

Electronic Supplementary Information

Biosensor for determination of hydrogen peroxide based on *Yucca Filamemntosa* membrane

Huan Yue,^{a,b} Jie He,^{a,c} Dan Xiao^{a,*} and Martin M. F. Choi^{d,**}

^aCollege of Chemical Engineering, Sichuan University, Chengdu 610065, P.R. China

^bChengdu Grain Storage Research Institute, China Grain Reserves Co., Ltd., Chengdu 610031, P.R. China

^cMonitoring Center, Chengdu Drainage Co., Ltd., Chengdu 610042, P.R. China

^dDepartment of Chemistry, Hong Kong Baptist University, Kowloon Tong, Hong Kong SAR, P.R. China

* Corresponding author. Tel: +86-28-8541-5029; fax: +86-28-8541-6029

** Corresponding author. Tel: +852-34117839; fax: +852-34117381

E-mail addresses: xiaodan@scu.edu.cn (D. Xiao); mfchoi@hkbu.edu.hk (M.M.F. Choi)

(a)



(b)

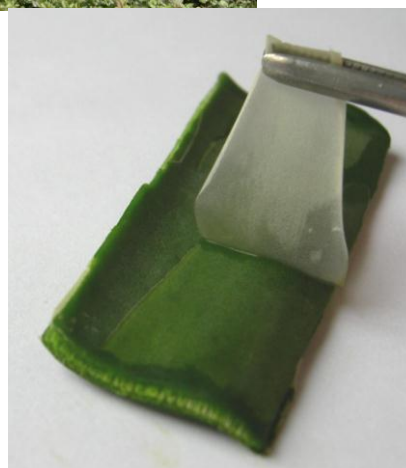


Fig. 1S. Photographs of *Yucca Filamemntosa*: (a) the whole plant, (b) the leaf and the leaf membrane.

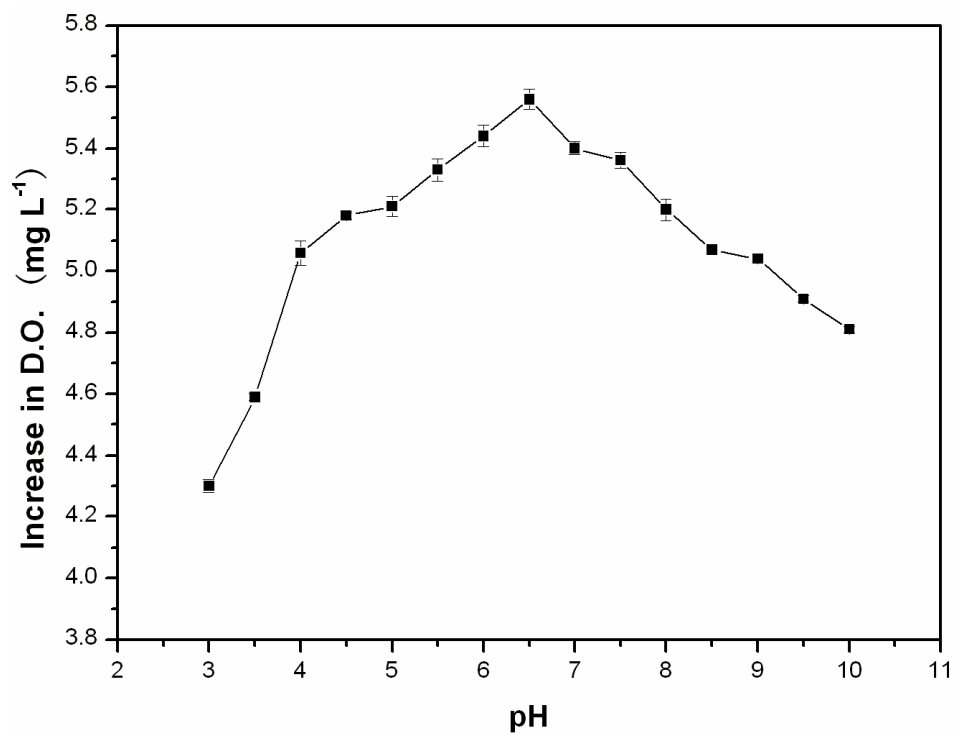


Fig. 2S. Effect of pH on the response of the biosensor upon exposure to 1.81 mM H₂O₂. Error bars are calculated from three replicate measurements.

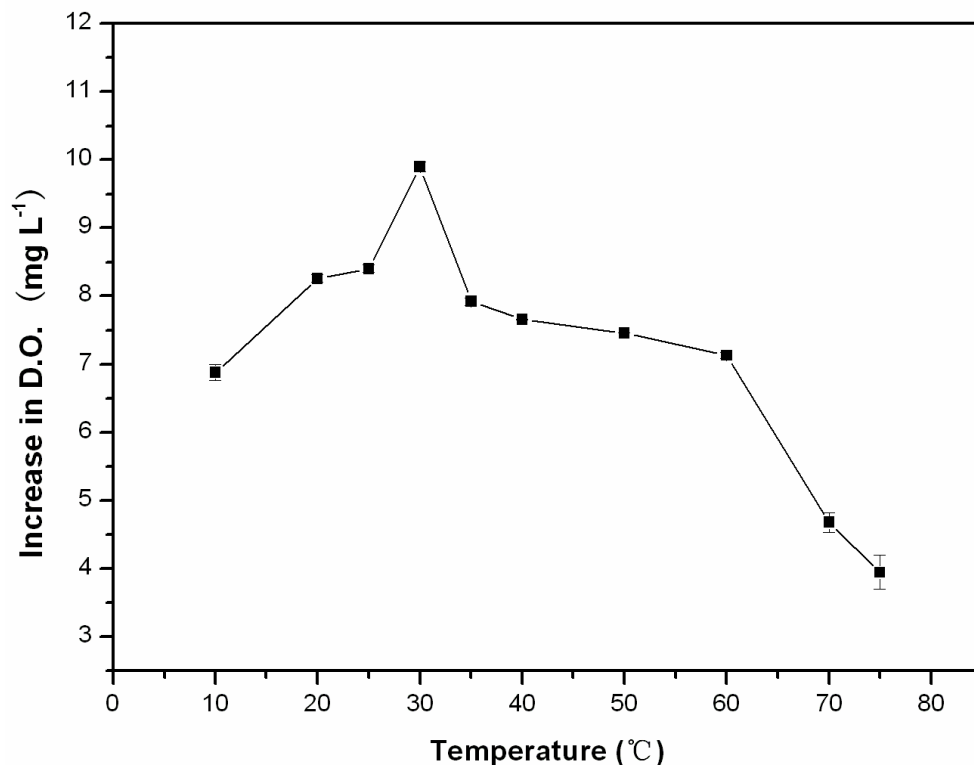


Fig. 3S. Effect of temperature on the response of the biosensor upon exposure to 3.23 mM H₂O₂. Error bars are calculated from three replicate measurements.

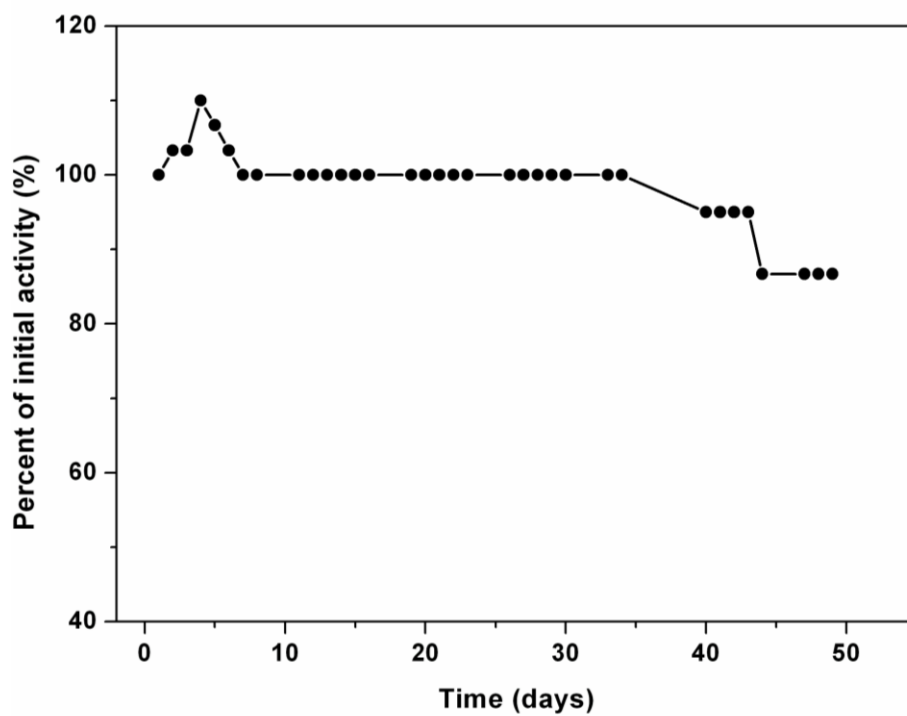


Fig. 4S. The working life-time of hydrogen peroxide biosensor.