

Table S1. Source code for programmed Arduino Uno ohmmeter unit.

```
1  int analogPin = 0;
2  int raw = 0;
3  int Vin = 5;
4  float Vout = 0;
5  float knownR = 1000;
6  float sensorR = 0;
7  float buffer = 0;
8  float R1 = 0
9  float R2 = 0
10 float R3 = 0
11 float R4 = 0
12 float R5 = 0
13
14 void setup()
15 {
16   Serial.begin(9600);
17 }
18
19 void loop()
20 {
21   raw= analogRead(analogPin);
22   if(raw)
23   {
24     buffer = raw * Vin;
25     Vout = (buffer)/1024.0;
26     buffer = (Vin/Vout) -1;
27     sensorR = knownR * buffer;
28     if (sensorR == R1) {
29       if (R2 == sensorR) {
30         R3 = sensorR;
31       } else{
32         R2 = sensorR;
33       }
34     } else {
35       R1 = sensorR;
36     }
37     Serial.print("Resistance: ");
38     Serial.println(sensorR);
39     if ((R1 != 0) && (R1 == R2 == R3)) {
40       delay(100000)
41     } else {
42       delay(2000);
43     }}}
```