

# CWSF 2016 - Montreal, Quebec



## Viraji Rupasinghe

### Comparing the Harmful Effects of Bisphenol S to Bisphenol A

**Challenge:** Environment

**Category:** Intermediate

**Region:** Chignecto West

**City:** Bible Hill, NS

**School:** Cobequid Educational Centre

**Abstract:** The toxicity of recently introduced bisphenol S (BPS) was compared to bisphenol A (BPA). The LD50 of BPS is similar to that of BPA as determined by an acute lethality bioassay using *Daphnia Magna*. Both BPA and BPS caused DNA damage in cultured human lung epithelial cells. Two bisphenol analogues (BPP and BPF) were detected when plastics were exposed to microwave and UV radiation.

#### Biography

My project, "Exploring the Harmful Effects of Bisphenol A and S" was inspired by my curiosity of the environmental and health effects plastics and epoxy resins have. I've always been interested in human health and studying how the things we use day to day may be harmful. Recently I've also gained a new interest in environmental issues. I've realized environmental complications can impact our health very closely. I think it is important to investigate both environmental and health concerns to provide a well rounded view on public health concerns. I have ambitious plans to create a natural material out of waste food products such as nutshells, mussels and coconut shells. I hypothesize that a material 100% made out of these natural products will not negatively affect our health and environment. When you're passionate about something, you cannot let your ideas rest and not extend and improve.

#### Awards

#### Value

Excellence Award - Intermediate - Bronze Medal Sponsor: Youth Science Canada	
Western University Scholarship Bronze Medallist - \$1000 Entrance Scholarship Sponsor: Western University	\$1 000
Total	\$1 000