



**CALIFORNIA STATE SCIENCE FAIR
2014 PROJECT SUMMARY**

Name(s) Anika J. Wille	Project Number 34452
Project Title Compostable Utensils: How Eco-friendly Are They?	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals Compostable utensils were made to reduce the ever-growing amount of landfill. However, it is not entirely clear about the compostability of compostable utensils and factors contributing to their decomposition, such as the composting conditions and the materials they were made of. This project is to investigate how compostable utensils degrade under various conditions and to compare the degree of decomposition among utensils made of various materials.</p> <p>Methods/Materials Three popular brands of compostable utensils that are made of different biodegradable materials were used in the experiments, namely World Centric, TaterWare, and Eco-Products utensils. Non-compostable generic plastic utensils made from polystyrene were included as negative controls. Utensils were incubated for 4 months in various composting environments including steer manure enriched soil, bark nuggets, vinegar, soy sauce and tap water, mimicking different amount of microbes, acids, and enzymes in natural compost.</p> <p>Results The results showed that TaterWare utensils showed the most signs of decomposition in steer manure enriched soil and in tap water, while Eco-Products were affected to a lesser degree by vinegar and soy sauce. As expected the polystyrene control utensils were unaffected.</p> <p>Conclusions/Discussion The results suggest that both composting environment and the make-up of the compostable utensils play important roles in the degree of compostability.</p>	
Summary Statement I wanted to test, if "compostable utensils" really are compostable and environmentally friendly.	
Help Received My father helped to set up the experiments, my mother helped to make the poster, and my science teacher gave me some advice.	