***The Effects of Microgravity and Light Wavelength***

***on plant growth in an Ardulab***

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| Item | Pros | Cons |
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| Growing medium | Plant gel- Easier to manage, holds water, clear | Plant gel- Might not hold seeds and water as well as we hope |
|  | Rockwool should hold water well | Rockwool may not have enough volume for our seeds, does the volume change when waters? |
|  | Cheese cloth- Cheesecloth doesn’t require much waterFour seeds to make sure the plant growsCheesecloth is light, takes very little space, inexpensive, and has no chemicals | Not sure how to secure Cheesecloth |
| Light System A- # of blue/red differentLight system B- Intensity differentLight system C- # of hours the red/ blue on different | Easy to control, good for plantsThe plant won’t burn with two lightsThe plant will get the same amount of light as on earth | Takes up to much space, intensity being different Not a big enough difference |
| Grid system for measuring | We can measure the growth easily with the grid systemMay be an accurate measurement | Might be very hard to measure, alignment might be off |
| Watering system | Will know that water will be available to plantsWe won’t have to have two pipettes because both sides share the cheesecloth | Hard to contain and release water, too much spaceCan’t tell when the plants need to be wateredHow will we let our watering system know when and how much water to releaseMay not be able to provide enough waterMay be difficult to find the right sensorMore plants that we have to waterWatering system has to be triple-containedMechanics of the watering system could be complicated |
| Dividing the Ardulab | Will keep the light fro | The light might leak into the other section -Not a big enough difference |
| Number of seeds |  | Crowding of plants might block the lightThe plant roots might grow together |