

AUTOSIR TESTING & TEST INTERRUPTIONS

Q – What should I do if I suffer power failure during the test and can I simply have a “resume test” function?

A – To run a correct test you require:

- 1 Auto-SIR
- 2 Computer
- 3 Cables and/or rack
- 4 Environmental Test Chamber
- 5 Un-interruptible Power Supply (UPS) for Computer and Auto-SIR

The UPS will give you around 10 minutes of battery power before then providing a “soft shut-down” of the computer and Auto-SIR.

A UPS for a test chamber will be VERY expensive and, at best, only provide a few minutes of battery power.

The test coupons inside the chamber during a test should be at either:

- 40°C and 93%RH or
- 85°C and 85%RH

If the chamber suffers a power loss, then it will soon pass the dew point and there will be rain in the chamber that will surely “contaminate” the coupons under test. This may be seen as “white-spots” or “water-marks”.

You must NOT ignore these and simply try to carry on testing as though nothing happened.

The following are quoted from 2 test specialists:

Specialist 1 – In the past, *if I have been present* when the power failure occurs, and it is down for more than 5 minutes or so, I will remove the power from all test samples and open the chamber door. I do not have a UPS on the chamber, as it would be very expensive to get the necessary power feed. When the power returns, I check to see what the last set of data was. I ramp up the chamber to test conditions, wait an hour or so, and start measuring [again].

When the samples return to what they were before the test, with say $\frac{1}{4}\log\Omega$, then the test clock continues. Then I make note of it in the final report. During the post-test visuals, I look closely for water spots or other signs of condensation.

Assuming *I am not present* for example during the night, it is better to start with a new set of coupons and re-run the test.

I have always found it less costly to re-run the test, rather than trying to interpret questionable data to a client.

Specialist 2 – It will be easier to re-run the test. The samples have a much lower thermal mass than the environmental chamber, so the samples almost certainly went through the dew-point before the chamber walls.

If the customer wants to restart (due to time restraints, or whatever), they should assume the risk of obtaining questionable results. It would be your responsibility to convey those risks.

We are lucky enough at our location to have very redundant municipal power. Therefore, we have only experienced "momentary" [outages] from the grid healing itself. We employ a UPS on our [Auto-SIR], but a UPS for a chamber is very expensive especially when you keep in mind that most testing must be done over not less than 72 hours. We had an UPS on a chamber which would keep it running for ~5 minutes. Also, if you use wet/dry bulb, when the fan stops running, the readout is useless.

Conclusion – Restart but do not "resume" the testing.

Q – Your competitor is able to offer a "resume" function, why don't you?

A – The Auto-SIR will continue to test until it is instructed otherwise but will note an error log of any detected problems.

The Auto-SIR software has the option of a Temperature & Humidity probe. This monitors the temperature and humidity and will initiate a visual alarm if the conditions go beyond the applied settings.

Under what conditions does this competitor apply a "resume test" function? We suggest that this might be a language problem and that we are in fact talking about the same thing.