

pGLO Transformation Workshop

Materials

- 2 x 10 μ l DH5 α cells
- 5 μ l pGLO DNA
- 750 μ l LB broth
- 4 plates (1 LB agar, 2 LB + ampicillin, 1 LB + ampicillin + arabinose)

Methods

1. Label plates with your name and the following:
 - LB agar -pGLO
 - LB amp -pGLO
 - LB amp +pGLO
 - LB amp ara + pGLO
2. Label the DH5 α tubes:
 - +pGLO
 - -pGLO
3. Transfer 2 μ l pGLO DNA into +pGLO DH5 α Eppendorf tube.
4. Incubate both tubes of DH5 α on ice for 20 minutes.
5. Heat shock both tubes for 90 seconds at 42°C.
6. Transfer both tubes back onto ice for another 2 minutes.
7. Add 250 μ l LB broth into each tube. Mix by inverting tube gently 4-6 times.
8. Plate 100 μ l onto the appropriate plates and spread evenly.
9. Place in the incubator overnight at 37°C.
10. Visualize the plates under UV.

“Stop It” Game Codes

This is the code for the 'Stop It' game, a simple game using blinking LEDs and the arduinos called 'stop it'. The objective of the game is to press a button after a specific LED lights up. There will be various LEDs that will be continuously blinking, and the frequency of the blinking will become faster and faster as the player presses a button correctly after each blink. The game stops when the player fails to push the button after a blink, and the player loses.

```
const int LED1 = 13 ;
const int LED2 = 12;
const int LED3 = 8;
const int BUTTON = 7;
int ButtonState = 0;
int Mode = 0;
int CrMode=0;
void setup() {
  Serial.begin(9600);
  pinMode(LED1, OUTPUT);
  pinMode(LED2, OUTPUT);
  pinMode(LED3, OUTPUT);
  pinMode (BUTTON, INPUT);
  // put your setup code here, to run once:
}

void loop() {
  // put your main code here, to run
  repeatedly:
  ButtonState = digitalRead(BUTTON);
  if (ButtonState == LOW){
    if (Mode == 1){
      digitalWrite(LED1, HIGH);
      digitalWrite(LED2, LOW);
      digitalWrite(LED3, LOW);
    }
    if (Mode == 2){
      digitalWrite(LED1, LOW);
      digitalWrite(LED2, HIGH);
      digitalWrite(LED3, LOW);
    }
    if (Mode == 3){
      digitalWrite(LED1, LOW);
      digitalWrite(LED2, LOW);
      digitalWrite(LED3, HIGH);
    }
  }
  else{
    if (Mode == 3){
      Mode = 0;
    }
    switch (Mode) {
      //Case0
      case 0:
        digitalWrite(LED1, HIGH);
        digitalWrite(LED2, LOW);
        digitalWrite(LED3, LOW);
        break;
      //case1
      case 1:
        digitalWrite(LED1, LOW);
        digitalWrite(LED2, HIGH);
        digitalWrite(LED3, LOW);
        break;
      //case2
      case 2:
        digitalWrite(LED1, LOW);
        digitalWrite(LED2, LOW);
        digitalWrite(LED3, HIGH);
        break;
    }
    Mode = Mode + 1;
    delay (1000);
    Serial.print(Mode);
  }
}
```