CALIFORNIA STATE SCIENCE FAIR
2010 PROJECT SUMMARY

Name(s)
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Project Number
S1728

Project Title
Does Water from the Primary Wash of Oryza sativa Affect the Growth of Escherichia coli?

Abstract

Objectives/Goals
My goal was to test whether the water usually poured out after washing rice has any nutritional value.

Methods/Materials
I tested the nutritional factors by observing how it affected growth on E. coli. I prepared nutritional broth medium in test tubes and added E. coli to it. I left some control and then for the experimental group, I added rice water to it. I incubated it for 24 hours and then measured the amount of E. coli growth through a spectrophotometer.

Results
Instead of increasing the growth of E. coli or having no effect to it, the growth rate was decreased.

Conclusions/Discussion
My hypothesis was not supported although my null hypothesis was rejected. The rice water made a significant difference, but not in the way to promote E. coli growht. Since I tested it on E. coli, it could still have the potential to be nutritional for eukaryotes. This could also be due to the allelopathic factors of rice plants and futher experiments could be used to test whether rice water has the potential to be a natural herbicide or antibiotic.

Summary Statement
My project tested whether rice water has any nutritional value to it.

Help Received
I used work area and equipment at my high school under my advisor's supervision and obtained E. coli from Fresno city college.