



# 2016 NOBCChE National Science Fair Abstract

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Category: **Physical Science**

Title: **Water Safety Testing**

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Water that is contaminated with pollutants such as fertilizers, industrial waste, and by-products of human activity may have a negative effect on human health. Water used for cooking, cleaning, and consumption should be safe and free of harmful substances. This project looks at whether or not a home water testing kit could be used to determine if water from three different sources, distilled bottled water, city tap water, and fresh pond water, is safe to use for cooking. Each water sample was characterized before and after cooking with fresh broccoli. The home water testing kit measured pH, total hardness, total chlorine, alkalinity, nitrite and nitrate concentrations, copper concentration, and iron concentration. It was found that the home water testing kit could not reliably characterize the difference between the three water samples given basic understanding of each water source.

The National Organization for the Professional Advancement of Black Chemists and Chemical Engineers (NOBCChE) National Science Fair is a poster competition in which students present an independent completed research project. Each contestant in the Science Fair must demonstrate their ability to conduct a research project by:

- Submitting an abstract of 150 words or less on an individual research project in one of the following **four categories: physical science, math & engineering, consumer science, or biological science.**
- Presenting the results of the research in a poster format, including answering questions from judges; and submitting a written report during the poster presentation.
- For more information, visit [www.nobccheSTEMwkd.com](http://www.nobccheSTEMwkd.com).