

CWSF 2012 - Charlottetown, Prince Edward Island



John Mikhaeil

Detoxification of Jatropha oil-Cake from Phorbol esters

Challenge: Environment

Category: Senior

Region: Bay Area

City: Mississauga, ON

School: King's Christian Collegiate

Abstract: This project studied the detoxification of Phorbol esters from Jatropha oil-Cake using Natural Corn Cob Ash (NCCA). Different samples were prepared and treated with NCCA. The samples were tested using an HPLC system to determine the amount of Phorbol esters removed. After treatment, one sample had 88% of Phorbol esters removed. The results proved more successful than any research that was previously done.

Biography

I'm John Mikhaeil and I am a student at King's Christian Collegiate in Oakville, Ontario. I participate in basketball and volleyball sports teams and am part of Student Council at my school. I plan to enter a science-related undergraduate program and then carry on to medical school to become a physician. The inspiration for this project came after I was assigned an independent research project for my Chemistry course. My interest in natural fuel sources led me to the remarkable Jatropha curcas plant and after further research, I chose this topic as my research and created an original experiment to carry out. In the future, I hope to slightly change the procedure to produce more successful results, especially in one of the samples which did not have enough Phorbol esters removed as I had hoped. The main advice I would give to students thinking about doing a project is that they should never give up or become lazy when the project seems to be unsuccessful or it is becoming too much work.

Awards

Value

Excellence Award - Senior - Bronze Medal Sponsor: Nuclear Waste Management Organization	\$300
University of Ottawa Entrance Scholarship Senior Bronze Medallist - \$1000 Entrance Scholarship Sponsor: University of Ottawa	\$1 000
Western University Scholarship Bronze Medallist - \$1000 Entrance Scholarship Sponsor: Western University	\$1 000
Total	\$2 300