



## Colorado Science and Engineering Fair

## 2024 Individual Project Abstract Form

Please print 2 copies of the completed form. Sign both copies, keep 1 for your notebook and submit 1 copy to your Regional Fair Director with your other paperwork.

Title of Project: From Batter to Biofuel: Exploring Microbial Magic Investigating the influence of temperature on the rate of fermentation

Finalist's Name: Humza Asif Memon

School and City: Crescent View Academy, Aurora

Sponsor's Name: Asma Memon

Category: Chemistry (CHEM)

Division: Junior (6th - 8th grades)

Abstract (250 words or less):

The objective of this experiment is to investigate the influence of temperature on the rate of fermentation in Idli batter. We hypothesize that varying temperatures will have a significant impact on the fermentation process. By systematically altering the temperature conditions, we aim to determine the optimal temperature range for maximum fermentation efficiency and assess how extreme temperatures affect the overall fermentation rate. This study has implications for optimizing fermentation processes in biofuel production. Determining the ideal temperature for producing biofuels may be aided by determining the optimal conditions for microbial activity in batter.

*I hereby certify that the above statements are correct and the information provided in the Abstract is the result of one year's research. I also attest that the above properly reflects my own work.*

Finalist's Signature:

HAM

Date:

03/07/24

In addition, all students must complete the ISEF Student Checklist (1A), Research Plan, Approval Form (1B), and Checklist for Adult Sponsor (1), and any other ISEF forms required for this type of project. See the International Rules and Guidelines for form requirements. Return COPIES of all of these forms to your Regional Fair Director with you Finalist Verification/Permission Form. A signed copy of this form must be included in your notebook.