

Subject: CIA - Cooling Items of Action

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Hi All,

A short summary of what we've decided to do following the meeting:

1. Peek/AL Luer Locks: We have 7 samples, but one leaks. Fred will try to refit this seal, so that we can continue with all 7 samples. If this works, we will send 3 samples to be irradiated (to 25 MRad) in virgin C3F8, while the remaining 4 will enter the new test sequence at stage 3. Upon returning from irradiation, the three exposed samples will also enter the new sequence at stage 3. If the 7th fitting cannot be saved, we will split the group in half (3 irradiated, 3 not).
2. C3F8 supply: Tom will order new C3F8 so that we can be sure to have virgin liquid available for all future tests.
3. Al/Al Luer Locks: These have been tested through the old testing regimen (all successfully!) and will join the new sequence at stage 5 (He vac check) before going on to the thermal cycling.
4. Thermal Cycling: If the environmental chamber in B77 is not working by the end of monday, we will begin using the chamber in 50B, which can be programmed and has its own chiller attached. Samples are *not* pressurized during testing, minimum temperature is -35C, and there are 50 cycles.
5. Pressure Testing: This will be done using a swage lock type manifold, with 4-8 fittings attached at once. A solenoid valve will control filling and venting, which we may be able to indirectly drive with a function generator set to a very low frequency.
6. Glue Testing: Neat resin samples that have been unexposed to water, C3F8, and radiation will be irradiated to 25 MRad dry, and then exposed to 100% RH in order to see if they experience the same weight gain after irradiation that the samples that were irradiated in coolant showed.
7. Tubing sizes: I am posting to my website a table of tubing sizes (will be done shortly). I will also post meeting minutes (like this one) so that people can access old emails and such. my website is at <http://www-eng.lbl.gov/~hartman/>. Fred is going to determine what size Luer Locks we should make for the distribution of cooling tube sizes. We may settle on two general sizes of luer (small and large) that cover all tubing sizes available.
8. If I have missed anything, please let me know.

Thanks alot,
Neal