

CALIFORNIA STATE SCIENCE FAIR 2017 PROJECT SUMMARY

Peyton K. Pettyjohn J19200 Project Title Cryogenic Seed Exposure Diffectives/Goals Abstract The purpose of this project is to see how freezing seeds using liquid nitrogen (-320 °F) affects seed germination rate, seed dormancy, and the seeds to put them in a stationary state or dormant state by varying the length of time of exposure to try to cool the seeds to put them in a stationary state or dormant state by varying the length of time of exposure to try to cool the seeds to put them in a stationary state or dormant state over time. Methods/Materials Tomato, sunflower, sage seeds. Freeze seeds in liquid nitrogen for different lengths of time. Place seeds in pertidish inside incubator. Measure total seeds germinated and germination rate over time. Results Tomato, sunflower, sage seeds. Freeze seeds in liquid nitrogen to the over time. Results Tomato, sunflower, sage seeds. Freeze seeds in liquid nitrogen to different lengths of time. Place seeds in pertidish inside incubator. Measure total seeds germinated and germination rate over time. Results Tomato, sunflower, sage seeds. Treeze seeds in liquid nitrogen to seed viability. The trial seeds germinated at the same rate and same percentage as the controls. The seeds were not affected by the liquid nitrogen. Conclusions/Discussion The seeds in liquid nitrogen does not affect seed germination rate, or seed viability. Kummary Statement Ishowed that freezing seeds in liquid nitrogen does not affect seed germination rate, or seed viability.	Name(s)	Project Number
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Jain Received	Help Received	

My dad built the incubator and helped with Liquid Nitrogen safety.