



CALIFORNIA STATE SCIENCE FAIR  
2016 PROJECT SUMMARY

<b>Name(s)</b> Alyssa L. Plese	<b>Project Number</b>  36701
<b>Project Title</b> Analyzing Biodegradation of Polystyrene by Mealworms	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> Determine whether mealworms be able to consume greater quantities of a condensed polystyrene variety compared to a non-condensed variety.</p> <p><b>Methods/Materials</b> 2.5 grams polystyrene (normal state), 2.5 grams condensed polystyrene , 10 Clear containers , Yellow mealworms, .5 grams wheat bran. Recorded the mass of the enclosures containing mealworms and polystyrene on daily intervals for one week, averaging the total amounts consumed upon conclusion of the trials.</p> <p><b>Results</b> The mealworms consumed approximately 40 milligrams more of the condensed Styrofoam than the non-condensed over a one week period, for an average of 5 mg more per day.</p> <p><b>Conclusions/Discussion</b> Mealworms are able to consume greater amounts of condensed polystyrene than non-condensed; on a larger scale, this difference in quantities suggests a more efficient method for the biodegradation of polystyrene by mealworms in a sustainable and humane manner.</p>	
<b>Summary Statement</b> Determine whether mealworms can consume greater quantities of condensed polystyrene compared to non-condensed polystyrene.	
<b>Help Received</b> NA	