

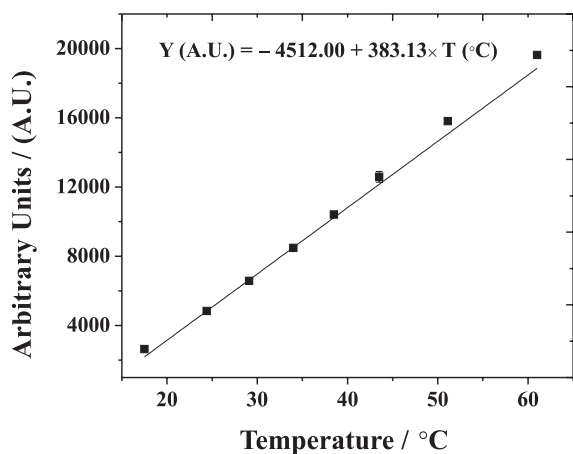
**CONSTRUCTION AND APPLICATION OF A PORTABLE MICROCONTROLLED TURBIDIMETER FOR THE *IN SITU* DETERMINATION OF SULFATE**

Vagner B. dos Santos, Thiago B. Guerreiro, Ronaldo C. Faria e Orlando Fatibello-Filho\*

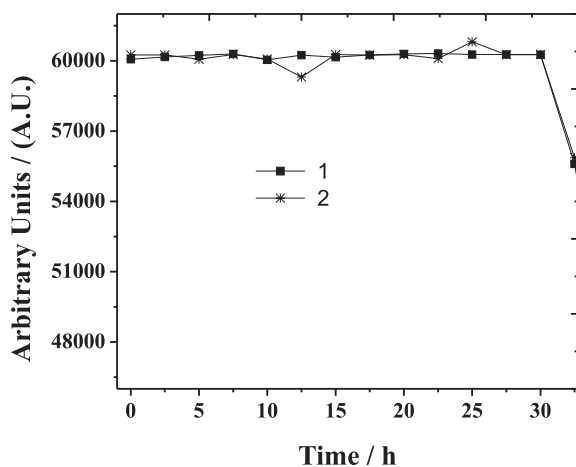
Departamento de Química, Universidade Federal de São Carlos, Centro de Ciências Exatas e de Tecnologia, P.O. Box 676, 13560-970, São Carlos-SP, Brasil

Willian T. Suarez

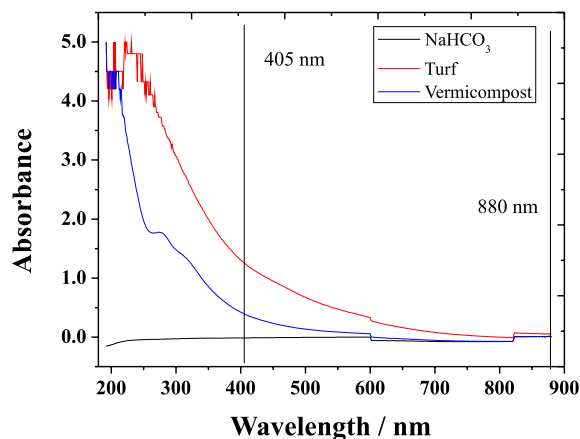
Departamento de Química, Universidade Federal de Viçosa, Centro de Ciências Exatas e Tecnológicas, 36570-000, Viçosa-MG, Brasil



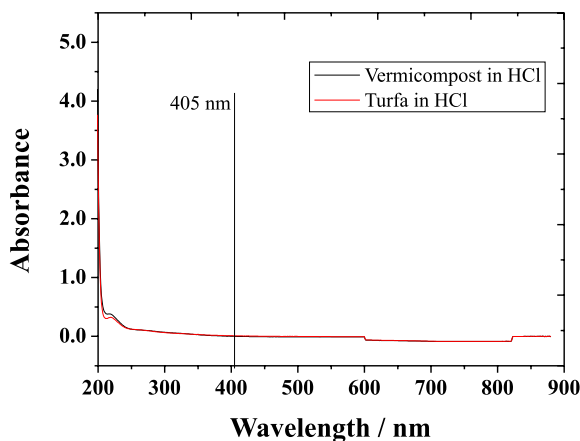
**Figure 1S.** Calibration curve of the temperature sensor embedded in the turbidimeter. Data are in arbitrary units (A.U.) refer to AD units. Coefficient of correlation ( $r$ ) = 0.997. For construction of this curve an average of 5 replicated for each point were performed and a RSD of 0.1 % was found



**Figure 2S.** Stability evaluation for the microcontrolled turbidimeter in battery module: (1) in an acclimatized room at 18 °C and (2) field analyses with a variation of temperature from 18 °C to 29 °C. Only a cuvette with deionized water was used



**Figure 3S.** Spectra of humic acids from Turf (peat) and vermicompost extracted with  $\text{NaHCO}_3$



**Figure 4S.** Spectra of the supernatant solution extracted of the treatment of humic acids (Turf and Vermicompost) with  $0.1 \text{ mol L}^{-1} \text{ HCl}$