70% Isopropyl (Rubbing) Alcohol Lubricant for HD Flow/Dilution Sensors

DEFINITIONS

Lubricant: a substance for lessening friction, especially in the working parts of a mechanism.

Isopropyl alcohol, or isopropanol: 70% isopropyl alcohol (Rubbing Alcohol) is an effective antiseptic agent against a wide range of bacteria, viruses, protozoa, and fungi, with relatively low toxicity to humans. Alcohol wipes (70% isopropyl alcohol) are used for disinfecting surfaces by coagulating essential proteins in microorganisms that render them ineffective. They may also have a dehydrating effect and may interfere with the functioning of cell membranes.

Couplant: A substance (usually liquid) used between the transducer and the test surface to permit or improve transmission of ultrasonic energy into the test object.

Vaseline®: A type of petroleum jelly used as an ointment and couplant.

BACKGROUND

Transonic® Hemodialysis Flow/dilution Sensors have traditionally been used with Vaseline® applied onto the outer surface of the tubing before the tubing is inserted into the groove of the Flow/dilution Sensor. The purpose of the Vaseline is to ensure good ultrasonic signal coupling between the sensor and the tubing which is necessary to achieve accurate measurements.

Customers's asked to be able to use an antiseptic material other than Vaseline, to lubricate their tubing before placing it into the groove of the Flow/dilution sensor. In response to this request, Transonic engineers have extensively tested 70% isopropyl (rubbing) alcohol as a substitute for Vaseline with Flow/dilution Sensors. The testing results showed that 70% isopropyl alcohol works well as a tubing lubricant and doesn't result in any significant loss of either Flow/dilution Sensor accuracy or signal strength.

HD03 MONITORS

Transonic now provides 70% isopropyl alcohol wipes with the Hemodialysis HD03 Monitor rather than Vaseline packets. Refills can be purchased through normal clinic supply channels.

Fig. 1: Open Hemodialysis Flow/dilution Sensor with tubing inserted into the groove.

Fig. 2: Generic isopropyl alcohol wipe.

SEAMLESS [WIPE-INSERT-CLOSE] SEQUENCE CRITICAL

An important caveat to using 70% isopropyl alcohol as the lubricant with Flow/dilution Sensors is to follow the Instructions for Use with careful attention paid to a seamless wipe the tubing, insert tubing into sensor and close the sensor sequence to achieve successful measurements.

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