- Store the Pump X3 away from excessive humidity.
- Turn the control dial to the OFF CHARGE setting.

To prolong the life of the Pump X3, observe the following:

CAUTION: When necessary, possible, battery level, keep the line cord connected to AC power.
To maintain maximum battery charge and to prolong recharge time, replace, consult a qualified hospital technician. Recharge the battery and recharge the Pump X3 if the battery level will need to be discharged and recharged. The battery will be partially charged.

9.2 Battery Maintenance

CAUTION: If the Pump X3 is battery powered or emergency backup, connect the Pump X3 to AC power immediately.

CAUTION: If the Pump X3 is battery powered, battery must be charged at least once every six months for optimum battery performance and life.

In battery power mode, when the Pump X3 is connected to AC power, the alarm sounds.

Failure to meet inflation pump settings.
- Failure to meet inflation pump settings.
- Failure to meet inflation pump settings.
- Failure to meet inflation pump settings.
- Failure to meet inflation pump settings.

Battery Maintenance:
- Battery Maintenance:
- Battery Maintenance:
- Battery Maintenance:
- Battery Maintenance:

Service

9.4 Service

Laboratories Technical Support Operations:

Service Manual may be ordered from Abbott
All servicing or adjustments to the Pump X3 should be made by a qualified technical personnel. A technical

CAUTION: Do not operate the Pump X3 with the power line cord disconnected from the Pump X3.
10.0 SYSTEM ACCESSORIES

Plum XL3 Micro/Macro is compatible with all Plum accessories, and all PlumSets administration sets.

Note: Accessories are updated without notice. Contact an Abbott Laboratories Hospital Products representative for current listings.
10 psi (+5, -2 psi)

DISTANT
OCCULTION RANGE:
100 to 6999 ml (in 1-ml increments)

Mode:
Primary, Secondary

DOSE LIMIT RANGE:
100 to 6999 ml/ir (in 1-ml increments)

Mode:
Primary, Secondary

K xo:
0.10 to 0.99 ml/ir (in 0.1-ml increments)

equivalent pressure:
0.01000 feet (0.3000mm) or
10% to 90% relative

Battery Title:
The pump XL3 is battery powered for mobile use. Battery pack provided;
replaceable with leads and high-quality connectors. Accessible for testing of battery packs using a cradle
packaged with the device. Use of 7.2 V batteries with an internal to
6 V adapter used in at least one cradle. Lead-acid batteries are required to
be rechargeable and sealed.

 relatrive humidity:
20% to 60% C

Environment:
10% to 40% C, 10% to 90% relatve
humidity

Pump is powered off when batteries are present. The pump will
not start and will not function unless batteries are present.

Recharge:
The batteries charge whenever the

Power Requirements:
100-120 VAC, 47/63 Hz, less than
60 W

Environmental:

Physicial:
Approximately 7.25" x 12.2W x
13.75H (including pole clamp)

Approximately 20 lbs (with batteries)

High-impact plastic

ELECTRICAL:
Class: II

WEIGHT:

Dimensions:

12.0 WARRANTY

Subject to the terms and conditions herein, Abbott Laboratories, herein referred to as Abbott, warrants that (a) the product shall conform to Abbott's standard specifications and be free from defects in material and workmanship under normal use and service for a period of one year after purchase, and (b) the replaceable batteries shall be free from defects in material and workmanship under normal use and service for a period of 90 days after purchase. Abbott makes no other warranties, express or implied, as to merchantability, fitness for a particular purpose, or any other matter.

Purchaser's exclusive remedy shall be, at Abbott's option, the repair or replacement of the product. In no event shall Abbott's liability arising out of any cause whatsoever (whether such cause be based in contract, negligence, strict liability, other tort or otherwise) exceed the price of such product, and in no event shall Abbott be liable for incidental, consequential, or special damages or losses or for lost business, revenues, or profits. Warranty product returned to Abbott must be properly packaged and sent freight prepaid.

The foregoing warranty shall be void in the event the product has been misused, damaged, altered, or used other than in accordance with product manuals so as, in Abbott's judgment, to affect its stability or reliability, or in the event the serial or lot number has been altered, effaced, or removed.

The foregoing warranty shall also be void in the event any person, including the Purchaser, performs or attempts to perform any major repair or other service on the product without having been trained by an authorized representative of Abbott and using Abbott documentation and approved spare parts. For purposes of the preceding sentence, "major repair or other service" means any repair or service other than the replacement of accessory items such as batteries and detachable AC power cords.

In providing any parts for repair or service of the product, Abbott shall have no responsibility or liability for the actions or inactions of the person performing such repair or service, regardless of whether such person has been trained to perform such repair or service. It is understood and acknowledged that any person other than an Abbott representative performing repair or service is not an authorized agent of Abbott.
The presence of flammable anesthetics. A possible explosion hazard exists if the device is used in the presence of a physician or other licensed practitioner.

CAUTION: Federal (USA) law restricts this device to sale by or on the order of a physician or other licensed practitioner.

Note: Outside the U.S., contact your local Abbott Laboratories sales office.

Moraga Hill, CA 95037
755 Judirs Drive
Abbott Laboratories
Technical Support Operations

Customer service within the United States, contact:
1-800-426-1713 (1-800-222-6869)

For technical assistance and product return authorization:
1-800-241-4022

For customer service within the United States, contact:
1-800-426-1713 (1-800-222-6869)