

# Effect of growth on mung bean solution essay



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Effect of Salt Solution on Mung Bean Growth Hypothesis: If the Mung Beans are watered with a higher salt solution, then less Mung Beans will sprout.

John Murrell 9-18-12 Magnet Biology Introduction This experiment was done to test the effect of salt solution on mung bean growth. Generally when you grow mung beans you soak them in water for eight to twelve hours and then put them in a separate container to sprout. Since this experiment was not monitored every hour, and had limited resources, we could not soak the mung beans for that period of time.

There are multiple ways to grow mung beans but since the experiment was to test the effect of different salt solutions, one particular way was chosen.

Methods 1. Gather two paper towels and two petri dishes, no safety goggles or gloves will be required for this experiment. 2. Place a petri dish on a paper towel and trace the bottom of it so a circle is drawn. Do this twice on each paper towel so there are four separate circles drawn. 3. Separate the top and bottom of each petri dish so they can each be used separately, creating four dishes. 4. Label the petri dishes: Distilled, . 5 solution, . 50 solution, and . 75 solution 5. Cut out the circles that were traced on the paper towel sheets. 6. Place one paper towel circle in the bottom of each dish. 7. Now take a graduated cylinder and place 20 mL of distilled water in it. 8. Pour the 20 mL of water on top of one of the paper towels in the dish so it can soak up the water. 9. Repeat step seven with a . 25, . 50, and . 75 salt solution. Be sure to put each one in a separate petri dish with a paper towel circle in it. 10. Place 20 mung beans in each petri dish; be sure to check that the mung beans are paced apart from each other. 11. Place the petri dishes on a counter and leave them there for five days. 12. Take measurements each

day and record results. Results Table 1: Amount of Beans Sprouted

Amount of Beans Sprouted	Day 1	Day 2	Day 3	Day 4	Day 5
Distilled Water	0	0	0	0	0
. 25 Salinity	0	0	0	0	0
. 50 Salinity	0	0	0	0	0
. 75 Salinity	0	0	0	0	0

Figure 1: Conclusion Based on the results of this experiment, salt solution does not affect the growth of mung beans. However, there were several mistakes made in this experiment that would need to be corrected next time.

One of them was taking the lid off of the petri dish and using it as a separate container. Doing this made the water and solution evaporate faster, and when it did evaporate it was just put out into the environment. If there was a top to the petri dish the water would have stayed in the dish and recondensed after evaporation. An alternative to this would have been keeping just two petri dishes with the top and testing one salt solution against distilled water, or plastic wrap could have been put over each of the four separate dishes.

Another mistake made was placing the dishes by a window. This allowed the sun to reach the dishes, which also caused the water and solution to evaporate faster. If this experiment is conducted again the petri dishes would be placed on a counter that is not by a window. The third and final major mistake made was placing twenty mung beans in each petri dish. This did not provide the space the mung beans needed to grow, and caused them to each have less water since they had to compete for it. This experiment neither proved nor disproved the hypothesis made.

If this experiment is conducted in the future, with all the corrections established, the original hypothesis generated would still be used. This hypothesis would also be based solely on background information discovered about mung bean growth, since there was no data created from this experiment. References \* [http://www.ggfagro.com/books/UsefulDocs/sample%20manuscript\\_8-11.pdf](http://www.ggfagro.com/books/UsefulDocs/sample%20manuscript_8-11.pdf) \* [http://www.abc.net.au/science/surfingscientist/pdf/lesson\\_plan12.pdf](http://www.abc.net.au/science/surfingscientist/pdf/lesson_plan12.pdf) \* <http://simple-green-frugal-co-op.blogspot.com/2010/01/grow-your-own-mung-bean-sprouts.html>

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