



**CALIFORNIA STATE SCIENCE FAIR  
2013 PROJECT SUMMARY**

<b>Name(s)</b> <b>Sakina Bambot</b>	<b>Project Number</b> <b>J2104</b>
<b>Project Title</b> <b>What's in My Water?</b>	
<b>Abstract</b> <b>Objectives/Goals</b> The purpose of this experiment is to see which filter takes out the most residue from the water. Another goal is to see what elements the filters leave behind and/or takes out. <b>Methods/Materials</b> Method: 1.Fill 1 gallon of tap water in a pot. Boil it and let it evaporate until there is only a small amount left and fill that remaining water into two small vials. Repeat the process using water from the other filters. 2.Evaporate until there is only 10 milliliters left of each type of water. 3.Put a quarter of a milliliter of each water type onto filter paper and let it dry overnight. Measure the weight of the filter paper with and without the residue on it to get the weight of the residue. 4.Take pictures of the residue with a microscope. 5.Put the residue in an XRF and collect data. <b>Results</b> The elements that Filters A and B removed were different from each other, but the weight of their residue was about the same. The residue from Filters A and B weighed about half as much as the residue from the tap water. The weight of the residue from Filter C was the least from all the filters.Filters A and B left about the same weight of each residue. They also were about the same in what elements they removed or added. Filter C removed a lot of each element for almost all of the elements. <b>Conclusions/Discussion</b> I was really surprised to find out that filters A, B, and C had completely different results in what elements they removed. I noticed that Filters A and B added potassium to the water while Filter C added a little bit of sodium to the water. Except for bromine (which was completely removed by all three filters) and magnesium (which the amount in the tap water was about the same with the amount in all three filters), how much of each of the other four elements were removed, greatly varied for the three filters. I was also surprised that none of the filters removed much chlorine, which isn't good for you. Filter C, the fridge filter removed barely any chlorine.	
<b>Summary Statement</b> I tested three different types of water filters to see which one would filter tap water the best.	
<b>Help Received</b> EAG scientist showed how to use XRF; Parents helped with excel format	