



**CALIFORNIA STATE SCIENCE FAIR
2002 PROJECT SUMMARY**

Name(s) Kelli M. Kaku	Project Number 22426
Project Title Bioassay of Garlic Extracts on Root-knot Nematodes to Determine the LC50	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals My objective was to determine the LC50 of garlic extracts on root-knot nematodes exposed for twenty-four hours. I believe the LC50 of garlic extract will be 10-g/l because from my previous experiment 20-g/l had 100% mortality.</p> <p>Methods/Materials I extracted root-knot nematodes from 1 liter of soil by sieving the soil and putting it into a mist chamber. I made my garlic extract by cutting up 20 grams of garlic and putting it into a liter of water. I exposed the root-knot nematodes to 20-g/l, 10-g/l, 5-g/l, and untreated water. I checked the mortality after 24 and 48 hours.</p> <p>Results The 20 and the 10-g/l both had 100% mortality. The 5-g/l had 40.3% mortality and the untreated water had 0% mortality. I used log probability paper to estimate the LC50 to be 6.5-g/l.</p> <p>Conclusions/Discussion My conclusion is 6.5-g/l is the approximate LC50 of garlic extract on root-knot nematodes. I need to do more experiments narrowing the concentrations closer to the 6.5 range.</p>	
Summary Statement My project was to determine the LC50 of garlic extracts on root-knot nematodes.	
Help Received Use lab equipment at the Kearny Agricultural Center under the supervision of staff research associate Stephanie Kaku	