

HIGH DESERT HEALTH SYSTEM AMBULATORY SURGICAL CENTER

SUBJECT: V-118 OPTIMUMM SMOKE EVACUATOR	POLICY #: 1243
	VERSION: 1
APPROVED BY: ASC Approvers	
DATE APPROVED: 06/28/2016	

PURPOSE: To provide guidelines for the safe use of Optimumm Smoke Evacuator.

POLICY: The Optimumm Smoke Evacuator will be used according to the following guidelines. The Optimumm Smoke Evacuator is specifically designed to improve visibility and reduce potential health hazards associated with surgical smoke.

PROCEDURE:

1. The Optimumm Smoke Evacuator captures particulates and absorbs gases from surgical smoke. A centrifugal fan provides suction, drawing the surgical smoke into and throughout the system. In the first stage of filtration, a single-use prefilter captures gross particulates > 0.3 microns in size. Next, an ultra-low penetration air (ULPA) filter captures submicron particulates 0.12 microns in size with 99.999% efficiency. The charcoal element in the ULPA filter absorbs odorous gases.
2. The Optimumm Smoke Evacuator is designed for use with Valleylab Electrosurgical Pencils.

A. OPERATING MODES-

- 1) When the electrosurgical pencil is activated, the smoke evacuator operates in the pre-selected flow setting.
- 2) Four operating modes are available:
 - a) Standby – powers up the unit without activating the motor or vacuum flow.
 - b) Foot switch – is used to turn the smoke evacuator on or off with the optional Foot switch pedal.
 - c) Rapid Vac – is used to control the vacuum flow simultaneously with activation of a Valleylab Electro Surgical pencil. The mode is controlled with the optional generator interlink or electro surgery sensor.
 - d) Continuous – is used to operate the smoke evacuator using continuous airflow.

CAUTION:

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- Provide as much distance as possible between the smoke evacuator and other electronic equipment (such as monitors). An activated smoke evacuator may cause interference with them.
- Use the smoke evacuator only if the filter test has been completed. Otherwise, the smoke evacuator may not perform properly.
- Handle used filters as you would any biohazardous material. Dispose of the filters and tubing as you would any biohazard material in the red bags.

3. TESTING THE ULPA FILTER-

Test the ULPA filter with a new prefilter and no tubing or adapters installed. The mode selector can be set to any position while testing the ULPA filter.

- A. Before the filter test, verify the ULPA filter is properly installed and that the prefilter cover is removed. If the replace filter status indicator is blinking, the filter is not properly installed.
- B. Press the filter test button to test the ULPA filter. While the test is occurring, the Filter Status Indicators will blink alternating green and red. The filter test lasts approximately five seconds.
- C. After the test is complete.
 - 1) If the pass Filter Status Indicator illuminates green, the filter is functioning properly.
 - 2) If the Replace Filter Status Indicator illuminates red, replace the ULPA filter as described in the policy.
 - 3) If the Replace Filter Status Indicator illuminates blinking red, the filter is not properly installed. Reposition the filter and retest.

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4. CHANGING THE ULPA FILTER-

- A. Remove the ULPA filter by turning the filter assembly counter clockwise and pulling it out of the smoke evacuator.
- B. Dispose the prefilter, tubing and ULPA filter with the other operative waste materials in the red bag.
- C. Install a new E3630 prefilter in the smoke evacuator.

5. CHECKING THE SMOKE EVACUATOR-

- A. Before each use, test the following smoke evacuator components to verify performance:
 - 1) The ULPA filter
 - 2) The airflow controls
 - 3) The foot switch (if applicable)
 - 4) The electrosurgery sensor (if applicable)

6. BEFORE SURGERY-

- A. Install the prefilter onto the ULPA filter. The prefilter is held in place by 2 locking tabs.
- B. Installing the ULPA filter assembly into the smoke evacuator by aligning the key locking mechanism on the filter with the slot on the faceplate of the smoke evacuator. Slide the filter into the smoke evacuator and rotate the filter clockwise to lock in place.
- C. Testing the ULPA Filter

7. REPLACING THE ULPA FILTER-

- A. Rotate the ULPA filter assembly counterclockwise to loosen.
- B. Slide the ULPA filter assembly out of the smoke evacuator.
- C. Dispose of the prefilter and ULPA filter with other operative waste materials in the biohazard red bags as per policy.

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8. TESTING THE AIRFLOW CONTROLS-

WARNING- the smoke evacuator produces a strong vacuum. Properly adjust the airflow and the position of the inlet end of the wand or tubing to prevent patient injury and to prevent suction of surgical materials and surgical specimens.

- A. You can change the vacuum airflow rate when the smoke evacuator is on. When you place the smoke evacuator in standby mode, the airflow rate that you set previously remains in effect.
- 1) Verify that the ULPA filter and prefilter are installed. Verify that the prefilter cover is removed.
 - 2) Ensure that the power cord is plugged into a hospital grade power receptacle.
 - 3) Check that the mode selector is set to standby and that the standby indicator illuminates.
 - 4) Check the power switch on the lower left of the smoke evacuator front control panel. It should be on (), turn it on.
 - 5) Set the airflow to maximum by turning the vacuum Flow Selector clockwise.
 - 6) Turn the Mode Selector to continuous. Verify that the vacuum flow changes from high to low and that the vacuum flow indicators turn off as the motor speed decreases.

9. REMOVING THE PREFILTER AND TUBING-

- A. The prefilter used in the smoke evacuator removes gross particles from surgical smoke. You must remove and discard the used prefilter and tubing after each surgical procedures.
- B. The prefilter and tubing capture potentially hazardous particles. When removed, handle as you would any biohazardous material. Dispose of these items as you would with other operative waste materials.
- 1) Turn the Mode Selection to standby.
 - 2) Press the power switch on the front panel to turn off the smoke evacuator.

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- 3) With the prefilter connected to the tubing, disconnect the prefilter and tubing from the smoke evacuator.
- 4) Installed a new prefilter and leave the cover on until the smoke evacuator is ready to use again.

10. MINIMIZING NOISE-

The higher the power setting, the greater the noise. Minimize noise by using a lower power setting can be maximized by using a larger diameter tubing and/or positioning the tubing closer to the source of smoke.

11. CHANGING THE AIRFLOW-

You can change the airflow while the smoke evacuator is in use.

- A. To change the airflow, turn the Vacuum Flow Selector on the control panel.
- B. Verify that the indicator illuminates for the speed setting you selected.

12. TEMPORARILY TURNING OFF THE AIRFLOW-

To temporarily turn off the airflow, place the smoke evacuator in standby mode. When the smoke evacuator is in the standby mode:

- A. The standby indicator illuminates
- B. There is no airflow
- C. The smoke evacuator retains the previous

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