



**CALIFORNIA STATE SCIENCE FAIR
2012 PROJECT SUMMARY**

Name(s) Maxwell P. Jenkins	Project Number J2119
Project Title To Dab or Not to Dab?	
Objectives/Goals What percent of the total percent of fat in pizza is removed by dabbing with paper towels?	
Abstract	
Methods/Materials a. Materials Amici's New York thin crust cheese pizza; (delicious); Pizza slicer; Paper towels; 50 ml plastic vials with caps for extracting pizza (pre-weighed); 10 ml glass vials with caps for sample analysis (pre-weighed); Analytical balance; Graduated 25 ml burette with rubber vacuum bulb; 1 ml analytical pipette; Fume hood; Hexane; High speed vortexer; Safety glasses & lab coat. b. Methods i. A small New York cheese pizza was purchased from Amici's in Redwood City. ii. The pizza was cut in half in such a way that the two halves were as symmetric as possible. iii. One half of the pizza was dabbed repeatedly with clean paper towels until no grease was visible on the towel. iv. 9 samples of roughly equal size were cut from each pizza half, then placed in pre-weighed 50 ml plastic vials, then tightly sealed with the cap. v. The resulting pizza samples were weighed in the capped vials and the weights recorded. vi. The mass of the pizza samples were calculated by subtracting the weight of the vial from the weight of the (vial + sample). vii. 5 mls of hexane per gram of pizza was then added to the vials, then the vials were tightly sealed. viii. The vials were then vortexed vigorously for 20 seconds. ix. The vials were placed in a cool area and allowed to sit for 5 days to complete the extraction and allow any chunks of pizza to settle to the bottom of the vial. x. Exactly 1 ml of the hexane solution was accurately removed from the sample vials using a very accurate 1 ml pipette and placed in the pre-weighed glass vials then capped. xi. Once all the samples were prepared they were placed in a fume hood, the caps were loosened so that the hexane could evaporate but no dust or other particles could enter. xii. The vials were allowed to evaporate for three days. xiii. The evaporated vials with the pizza fat residue remaining were carefully weighed. xiv. The mass of the pizza fat residue in each sample vial was calculated by subtracting the mass of the empty vial from the mass of the (vial + fat residue).	
Results In my experiment 39% of the total fat in pizza was removed by dabbing with paper towels	
Conclusions/Discussion my hypothesis was incorrect the amount of fat removed in pizza when dabbing was about one third. i guess about one half.	
Summary Statement removing fat from pizza with paper towels.	
Help Received Father gave me access to his lab.	