

## **Hybrid-paper-based-Potentiostat for low cost point of need diagnostics**

Petroné Bezuidenhout, Suzanne Smith Kevin Land<sup>1</sup> and Trudi Joubert<sup>2</sup>

### **ABSTRACT**

The focus of this paper is the manufacturing of a low-cost hybrid paper-based potentiostat. Potentiostats exhibit high sensitivity, and can be used for a variety of applications. The results highlight the functionality of a paper-based potentiostat compared to an LMP91000EVM development board, and a laboratory-based Metrohm Autolab potentiostat. The development of a portable, low-cost, disposable potentiostat can assist in a variety of fields including environmental monitoring, wearables and healthcare.