

Accepted Manuscript

Title: Determination of Cu(II) in environmental water samples using polymer inclusion membrane-TAC optode in a continuous flow system

Authors: Ma. Cristine Faye J. Denna, Razelle B. Camitan, Dan O. Yabut, Bryan A. Rivera, Lilibeth dIC. Co



PII: S0925-4005(17)32501-7
DOI: <https://doi.org/10.1016/j.snb.2017.12.165>
Reference: SNB 23853

To appear in: *Sensors and Actuators B*

Received date: 3-8-2016
Revised date: 22-12-2017
Accepted date: 26-12-2017

Please cite this article as: Ma.Cristine Faye J.Denna, Razelle B.Camitan, Dan O.Yabut, Bryan A.Rivera, Lilibeth dIC.Coo, Determination of Cu(II) in environmental water samples using polymer inclusion membrane-TAC optode in a continuous flow system, Sensors and Actuators B: Chemical <https://doi.org/10.1016/j.snb.2017.12.165>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Determination of Cu(II) in environmental water samples using polymer inclusion membrane-TAC optode in a continuous flow system

Ma. Cristine Faye J. Denna^a, Razelle B. Camitan^b, Dan O. Yabut^b Bryan A. Rivera^b and Lilibeth dlc. Coo^{a*}

^aInstitute of Chemistry, University of the Philippines, Diliman, Quezon City, Philippines, 1101

^b Philippine Council for Industry, Energy and Emerging Technology Research and Development (PCIEERD), Department of Science and Technology, Science Community Complex, Bicutan, Taguig City, Philippines 1631

*Corresponding author e-mail address: ldcoo@up.edu.ph

Highlights:

- A polymer inclusion membrane (PIM) was prepared and its composition optimized.
- Light dependent resistor (LDR) detects decreasing light intensities.
- PIM and 2-(2-thiazolylazo)-p-cresol as a copper sensing optode in Continuous Flow.

Research highlights

The ligand, 2-(2-thiazolylazo)-p-cresol (TAC) has been successfully incorporated into a polymer inclusion membrane to complete a sensing platform for copper ions in water samples. The detection is through the color development from the complexation reaction of copper with TAC. The absorbance measurements are conducted by using light emitting diode (LED) and light dependent resistor (LDR) connected to a voltmeter. Results are obtained through the voltage readout on the computer. The sensor has a limit of detection (LOD) of 0.10 mgL⁻¹.

Download English Version:

<https://daneshyari.com/en/article/7140910>

Download Persian Version:

<https://daneshyari.com/article/7140910>

[Daneshyari.com](https://daneshyari.com)