

## Supplementary Information

### Use of Arduino in the Development of a New and Fast Automated Online Preconcentration System Based on Double-Knotted Reactor for the Mn Determination in Tea Samples by Flame Atomic Absorption Spectrometry

Jeferson A. Barreto,<sup>a</sup> Valfredo A. Lemos,<sup>a</sup> Djalma M. de Oliveira,<sup>a</sup> Uillian Mozart F. M. Cerqueira,<sup>a</sup> Lucília A. Meira<sup>a</sup> and Marcos A. Bezerra \*<sup>a</sup>

<sup>a</sup>Laboratório de Química Analítica (LQA), Universidade Estadual do Sudoeste da Bahia (UESB), Campus de Jequié, 45206-191 Jequié-BA, Brazil

**Table S1.** Program of the Arduino board used to control the solenoid valves and change the configuration of the automated preconcentration system

Command	Commentary
int valv1 = 8;	
int valv2 = 9;	// it defines the integer type variables of the valves 1,2,3 and 4 in the
int valv3 = 6;	positions of the digital pins 8, 9, 6 and 11 respectively
int valv4 = 11;	
void setup(){	
pinMode (valv1, OUTPUT);	// it defines the logic control ports of the solenoid valves, activating ports 8
pinMode (valv2, OUTPUT);	(Valv1), 9 (valv2), 6 (valv3) and 11 (valv4) as information output
pinMode (valv3, OUTPUT);	
pinMode (valv4, OUTPUT);}	
void loop(){	
digitalWrite (valv2, HIGH);	
digitalWrite (valv3, HIGH);	// control cycle 1; valves 2 and 3 are actuated, and valves 1 and 4 are
digitalWrite (valv1, LOW);	switched off for a delay of 60 s
digitalWrite (valv4,LOW);	
delay(60000);	
digitalWrite (valv1, HIGH);	
digitalWrite (valv4, HIGH);	// control cycle 2; valves 1 and 4 are actuated, and valves 2 and 3 are
digitalWrite (valv2,LOW);	switched off in a delay of 60 s
digitalWrite(valv3,LOW);	
delay(60000);}	

\*e-mail: mbezerra@uesb.edu.br



This is an open-access article distributed under the terms of the Creative Commons Attribution Licence.