

RADIOAEROSOL SYSTEM

TROUBLESHOOTING GUIDE

Patient Consideration

- Radioaerosol tracers adhere to smoke particles in the lung.
- The patient should be instructed not to smoke 24 hours prior to the test.
- Explain the entire procedure to the patient prior to the test to ensure patient cooperation.
- Instruct the patient not to remove the mouthpiece or nose clip during the procedure.
- Instruct the patient to "signal" by raising their hand if they are experiencing any difficulty during the test.

Overall Guidelines

- Read the operational manual prior to performing the test.
- Perform the test in accordance to the operational manual.
- Explain the entire procedure to the patient prior to the test.
- Take care that the patient does not contaminate you or themselves during the test.
- Use only the correct shielded canister identified for the radioaerosol system.
- Ensure that the radioaerosol tracer is of high purity.

PROBLEM / ISSUE

TROUBLESHOOTING

Insufficient Air Flow

- If using a tank, replace the tank if remaining pressure drops to 25% of the air / O₂ in the tank.
- If using wall oxygen, have maintenance check the regulator at the wall inlet to ensure 50 to 55 psi.
- If using a flow meter, ensure the flow is between 10 - 13 liters per minute.
- Ensure the radioaerosol kit is properly seated in the shielded canister.
- Ensure the oxygen inlet tube is not blocked or damaged.

Oxygen inlet tube blow off

- Back pressure in oxygen (or air) supply is building too rapidly, turn oxygen (or air) supply to 10 liters/per minute and increase gradually. Ensure the regulator output is between 50 to 55 psi.
- In rare cases, the small orifice of the nebulizer may become partially clogged creating higher than normal back pressure. Use another radioaerosol kit.

PROBLEM / ISSUE

TROUBLESHOOTING

Radioaerosol is not functioning

- Perform functionality testing with sterile water / saline solution to confirm nebulizer functionality. You should see a 3 to 4 inch plume of mist from the mouthpiece.

If there is no mist production, check the following:

- Check for leaks in the oxygen tubing.
- Ensure the radioaerosol kit is properly seated in the shielded canister.
- Use another radioaerosol kit.

Injected dose is not present in the nebulizer bowl

- Inject the dose through the center of the injection port (septa) with a 22 gauge or larger gauge needle using care not to pierce the back of the injection port elbow.
- Ensure the proper dose concentration is inside the nebulizer.

Hot spots on the ventilation image

- Instruct the patient not to smoke 24 hours prior to the test.
- High velocity in the patient's lungs / patient breathing irregular or too fast, particles adhering to mucus plugs.
- Instruct the patient to take slow deep breaths.

No counts or slow build up of count rate in patient

- Check the concentration of the dose. It may be too low.
- Oxygen flow rate may be incorrect or nebulizer is malfunctioning. Perform functionality testing with sterile water / saline solution to confirm nebulizer functionality. You should see a 3 to 4 inch plume of mist.
- Check the regulator on the oxygen supply and calibrate if necessary, or it may read incorrectly if the regulator is at an angle.
- Check the O₂ hose for leakage.

BIODEX

Biodex Medical Systems, Inc.

20 Ramsey Road, Shirley, New York, 11967-4704, Tel: 800-224-6339 (Int'l 631-924-9000), Fax: 631-924-9241, Email: info@biodex.com, www.biodex.com