## **Accepted Manuscript**

Title: Evaluation of a novel PVC-based efficient potentiometric sensor containing a tripodal diglycolamide (TREN-DGA) ionophore for europium(III) estimation

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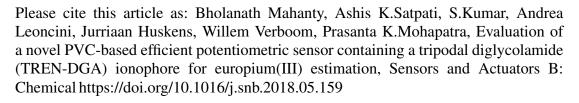
PII: S0925-4005(18)31067-0

DOI: https://doi.org/10.1016/j.snb.2018.05.159

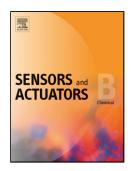
Reference: SNB 24815

To appear in: Sensors and Actuators B

Received date: 11-1-2018 Revised date: 17-5-2018 Accepted date: 27-5-2018



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## ACCEPTED MANUSCRIPT

Evaluation of a novel PVC-based efficient potentiometric sensor containing a tripodal diglycolamide (TREN-DGA) ionophore for europium(III) estimation

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#### **HIGHLIGHTS**

- TREN-DGA ligand containing PVC membranes were developed
- The polymeric membranes were characterized using conventional techniques
- The polymeric membranes were used for Eu<sup>3+</sup> ion sensing from dilute acid feeds
- The stability and interference studies were highly encouraging
- The TREN-DGA based sensor was found to be much superior to the TODGA based sensor

### **Abstract**

Polymeric membrane-based electrodes containing a multiple diglycolamide (DGA), such as a N-pivot diglycolamide (diglycolamide-TREN (DGA-TREN) and a C-pivot diglycolamide (tripodal diglycolamide) (T-DGA) as ionophore, and polyvinyl chloride (PVC) as the base polymer were fabricated. These membranes were tested for the potentiometric determination of europium ions in acidic feed solutions. The membrane with a composition of 81.5% PVC and

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