

CWSF 2009 - Winnipeg, Manitoba



Shubham Talwar

Hyper Heartbeat: The Effect of pH levels on Micro-organisms

Division: Physical & Mathematical Sciences / Environmental Innovation

Category: Junior

Region: Lethbridge

City: Lethbridge, AB

School: Gilbert Paterson Middle School

Abstract: The effect of pH levels on the heartrate of *Daphnia pulex* by treating them with different concentrations of HCl and NaOH solutions was determined. Under extremely acidic conditions, the heart stopped completely. Also, under extremely basic conditions, the heartrate was significantly lower than normal levels. An optimum pH-range was suggested based upon the data and the effect of pH levels in natural environments was discussed.

Biography

Hello, I am Shubham Talwar. I am 14 years old, and am a student at the Gilbert Paterson Middle School in Lethbridge, Alberta. I live with my two parents and my sister. I am really interested in science, especially chemistry and biology. I play the flute, and am in the band and the jazz band in my school. I am also involved in Air Cadets in Lethbridge.

Awards

Value

The University of Western Ontario Scholarship Silver Medallist - \$1500 Entrance Scholarship Sponsor: University of Western Ontario	\$1 500
Silver Medal - Life Sciences - Junior Sponsor: Pfizer Canada	\$700
Total	\$2 200