

ARUDUINO CODE

```
#include <EEPROM.h>

#include <OneWire.h>

#include <DallasTemperature.h>

#include <LiquidCrystal_I2C.h>

#include "GravityTDS.h"


#define TdsSensorPin A3

GravityTDS gravityTds;


float tdsValue = 0;


LiquidCrystal_I2C lcd(0x27, 16, 2);


#define ONE_WIRE_BUS 2

OneWire oneWire(ONE_WIRE_BUS);

DallasTemperature sensors(&oneWire);


float calibration_value = 21.34;

float temperature = 25 ;


void setup()

{

    lcd.init();

    lcd.backlight();


    sensors.begin();
```

```

Serial.begin(115200);
gravityTds.setPin(TdsSensorPin);
gravityTds.setAref(5.0);
gravityTds.setAdcRange(1024);
gravityTds.begin();
}

void loop()
{
  lcd.clear();
  lcd.setCursor(0, 0);
  lcd.print("Water Monitoring ");
  delay(100);

  gravityTds.setTemperature(temperature); // set the temperature and execute
  temperature compensation
  gravityTds.update(); //sample and calculate
  tdsValue = gravityTds.getTdsValue(); // then get the value
  // Serial.print("TDS : ");
  // Serial.print(tdsValue,0);
  // Serial.println("ppm");

  lcd.clear();
  lcd.print("TDS:");
  lcd.print(tdsValue,0);

  sensors.requestTemperatures();

  //print the temperature in Celsius
  // Serial.print("Temperature: ");

```

```

// Serial.print(sensors.getTempCByIndex(0));
// Serial.print((char)176);//shows degrees character
// Serial.print("C | ");
    temperature = sensors.getTempCByIndex(0);

//print the temperature in Fahrenheit
// Serial.print((sensors.getTempCByIndex(0) * 9.0) / 5.0 + 32.0);
// Serial.print((char)176);//shows degrees character
// Serial.println("F");

lcd.print("Temp:");
lcd.print(sensors.getTempCByIndex(0));
lcd.print(" C");

int sensorValue = analogRead(A0);// read the input on analog pin A0:

float voltage = sensorValue * (5.0 / 1024.0); // Convert the analog reading (which goes
from 0 - 1023) to a voltage (0 - 5V):
// Serial.print("Turbidity : ");
// Serial.println(voltage); // print out the value you read:

lcd.setCursor(2, 1);
lcd.print("Turbidity");
lcd.print(voltage);

// delay(1000);

float volt = analogRead(A1)*5.0/1024;
float ph_act = -5.70 * volt + calibration_value;

```

```
Serial.print(temperature);
```

```
Serial.print(",");
```

```
Serial.print(tdsValue);
```

```
Serial.print(";");
```

```
Serial.print(voltage);
```

```
Serial.print(":");
```

```
Serial.print(ph_act);
```

```
Serial.println();
```

```
delay(2000);
```

```
}
```