



**CALIFORNIA STATE SCIENCE FAIR  
2005 PROJECT SUMMARY**

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| <b>Name(s)</b><br>Adam Z. McCloskey   | <b>Project Number</b><br><b>J1322</b> |
| <b>Project Title</b><br><b>Bacteria Fighting Silver</b>   |                                       |
| <b>Abstract</b><br><b>Objectives/Goals</b><br>To find out if silver can keep un-refrigerated milk fresh longer by killing the bacteria which sours milk.<br><b>Methods/Materials</b><br>By introducing a silver dollar as well as colloidal silver into separate cups of milk I want to prove silver keeps milk fresh when unrefrigerated. Materials: Milk, silver dollar, silver rods (.999 pure) camers, sea salt, 24 volt power supply, Agar, petri dishes, computer, printer, distillrd water, notebook, sterile swabs, one ounce of colloidal silver.<br><b>Results</b><br>Both the solver dollar and the colloidal silver kept the un-refrigerated milk fresh. The silver dollar kept it fresher for two days longer then nothng at all. The colloidal silver however kept the milk fresh for 10 dyas (seven days of the experiment and three days after).<br><b>Conclusions/Discussion</b><br>Silver can and will keep milk fresh without refrigeration, at least for awhile. I have also proven Colloidal Silver keeps milk fresher lomger than a Silver Dollar alone. Because of the bacteria growth on the petri dishesd, I feel the silver also kills certain bacteria as the untreated milk grew a large green bacteria which neither treated milk grew. This experiment also shows the colloidal silver inhibits spoilage in un-refrigerated milk for a longer time because the colloidal silver mixes with the milk. Although silver keeps un-refrigerated milk fresh, theres nothing like refrigeration to keep milk freah and cold. |                                       |
| <b>Summary Statement</b><br>Silver inhibits bacteria growth and keeps milk fresh without refrigeration.   |                                       |
| <b>Help Received</b><br>Dad helped me make the colloidal silver and set up the petri dishes with agar.  |                                       |