Electronic Supplementary Material (ESI) for Analyst.

SUPPORTING INFORMATION

A New Substrate for Alkaline Phosphatase Based on Quercetin Pentaphosphate

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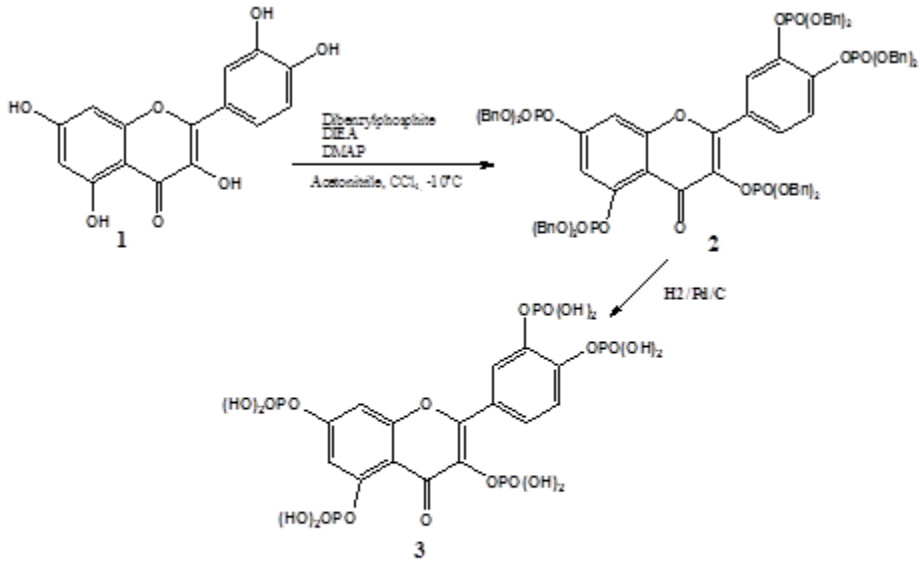
The purpose of this section is to provide additional information of interest to the reader: The information include, a pictogram showing changes of QPP solution before and after reacting with AP, changes in QPP absorbance and Rabbit anti-BG conjugated with ALP response of QPP substrate.



Scheme 1S: Synthetic procedures for QPP according to reference # 14

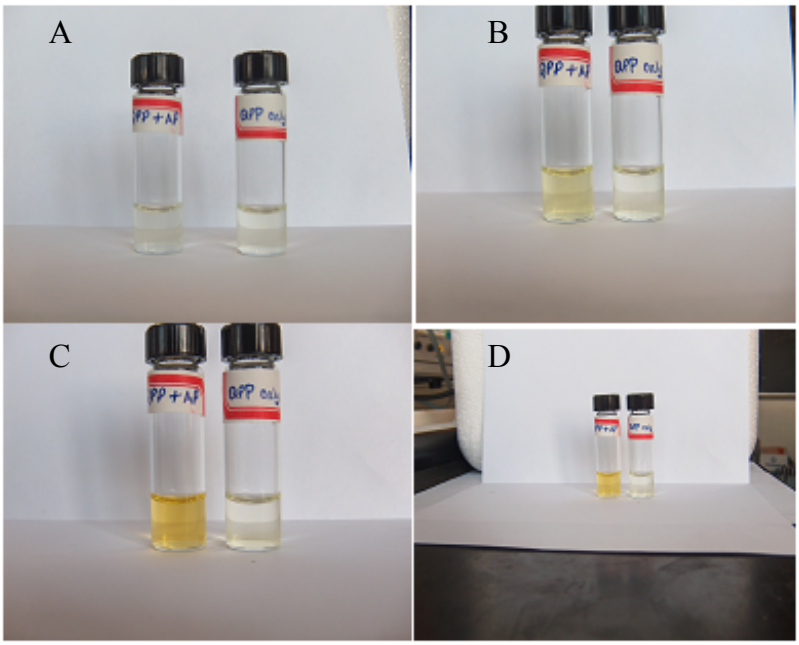


Figure S1. *Pictogram showing the changes in color of a QPP solution after interaction with ALP. (A) before addition of ALP (B) 5 min after adding ALP to one vial (C) 10 min (D) 30 min*

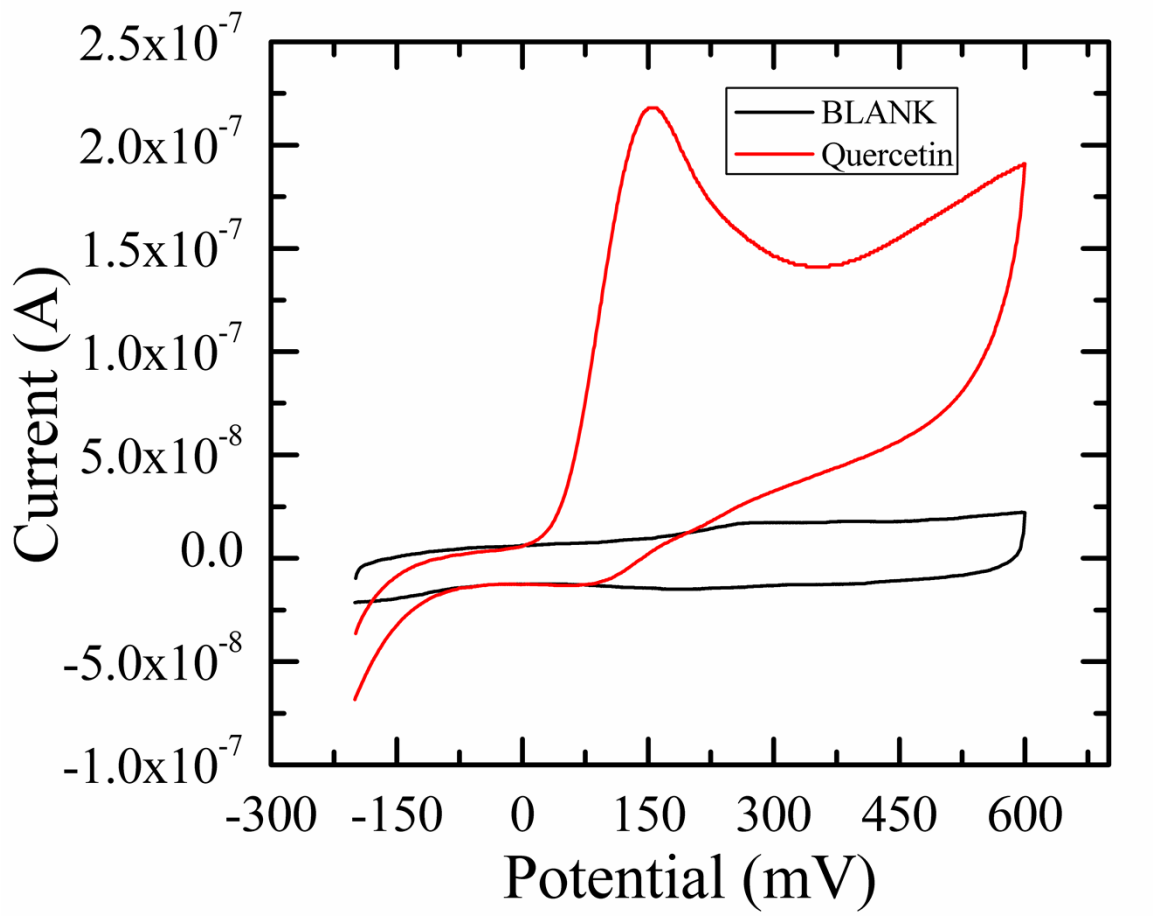


Figure S2. *CV obtained for the oxidation of quercetin adsorbed on gold working electrode scan rate 50 mV/s; 1μA/V. All experiments were carried out in phosphate buffer pH 7.03; potential range -200 – 600 mV vs Ag/AgCl. The blank contains phosphate buffer only.*

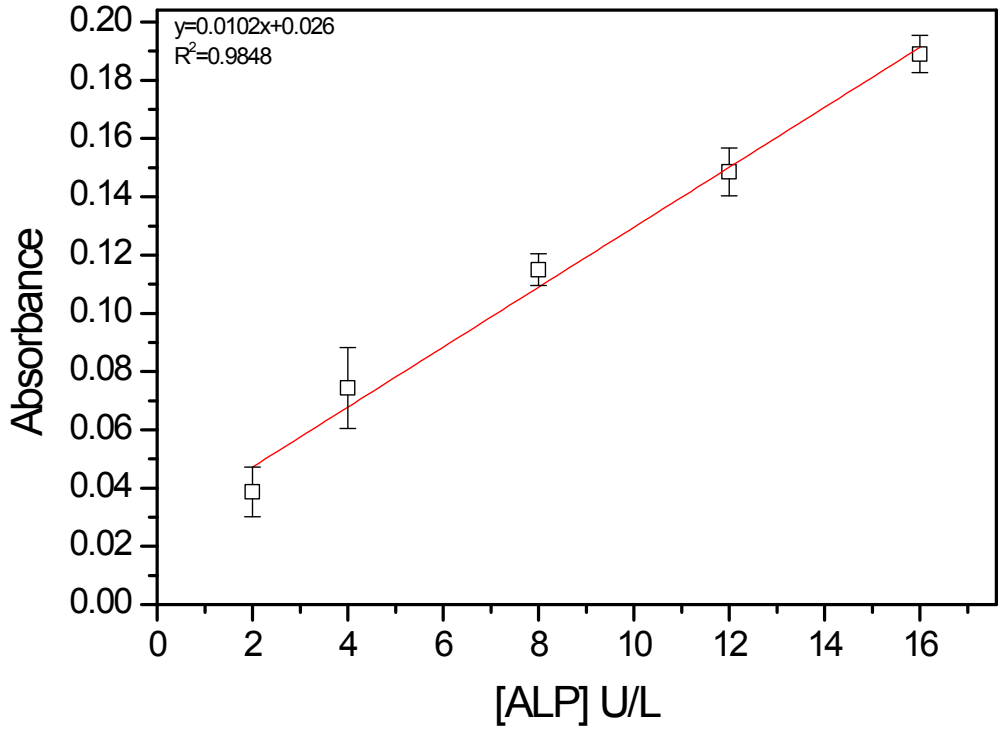


Figure S3. *Change in absorbance (Abs_{410nm}- Abs_{324nm}) in the presence of different concentrations of ALP. The absorbance readings were taken 18 minutes after incubation with ALP enzyme in DEA buffer and corrected for blank.*

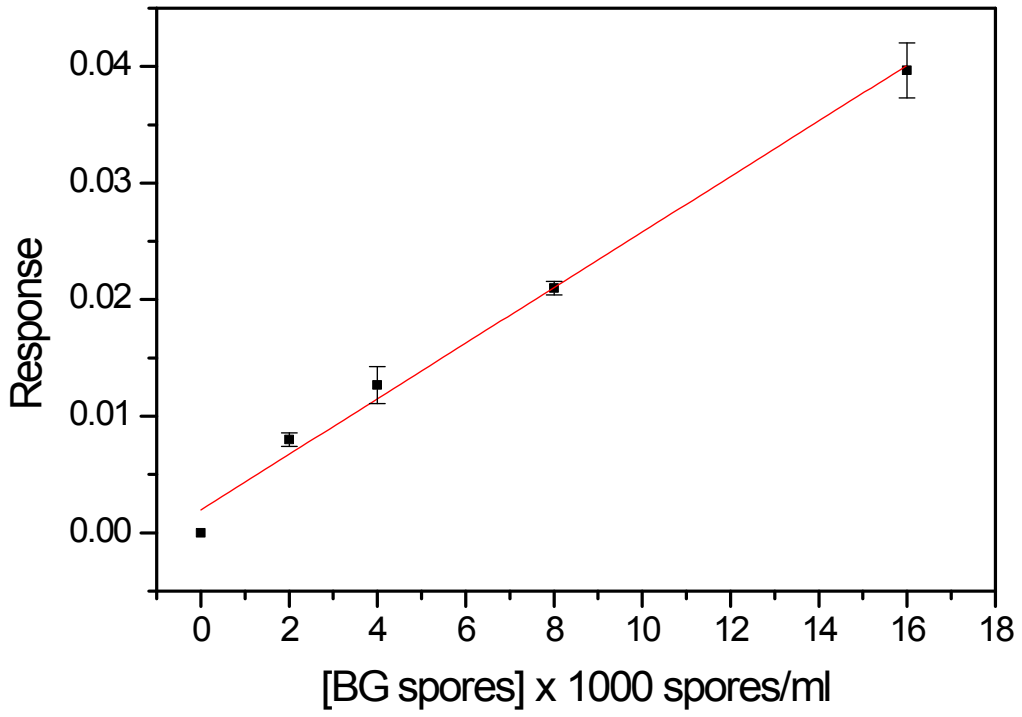


Figure S4. *Rabbit anti-BG conjugated with ALP response of QPP substrate. Absorbance (λ_{410}-λ_{324}nm) response with increasing concentrations of the BG spores when QPP was used as substrates. A limit of detection of 5998 spores/ml was achieved.R^2=0.989*