

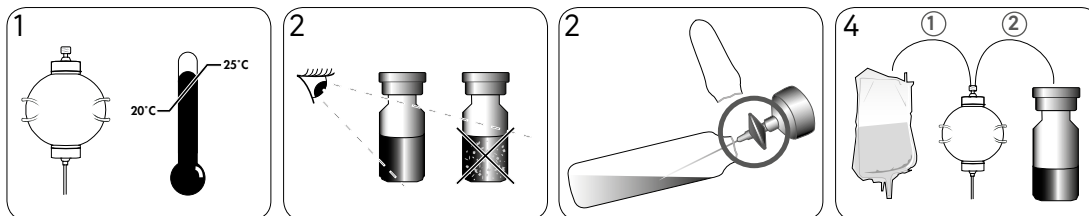
## TECHNICAL BULLETIN

# FLUOROURACIL PRIMING TECHNIQUE: AVANOS ELASTOMERIC PUMPS

As stated in Trissel's Handbook on Injectable Drugs, "precipitation of the Roche fluorouracil (5-FU) was observed with all pumps; a fine white precipitate originated close to the connection junction and migrated in both directions until it occupied most of the tubing and was in the drug reservoir. In some cases, the pumps stopped due to the extent of precipitation. The authors noted that various factors, including solution pH, temperature, drug concentration and solubility, and the manipulative techniques used could contribute to precipitate formation."<sup>1</sup>

Fluorouracil precipitation issues can cause medication crystallization within the pump tubing, filter or flow restrictor, and may result in an occlusion or in a partial or no-flow condition.

To minimize the incidence of precipitation, follow the manufacturer's recommendation for storage and administration.<sup>2</sup>



- 1 Store at controlled room temperature (20-25 degrees C, 68 - 77 degrees F). Do not refrigerate or freeze. Protect from light.
- 2 Visually inspect that 5-FU does not have visible particulate prior to administration. Follow manufacturer's recommendation to ensure that any particles are dissolved.
- 2 If drawing 5-FU from a glass ampule, the use of a filter needle is recommended <sup>3</sup>.
- 4 If 5-FU is diluted, fill the pump with the diluent (e.g. normal saline) first followed by the prescribed dose of 5-FU.

In order to minimize the risk of precipitation within the pump tubing, the Avanos pump can also be pre-filled and primed with a small amount of normal saline so that the 5-FU solution is not in the pump tubing until the infusion is started. This technique can be used for any drug prone to precipitation.

### Step-by-Step Instructions:

1. Close the clamp on the pump.
2. Fill the pump with 10 ml of normal saline.
3. Open the clamp, remove distal luer cap, and allow the pump to prime until a drop is observed at the distal end of the set.
4. Close the clamp and replace distal luer cap.
5. Fill pump with 5-FU and diluent needed per pharmacy protocol.
6. Do not open the clamp until ready to attach to patient.

#### REFERENCE:

1. Trissel LA. Handbook on Injectable Drugs, 14th ed. Bethesda, MD: American Society of Health-System Pharmacists, 2007.
2. Fluorouracil injection, USP. Product insert APP Pharmaceuticals, Jan 2008.
3. American Society of Health System Pharmacists guidelines on handling hazardous drugs. AmJ. Health Syst Pharm. 2006; 63:1172.93.

There are inherent risks in all medical devices. Please refer to the product labeling for **Indications, Cautions, Warnings and Contraindications**. Failure to follow the product labeling could directly impact patient safety. Physician is responsible for prescribing and administering medications per instructions provided by the drug manufacturer. Refer to [www.avanosmedicaldevices.com](http://www.avanosmedicaldevices.com) for additional product safety **Technical Bulletins**.

Please contact the Clinical Services Department at **800-444-2728** or **949-923-2400** if you have any questions regarding this information.