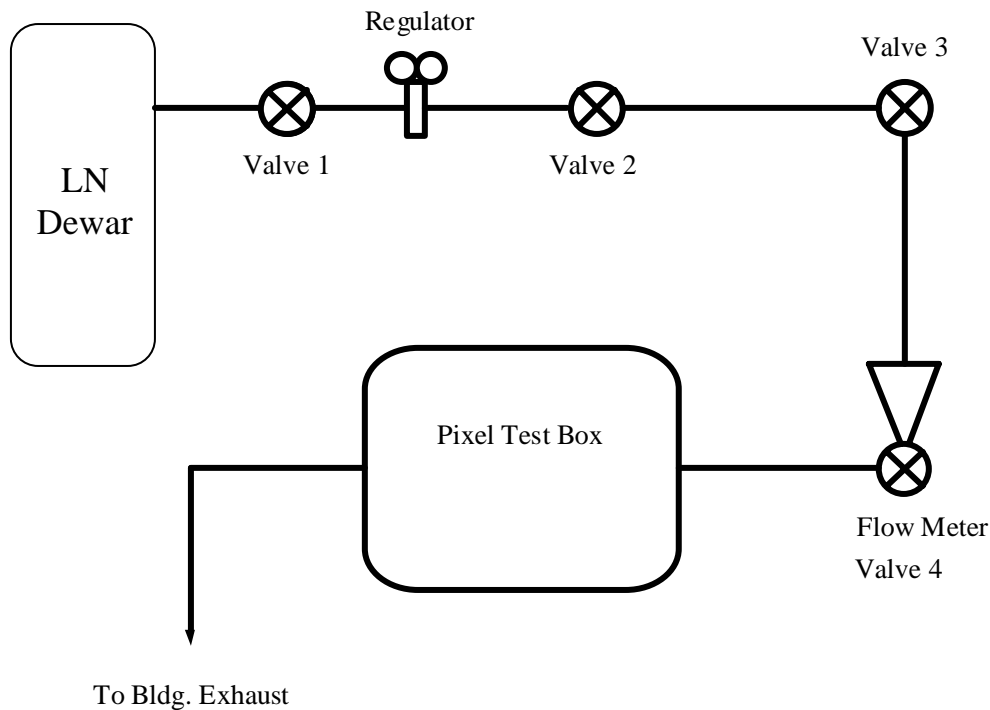


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Gas System for Pixel Test Box.

I have constructed a simple gas system for use in purging the Pixel testing box. This is to aid in lowering the humidity and thus the dew point in the box to allow us to operate the MIMOSA 5 detectors at near 0 deg. C. The schematic, operating procedure and some performance data are given below.

The gas system consists of the components shown below:



Operating Procedure

It is assumed that Valves 2 and 3 are always open. Please do not close these valves. The regulator is set to produce 2 psig. Please do not change the regulator setting.

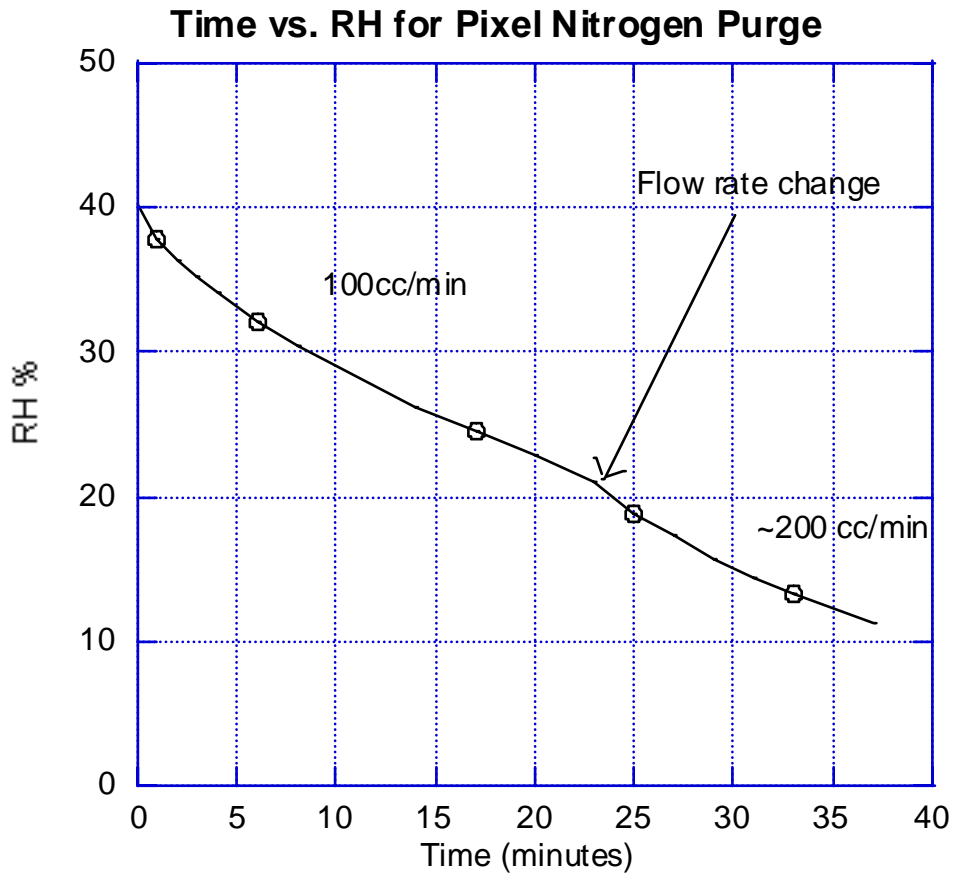
To Purge the Pixel Test Box.

1. Close and latch the test box in the configuration in which you wish to have the box purged.
2. Open Valve 1
3. Adjust Valve 4 to give sufficient flow to purge the box in a reasonable amount of time. (perhaps 100-200 cc/min.)

4. Watch the humidity gauge. When the desired level of humidity is reached, slow the gas flow to ~25 cc/min. The box is now purged and ready to use.
5. When one is finished using the box. Please close valves 1 and 4.
6. The box is now secured.

Some data on purge rates.

I documented the measured relative humidity as a function of time for an initial purge. This data is shown below.



As one can see, with a higher flow rate of ~200 cc/minute one can purge the box relatively quickly.