



**CALIFORNIA STATE SCIENCE FAIR  
2013 PROJECT SUMMARY**

<b>Name(s)</b> Austin Jones; Ian Jones	<b>Project Number</b> <b>S1595</b>
<b>Project Title</b> <b>How Sterile Are Frozen Foods? The Effects of Defrosting on Bacterial Growth in Peas</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> We hypothesized that when peas were defrosted, bacterial growth would increase and there would be a direct correlation between the duration of defrosting and bacterial growth.</p> <p><b>Methods/Materials</b> Three replicate pea samples were defrosted for each different treatment and refrozen until grinding and plating on Luria Broth agar plates. After 42 hours, growth was recorded by counting the number of colonies on each plate. Data was analyzed in Open Office.</p> <p><b>Results</b> Bacterial growth during the first four hours of defrost time was generally minimal, but after the four hour mark, growth spiked and cultures contained hundreds of colonies.</p> <p><b>Conclusions/Discussion</b> In our experiment, we found that, as predicted by our hypothesis, bacterial growth had a direct relationship with defrosting time. A longer period of defrost time correlated to more bacterial growth.</p>	
<b>Summary Statement</b> We tested how defrosting affects bacterial growth in peas.	
<b>Help Received</b> Dr. Malhotra showed us a plating technique, but her culture was not used in the results.	