



**CALIFORNIA STATE SCIENCE FAIR
2017 PROJECT SUMMARY**

Name(s) Ritika Parvatikar; Isha Saldhi	Project Number S1116
Project Title Bioplastic: Which Food Waste Produces the Best Bioplastic?	
Abstract Objectives/Goals The objective of this study is to create an alternative for plastic that holds the same properties such as flexibility and tensile strength, but is much better for the sustainability of our environment. Methods/Materials Banana peels Potato peels Coffee grounds Orange peels Cinnamon Vinegar Honey Thyme leaves Water Pan Plastic container 2 spoons Measure cup (milligram) Blender Filter Stove Oven Baking sheets Steel tray CO2 Emission Tester Laptop 10-500g weights Protractor Milligram Balance Results The potato peel bioplastic was the best bioplastic as it passed the flexibility, buoyancy, and strength test. It also released the least amount of carbon dioxide at only -65 ppm. This result was surprising as orange	
Summary Statement Bioplastics are plastics that are made from carbon and renewable resources, which are a better alternative to current plastic. Current plastic contributes to mass amounts of drilling and hazardous activities that could be harmful to our bio	
Help Received Mr. Lancaster helped us gather materials needed for experiments and testing, and taught us how to use the equipment.	