During all cleaning manipulations:

**Caution #1:** Do not wipe the sensor tip. Stop approximately 1 inch (2.5 cm) before the sensing tip. Be conscious of where the catheter is at all times, and take great care to handle it gently. Above all, NEVER touch the tip with anything other than the edge of a kimwipe.

**Caution #2:** Do not submerge the entire catheter. This may damage the fiber-optic connector side of the catheter and void its warranty.

**Caution #3:** Do not immerse the junction (between clear and amber section) to avoid any risk of fluid to leak in.

**Caution #4:** Do not hit, or knock the sensor on the dish bottom or walls during the stirring.

**General precautions:**
- Avoid sharp bending radius in the fiber-optic cable (< 50 mm).
- Avoid tension, pinch points, or twisting of the fiber-optic cable.
- Do not pull on fiber-optic cable to clear tangles; instead, carefully unwind.
- Always use protector caps on the fiber-optic connectors when the catheter is disconnected from the FPI-LS signal conditioner.
- Failure to clean immediately after use and according to directions may void the catheter warranty.
- Do not try to insert any kind of brush or foam swap to clean the gel at the sensing tip as you could damage the membrane.
- Delays in rinsing greatly reduce the cleaning effectiveness.

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**BEFORE THE EXPERIMENT**

- The distal tip can be immersed or soaked in distilled water or a saline solution to make the insertion easier.
- The distal tip can be immersed in heparin solution to avoid blood clotting. The concentration of heparin, or alternative anticoagulant, should be determined by the experimental protocol.
### DURING AND AFTER EXPERIMENT
Never let blood dry on the catheter tip! Always keep the tip soaking in saline or distilled water between experiments or until you are ready to proceed with the next cleaning step.

1. **Prepare saline solution in a dish.**  
   *See caution #1.*
2. Hold the polyimide by the polyimide (amber tubing). Wipe the catheter with a wetted delicate task wiper immediately after use to remove any bulk contaminants.  
   *See caution #2, #3 & #4.*
3. The catheter tip must be immersed in saline solution or distilled water IMMEDIATELY after removal from animal, biological environment, to remove blood and tissue residue.
4. Gently stir the catheter a few minutes to make sure that it doesn’t have a “meniscus” of air in/on the tip to prevent any blood to coagulate and allow the blood to dissolve in the saline solution.
5. Let the catheter soak in the saline solution. You can let the catheter soak up to 3 hours.

### CLEANING THE CATHETER SENSING TIP
*The catheter tip must be cleaned immediately after every use.*

1. **Prepare saline solution in a dish.**  
   *See caution #1.*
2. Hold the polyimide by the polyimide (amber tubing). Wipe the catheter with a wetted delicate task wiper immediately after use to remove any bulk contaminants.  
   *See caution #2, #3 & #4.*
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6. **Prepare cleaning solution following manufacturer’s instructions.**

7. **Dry wipe the catheter with a delicate task wiper or gauze to absorb the saline solution.**

8. **Place the distal portion of the catheter in the cleaning solution.**
9. Wet a soft surgical gauze with the cleaning solution. Wipe the other surface of the catheter with the gauze.
10. Soak the distal portion of the catheter in the cleaning solution for 15 minutes, and then remove.

11. **Dry wipe the catheter with a delicate task wiper or gauze to absorb the cleaning solution.**
12. **Fill a dish with sterile pyrogen-free water.**
13. Immediately rinse the catheter at least three times with the sterile pyrogen-free water.

14. **Dry wipe the catheter with a delicate task wiper or gauze to absorb the cleaning solution.**
15. Examine the distal tip under a 10x magnification to ensure that there is no blood or tissue residue on sensor.
16. A disinfecting cycle could be achieved after the cleaning cycle. Isopropanol or chlorine solution can be used as disinfectant solution.
17. Carefully re-package the catheter.
18. Completely let the catheter dry and package it safely for storage before the next utilisation.