



**CALIFORNIA STATE SCIENCE FAIR  
2011 PROJECT SUMMARY**

<b>Name(s)</b> Marissa A. Blanco-Johnson	<b>Project Number</b>  31955
<b>Project Title</b> <b>Don't Touch That Handle! Which Brand of Disinfecting Wipes Kills the Most Bacteria Off of Shopping Cart Handles?</b>	
<b>Abstract</b> <b>Objectives/Goals</b> The objective of my science fair experiment was to find out which brand of disinfecting wipes, Clorox, Lysol or the Target brand Up&Up, kills the most bacteria off shopping cart handles. <b>Methods/Materials</b> Trial One: Choose a random grocery store and pick out three random shopping carts. Take a bacteria sample from each cart with a sterile swab. Wipe each handle with one of the three brands of disinfecting wipes. (Chlorox, Lysol and the Target brand, Up & Up). Wait two minutes and then swab each handle with a new sterile swab. Repeat this process at two more locations. After taking bacteria samples insert all 18 petri dishes containing the bacteria samples in an incubator for 7 days. After the 7 days, remove the petri dishes from the incubator and count the bacteria using a 100 square grid. Calculate the growth of bacteria. Calculate the means for the carts that were swabbed before and after using the wipes. Interpret the calculations to determine which brand of disinfecting wipe kills the most bacteria. Trial Two: Repeat complete process again. <b>Results</b> Results of this experiment show that the Clorox brand of disinfecting wipes kills the most bacteria off shopping cart handles, killing 96.8% of bacteria compared to Lysol which killed 55.5% of the bacteria and the Target brand Up&Up which killed 68.2% of bacteria from the shopping cart handles. <b>Conclusions/Discussion</b> The hypothesis for this experiment was that Clorox disinfecting wipes kills the most bacteria compared to Lysol and the Target brand Up&Up. Results of this experiment show that Clorox disinfecting wipes kills the most bacteria off shopping cart handles with a mean of 2.3% of the petri dish covered with bacteria and 96.8% of the bacteria killed off of the shopping cart handles compared to Lysol with a mean of 20.4% of the petri dish covered with bacteria and 55.5% of the bacteria killed, and the Target brand Up&Up with a mean of 22.8% and 68.2% of the bacteria killed off the shopping cart handles. Therefore my hypothesis was correct.	
<b>Summary Statement</b> This science fair experiment proves that Clorox disinfecting wipes kills the most bacteria compared to the Lysol and the Target brand Up&Up.	
<b>Help Received</b> My science teacher Ms. Griffith taught me how to count the bacteria from the petri dishes, calculate the percentages, and taught me how to write the abstract. My mother helped me cut the backgrounds for the display board.	