

## **An accurate amperometric glucose sensor based glucometer with eliminated cross-sensitivity**

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### **Abstract**

This paper represents an experimental analysis of cross-sensitivity, which is the main problem that usually faces amperometric glucose sensors. The elimination of cross-sensitivity is based on experimental determination and verification of new correction factors. The correction factors obtained were then used to design a new glucometer with cross-sensitivity of the amperometric glucose sensor to urea concentration in human blood eliminated. The accuracy of this glucometer satisfies the clinical requirements and the results of glucose measurements obtained using this glucometer are highly correlated with the glucose measurements for the same blood samples obtained using the well-known Yellow Springs Instrument glucose analyser.