

LABORATORY ANIMAL FACILITIES
STANDARD OPERATING PROCEDURES
FOR
SURGIVET V9004 CAPNOGRAPH OPERATION

- 1.0 Purpose
This procedure provides basic operating instructions for the V9004 Capnograph.
- 2.0 Scope
This procedure applies to all veterinary and principal investigator staff using the monitor.
- 3.0 Procedure
 - 3.1 The SurgiVet V9004 displays measurements of end-tidal CO₂ (ET CO₂), inspired CO₂ (inCO₂), respiration rate (RR), arterial blood oxygen saturation (Sp.O₂), and pulse rate (HR).
 - A. Displayed numerically and wave form where applicable.
 - 3.2 Alarm limits can be set on all monitored parameters (see operation manual).
 - 3.3 It is recommended to always plug in the monitor using the AC adapter.
 - A. Internal battery only has a two hour life span.
 - B. AC adapter port is located in the back of the machine (center).
 - 3.4 Prior to starting the machine, make sure the CO₂ absorber port is connected.
 - A. This is a closed circuit located in the rear of the machine, right side.
 - B. Consists of a filter end for the top connection looping to the connection port immediately below it.
 - C. This CO₂ absorber removes CO₂ from the sample gas when doing a low/high calibration.
 - 3.5 Turn on the machine.
 - A. Depress button in lower left corner of machine, looks like a % sign.
 - B. When machine is plugged in using the AC adapter a glowing green light is next to it.
 - 3.6 The machine performs a calibration check when first turned on.
 - 3.7 Set your high and low alarms (see operation manual) for your individual patient.
 - 3.8 Attach leads to patient.
 - A. Pulse oximeter cable inserts into machine to the left of the on/off button where it says %SpO₂.
 1. There is an extension cord to make the pulse oximeter cord longer to reach the patient.
 2. Attach other end of cable to patient on:
 - a. Ear
 - b. Tongue
 - c. Lip
 - d. Between toes
 3. This cable will provide %SpO₂ and heart rate.

- B. CO₂ lead attaches to machine in upper left corner.
 - 4. One end of line screws on to a disposable moisture trap that is inserted in the gas inlet port.
 - 5. The other end of the line is connected to the end of the endotracheal tube.
 - a. This end of the CO₂ line is of universal size so it will easily attach onto the end of the endotracheal tube and becomes the connection port in your gas anesthesia breathing circuit.
 - b. Always remember to have the analyzer tubing facing upward off the ET tube so moisture does not accumulate in your line.
 - c. Do not occlude line in any way, i.e. make sure it is not kinked or stuck beneath something heavy.
- 3.9 There is a quick reference guide permanently attached to the top of the analyzer providing symbol descriptions.
- 3.10 The menu/enter key when depressed reveals the main menu.
 - A. Menus replace the wave forms.
- 3.11 Press the arrow keys above and below the menu/enter key to scroll to the desired menu setting.
 - A. An arrow next to entry indicates the entry you are scrolling by.
 - B. Press menu/enter key to choose your entry.

NOTE: The alarm setting entry is the second entry when you first hit the menu/entry key.

 - 1. Press down arrow once.
 - 2. Press menu enter key.
 - 3. Alarm settings are displayed.
 - 4. You can change your alarm settings by:
 - a. Scroll to your setting you want to change and hit the menu/enter key.
 - b. That setting becomes highlighted.
 - c. Use the up and down arrows to change setting.
 - d. Press menu/entry key to accept change.
 - e. Scroll to EXIT and again press menu/entry to end.
- 3.12 Monitor can be connected to a printer (see operation manual).
- 3.13 Common problems
 - A. Occlusion appears
 - 1. Change CO₂ line leading to patient first.
 - a. The moisture trap occludes when it is full, if not the problem, then
 - 2. Change the CO₂ absorber in back of machine.
 - B. CO₂ rate climbs.
 - 1. CO₂ absorber needs changing or
 - 2. System is leaking.
 - C. See operation manual for more trouble shooting problems, page 14-1.
- 3.14 The Capnograph is serviced by SurgiVet, specifically Gerry Maute, 1-800-241-4224, x3596.

- 3.15 Calibration check is recommended by the SurgiVet technician to be done every three months.
- A. Calibration gas must be purchased from SurgiVet.
 - B. See operation manual, pages 6-2, 6-3 for instructions.
- 3.16 Capnograph should be kept free of debris.
- A. Reusable sensors and monitor should be cleaned with a soft cloth moistened in water or a mild soap solution.
 - B. To disinfect the sensor, wipe the sensor with isopropyl alcohol.
 - C. Disinfect between patients
 - D. Do NOT autoclave, ethylene oxide sterilize or immerse the sensors in liquid.