



**CALIFORNIA STATE SCIENCE FAIR
2010 PROJECT SUMMARY**

Name(s) Jeremy E. Fukushima	Project Number J1712
Project Title Is That Lemon Safe?	
Objectives/Goals Does bacteria grow on a lemon wedge from different restaurants and what can effect the growth?	
Abstract	
Methods/Materials 1.Take Blood Agar plates out of refrigerator and place in the open air 2.Keep the lids closed and let the plates come to room temperature for 10 to 15 minutes 3.Divide plate into fourths with a white crayon on back of the plates 4.Carefully swab the outside rind of the lemon and swipe the swab on one of the quarter sections of the plate 5.Use one quarter section of the plate for one sample therefore one plate will have four samples 6.Each lemon wedge was tested three times (three quarter sections) 7.Place the plate in an insulated container at room temperature to help ensure a stable environment 8.Check and record growth every 24 hours for a week 9.Repeat for other tests	
Results 47.5% of the samples grew something by the end of the second day. By the end of the week 84.2% of the plates grew something. Almost all of the samples grew different kinds of bacteria and molds.	
Conclusions/Discussion My conclusion is that the restaurants that did not have tongs and lids grew more. In addition, the way the places washed their lemons had an effect n the amount of growth. Finally, improved restaurant hygienic standards need to be implemented for lemon wedges.	
Summary Statement My project is looking to see if and how much bacteria grow on lemons from different restaurants.	
Help Received Mother hepled cut and retrieve lemons and done under her supervision. My mom is a pharmacist at Hoag Hospital.	