

Article

Arduino Automated Microwave Oven for Tissue Decalcification

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Supplementary Materials

Table S1. Arduino sketch.

```
// constants won't change
const int RELAY_PIN = 3; // the Arduino pin, which
connects to the IN pin of relay

// the setup function runs once when you press reset or
power the board
void setup() {
  // initialize digital pin as an output.
  pinMode(RELAY_PIN, OUTPUT);
}

// the loop function runs over and over again forever
void loop() {
  int i = 0;
  while ( i < 20000) {
    digitalWrite(RELAY_PIN, HIGH);
    delay(1);
    digitalWrite(RELAY_PIN, LOW);
    delay(1);
    i++;
  }
  digitalWrite (RELAY_PIN, LOW);
  delay(3600000);
}
```

Table S2. Modified hematoxylin and eosin protocol.

Hydration	Xylene	15 minutes
	Ethanol 100%	5 minutes
	Ethanol 90%	5 minutes
	Ethanol 70%	5 minutes
	Distilled water	5 minutes
Nuclear staining	Morel and Bassal hematoxylin	15 minutes
	Composition:	
	Solution A	
	Hematoxylin	1gr
	Ethanol 95%	100ml
	Solution B	
	Ferric chloride	2gr
	Cupric acetate	0.04gr
Differentiation	Hydrochloric acid 37%	1ml
	Mix solution A and solution B 1:1	
	Wash with distilled water	
	Acidified Ethanol	5 seconds
Bluening	Composition: Ethanol	70%
	HCl	1%
	Wash with distilled water	
Counterstaining	Ammonium Hydroxide 1%	30 seconds
	Wash with distilled water	
	Ethanol 80%	5 minutes
dehydration	Trichrome eosin	5 minutes
	Composition:	
	Eosin 1% (H ₂ O)	20ml
	Phloxin B 1% (H ₂ O)	2ml
	Orange G 1% (H ₂ O)	2ml
	Glacial acetic acid	0.8ml
Mount the slide	Ethanol 95%	156ml
	Wash with distilled water	
	Ethanol 100%	5 minutes
	Ethanol 100%	5 minutes
	Xylene 100%	5 minutes
	Xylene 100%	5 minutes