

CWSF 2012 - Charlottetown, Prince Edward Island

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Shifa Hayat

Fermented Wastes Rule and They Make... Fuel?!

Challenge: Energy

Category: Intermediate

Region: Greater Vancouver

City: Burnaby, BC

School: Britannia Community Secondary

Abstract: Overpopulation is resulting in shortages of fossil fuels, and increases in waste generation. This project unifies the two problems and determines the feasibility of fuels derived through yeast's fermentation of different common household wastes. Results are based on each waste's quantity of fuel production, composition, and energy output compared to energy consumption statistics. The prototype for a large-scale implementation of the process was also designed.

Biography

As a pre-IB student maintaining a high academic average at Britannia Secondary, I'm an active member of the Global City and Environment Club, and well aware of the many environmental and social issues faced by today's planet. Additionally, I'm a Royal Canadian Air Cadet and participation in such an extensive program focusing on aviation has allowed me to streamline my career goals. After completing high school, I intend to study at MIT's AeroAstro program, and become an aerospace engineer. At one point however, my dream job was to be a pilot and the realization of how flights would not be possible one day, if the world's resources continued depletion at such an alarming rate, became the inspiration for my science fair project; I want to ensure that there's a viable form of renewable energy for future generations to rely on. Being involved in science fairs has taught me that the most invaluable and beneficial reason, for taking part in such projects, is to be doing it for solely your own curiosity, learning, and discovery's sake.

Awards

Value

Statistical Society of Canada and Biostatistics Section Award Sponsor: Statistical Society of Canada and Biostatistics Section	\$750
Excellence Award - Intermediate - Bronze Medal Sponsor: Nuclear Waste Management Organization	\$300
Western University Scholarship Bronze Medallist - \$1000 Entrance Scholarship Sponsor: Western University	\$1 000
Total	\$2 050