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*Dim the Lights to Keep Food Nice*

Exposure to light speeds up the rate of food spoilage. Two other major factors that accelerate vitamin degradation and food spoilage, as light does, are exposure to high temperatures and oxygen. Temperature was controlled using fans so that each testing area was within one degree Celsius of each other. Oxygen exposure was controlled using a tight layer of saran wrap over each cup before they were exposed to light.

I used vitamin C concentration as the measure of food spoilage because the more vitamin C loss, the more spoiled the food is. I exposed different drinks to a 700 lumen (75 watt) light intensity, a 490 lumen (60 watt) light intensity, a 230 lumen (40 watt) light intensity, and had a trial in the dark as the control. After the trials were completed, the vitamin C concentration was found using a method of measurement called iodine titration. The highest light intensities did lose the most vitamin C, and the dark test lost the least vitamin C. Also, it was discovered that the initial twelve hours of exposure to the light had the most effect on the vitamin C, and as the vitamin C concentration got closer to zero, the rate of degradation slowed down.