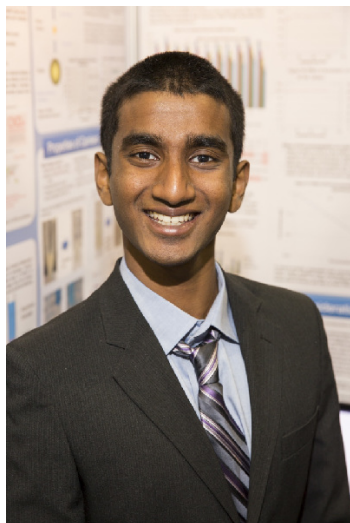


CWSF 2015 - Fredericton, New Brunswick



Gayashan Tennakoon

CEEP - A Novel Approach for Environmental Trace Elemental Analysis

Challenge: Environment

Category: Senior

Region: Ottawa

City: Ottawa, ON

School: Colonel By S.S.

Abstract: Measurement of low levels of trace elements, analytes, in aqueous samples poses two challenges: (a) transport of large volumes of liquid samples (b) their determination at natural low levels. This led to the development of a novel, simple, and cost-effective approach of analyte concentration using a solid carrier namely, "carrier enhanced evaporative pre-concentration". The feasibility of silica gel, activated carbon, and organic resins were investigated.

Biography

As a Grade 12 student attending Colonel By Secondary School in Ottawa, ON, I am more than excited to be attending my last Canada Wide Science Fair at Fredericton. Having attended it in previous years, it's helped me realize my understanding of the scientific method, and what it's like to be with of Canada's brightest students. Science has always been a big part of my life. I co-founded the regional branch of the organization, Project Pulse which organizes conferences for high school students to meet university students and professionals in the field of health sciences. Alongside this, I also came up with the idea for my project. It really came to be after understanding an issue, known as Chronic Kidney Disease of Unknown Origin, which has been a worldwide medical enigma. What saddened me the most was understanding how devastating this epidemic has been in my home country, Sri Lanka. I looked to help further develop environmental monitoring systems, to keep track of drink water sources for those in remote areas around the world. As a word of advice for other students, if you have a curious idea, always test it out. You never know where it may lead you.

Awards

Value

Canadian Stockholm Junior Water Prize - Senior Sponsor: Canadian WEF Member Associations, the Canadian Water and Wastewater Association, and Jacobs	\$2 000
The Manning Innovation Achievement Award - Senior Sponsor: Ernest C. Manning Awards Foundation	\$500
The Manning Innovation Achievement Award and \$4000 Manning Young Canadian Innovation Award and also receive an additional \$3000 towards their post-secondary education. Sponsor: Ernest C. Manning Awards Foundation	\$4 000
Excellence Award - Senior - Silver Medal Sponsor: Youth Science Canada	
Challenge Award - Environment - Senior Sponsor: Youth Science Canada	
Dalhousie University Faculty of Science Entrance Scholarship Senior Silver Medallist - \$2500 Entrance Scholarship Sponsor: Dalhousie University, Faculty of Science	\$2 500
UBC Science (Vancouver) Entrance Award Senior Silver Medallist - \$2000 Entrance Scholarship Sponsor: The University of British Columbia (Vancouver)	\$2 000
University of New Brunswick Canada-Wide Science Fair Scholarship Silver Medallist - \$2500 Entrance Scholarship Sponsor: University of New Brunswick	\$2 500
University of Ottawa Entrance Scholarship Senior Silver Medallist - \$2000 Entrance Scholarship Sponsor: University of Ottawa	\$2 000
Western University Scholarship Silver Medallist - \$2000 Entrance Scholarship Sponsor: Western University	\$2 000
Total	\$17 500

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