

MF - Automated Concentration Monitoring Session Questions and Answers

Q: What kind of preventive maintenance is needed on the CCS?

A: Usually the most important thing you can do is to clean the probe twice a week. Shut the valves and remove the finger type probe and clean it with IPA and soft bristle brush like a toothbrush.

Q: My chemistry has a corrosion protection built in it; will this build up on the probe?

A: It will over time, especially if it dries out, so you will have to make sure that the probe placement is below the tank level. This will keep the probe wet when the pump is shut down. When it shuts down and dries out, that's when the corrosion protection could dry on the probe. Make sure you do the preventative maintenance on the probe twice a week so the CP film doesn't build up on it.

Q: Is there a way to check the calibration on the CCS? If so, how do I do it?

A: Yes. First, you would purchase a Potassium Chloride solution which is 60-90% full scale of your probe. You will then dip the probe into the solution allowing the temperature to stabilize. After it is stable, the conductivity reading on the Myron L meter should read the same as the calibration solution; if not, then you will have to perform a calibration by adjusting the CAL potentiometer in the Myron L meter to the value to that of the solution. This procedure is outlined in the CCS manual.

Q: I use titration to measure concentration of my bath. Is there an automatic titrator that can be connected to a dosing pump?

A: We've actually done some work recently for a customer and we've noticed there are a couple of inline titrators on the market. The studies we first did looked promising and we're doing work to see how feasible it is to incorporate the automatic dosing pump or meter pump. It is possible, if you want to know more about the research then feel free to contact Wayne. It definitely seems doable and we will work on it.

Q: How deep should the probe dip in the tank for manual concentration checking?

A: The probe is about a foot deep. The main thing you want to do is keep the probe far away from the chemistry input that way in a bath you have proper mixing. Now, as you see in the pictures we provided, the fluid flows past the probe in a tee and we have the flow going from your wash pump, past the probe, through these isolation valves. We used to dip the probe in the tank but now we provide the flow by a way of a mixing pump.

Q: Is there an optimal temperature needed when taking a manual concentration rating?

A: Usually what I like to do is use a beaker and I'll scoop out a little bit of the bath sample and I'll swirl the probe inside the bath sample. The conductivity probe and meter that we use has automatic temperature compensation so it automatically accounts for the change in temperature. You'll get a reading right away. You don't have to wait for it to cool down or anything.

Q: Since I add manual amounts of chemistry, do you have a calculation form I can use to figure out how much chemistry to add?

A: What we do is, say that you have 100 gallon tank and you have 15% concentration and if you have 15 gallons of chemistry and 85 gallons of water if you add one more gallon of chemistry it will bring it up to about another percent concentration. Its not an exact way to do it, but there is a calculation that Wayne can send. But due to the pipes being full of fluid and the sprays coming on and the washer ending up at different levels of your run/fill switch, it's basically approximates. Usually if it's a 100-gallon tank, it's going to change your concentration by percent.

Q: Going back to the Drum Level Alarm. When there is a yellow light how many gallons are left in the drum, and when there is a red light how much is left?

A: When there is a low level or yellow light, there's about 6 and a half gallons in the drum and when there is red light or drum empty, there is about 2 gallons left in the drum.

Q: I am interested in the ANALYST/LMI pump combination of concentration control. Why would I want this over a traditional Conductivity Control System?

A: If you like analyzing numbers and adhering to tracking process control, then the ANALYST is for you. You can remotely monitor all the statistics right from your desk. The ANALYST is also able to send you alerts (such as a text message) in case there is an out-of-spec condition.