

GREATER SAN DIEGO SCIENCE & ENGINEERING FAIR (GSDSEF)

CERTIFICATION OF HAZARDS CONTROL FORM 4 (GSDSEF-4, 2015)

This form, if required, must be completed and signed before starting your project. Place it in your notebook for the GSDSEF SCREENING Fair. (Use the "Tab" key to move from line to line)

The student, and all who sign this form, MUST READ AND COMPLY with the Hazardous Material and Safety requirements for dealing with such materials as, bacteria; molds or fungi; protozoa; chemicals; toxic, corrosive, mutagenic, carcinogenic, teratogenic or infectious agents; venomous animals as explained in GSDSEF RULES & REGULATIONS page 13

Student's Name (last, first, middle) Hui, Jackwin K Date 9/17/2014

Partner's Name (Senior Division only) _____

School Marshall Middle School Grade 8

Science Teacher Mrs. Elaine Gillum

Project Title Can Liquid Crystal Be Used As An Innovative System to Detect Bacteria

Hazardous procedures/materials/substances involved Transfer of bacteria culture, weighing chemicals, using a heat gun,cholesteryl oleyl carbonate,cholesteryl pelargonate,cholesteryl benzoate,S. epidermidis

Answer 1 - 10 in detail & identify potential hazards clearly (use n/a if none—use additional sheets if needed):

1. Source of materials to be used Fisher Scientific, Carolina Biological
2. Disposal method(s) to be used for hazardous materials Disposed of in hazardous chemical waste bin
3. Procedures to be performed by the student weighing of chemicals, fusing chemicals in high heat, handling bacteria culture using aseptic techniques, pipeting using variable volume pipettor
4. Procedures to be performed by supervising scientist/adult supervisor supervise and ensure safety of student
5. Safety precautions to be taken during procedures (be specific for each hazard involved) wear lab coat, disposable gloves, and safety glasses while in lab premises
6. Name of adult hazards supervisor, Title, Phone, Company or Organization Dr. Ly, Tai Wei Sr. Director, Drug Development Technologies, 858-662-3111, Axkin Pharmaceuticals

Where bacteria, protozoa, fungi, molds, etc. are used, full details are required in 7-10:

7. Source of microorganism(s) Carolina Biological
8. Genus, species, strain Staphylococcus epidermidis
9. Culture medium Luria Broth
10. Method & timing of sealing Petri dishes N/A

REQUIRED CERTIFICATION SIGNATURES:

Failure to follow the rules and regulations will result in disqualification I CERTIFY THAT:

- The hazards control rules and regulations of the GSDSEF and the Intel ISEF will be followed.
- The procedures followed will ensure that neither the process nor the materials used constitute any known danger
- All microorganisms, pathogenic or non-pathogenic, will be handled and disposed of as if pathogenic.
- I have previously signed the completed Form GSDSEF-1, 2015 (which outlined the procedures to be followed for this study).

Student's signature Jackwin Hui Date 17 September 2014
Parent/ Guardian signature Michael Hui Date 17 September 2014
Teacher signature ESPOK Date 17-Sept. 14
Adult Hazards Supervisor signature Jackwin Hui Date SEPT. 17. 2014

SRC Approval