

WET (whet?) Your Infutest!

Your Infutest 2000 was shipped to you *dry*. But the Infutest *Operating Manual* recommends you wet the Infutest after priming it for best results. What does that mean?

If you are performing routine PM inspections on pumps at rates over 50 ml/hr, you probably don't have to "wet" your Infutest beforehand to obtain satisfactory results. But if you are testing pumps at **very low rates** (e.g. below 5 ml/hr), or if you want **maximum accuracy** from your Infutest, then you should ensure the instrument has been properly wetted before conducting such tests.

The Infutest measures flow by injecting an air bubble into the flowing water, and then measuring the time it takes for the air bubble to pass through a glass capillary tube of calibrated volume.

When you prime the Infutest after it has been dried out (e.g. after shipping or storage), you are filling up the glass tubes with water. But the glass tubes aren't really *wetted* by simply priming. To really wet the glass tubes, you have to run a Single Rate Test on the Infutest for awhile at about 500 ml/hr on both channels. As water is flushed through the system and Infutest's pneumatic system is exercised in injecting a few air bubbles, the glass tubes eventually "get wet" after 5 to 10 minutes.

FIG. 1 shows an air bubble in the glass tube of a properly wetted flow sensor. This air bubble has a rounded meniscus at either end and will flow nicely through the glass tube.

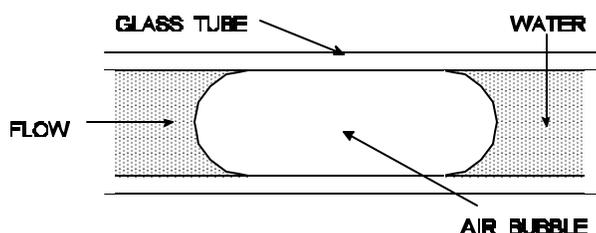


FIG. 1: Bubble in a "wetted" flow sensor.

FIG. 2 shows the kind of air bubble you can get if your Infutest hasn't been wetted. This bubble is more rectangular and has no identifiable meniscus at the

trailing end. Until the flow sensor "gets wet", this bubble can change shape as it passes through the glass tube, sticking to the glass and elongating as it moves. This can affect the accuracy of measurements Infutest displays on the LCD **if the flow rate is below 5 ml/hr.**

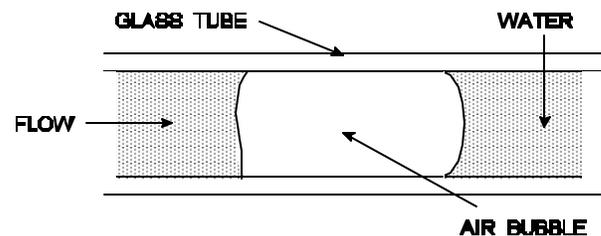


FIG. 2: Bubble in a "un-wet" flow sensor.

As suggested above, the easiest way to "wet" your Infutest is simply run a Single Rate Test at a higher rate for a few minutes. After you have "wetted" your Infutest, there is no need to wet it again unless the instrument is dried out for shipping or long-term storage.

Keeping your Infutest "wet" is also why the *Operating Manual* recommends you leave your Infutest set up and primed with water all the time. Of course, you should only do this if you are using distilled water as your test fluid. **NEVER** leave saline or ordinary tap water in your Infutest.

You can still keep your Infutest filled with distilled water even if you have to remove the instrument from your bench for short-term storage. Set the stopcocks on the channel inputs to the CHANNEL OFF position and disconnect the stopcocks from the pump(s) under test. If you keep the tubing connected to the A&B Output elevated above the channel inputs, you can store the Infutest primed and no water will dribble out the output. Remember to store the instrument upright to prevent water from leaking into the air injection system.