```
#include "HX711.h"
#include <Stepper.h>

HX711 cell(6, 2); //load cell
int buttonPin=10; //button
int solenoidPin = 4; //sollenoid valve
int dirA = 12;
int dirB = 13;
int pwmA = 3;
int pwmB = 11;
Stepper stepper1(200, dirA, dirB);
//all parts of stepper motor

void setup() {
   pinMode(buttonPin, INPUT_PULLUP);
  pinMode(solenoidPin, OUTPUT);
  pinMode(pwmA, OUTPUT);
  pinMode(pwmB, OUTPUT);
  digitalWrite(pwmA, HIGH);
  digitalWrite(pwmB, HIGH);
  stepper1.setSpeed(60);
  Serial.begin(9600);
}
int dummy=0;
long val = 0;
long tare = 0;
float count = 0;
void loop() {
     int buttonValue = digitalRead(buttonPin);
        if(buttonValue == LOW){
    dummy=1;
   }
  // pushing button starts system
  while(dummy==1){
 count = count + 1;

     if (count<101){
      val = ((count-1)/count) * val    +  (1/count) * cell.read();
      }
     if(count>100){
      val = (.6*val) + (.4*cell.read());
      if( ((val-tare)*(-50/18600.0f))<250.0){
      digitalWrite(solenoidPin, HIGH);//turns on valve
       }
```

```
   if(((val-tare)*(-50/18600.0f))>250.0){
      tare=0;//sets tare back to zero
   digitalWrite(solenoidPin, LOW);
        dummy=2;
   }
    }

  if (count==100){
    tare= val;//sets tare at average of first 100 readings
  }
  Serial.println( (val-tare)*(-50/18600.0f) );
}
while(dummy==2){
    count = count + 1;

  if (count<101){
   val = ((count-1)/count) * val    +  (1/count) * cell.read();
   }
  if(count>100){
   val = (.6*val) + (.4*cell.read());
    if( ((val-tare)*(-50/18600.0f))<23.0){
   stepper1.step(-100);//turns auger
    }
    if(((val-tare)*(-50/18600.0f))>23.0){
   dummy=0;//ends process and Gatorade is made
  }
  }
  if  (count==100){
   tare=val;
  }
     Serial.println( (val-tare)*(-50/18600.0f) );

  }
  }
```