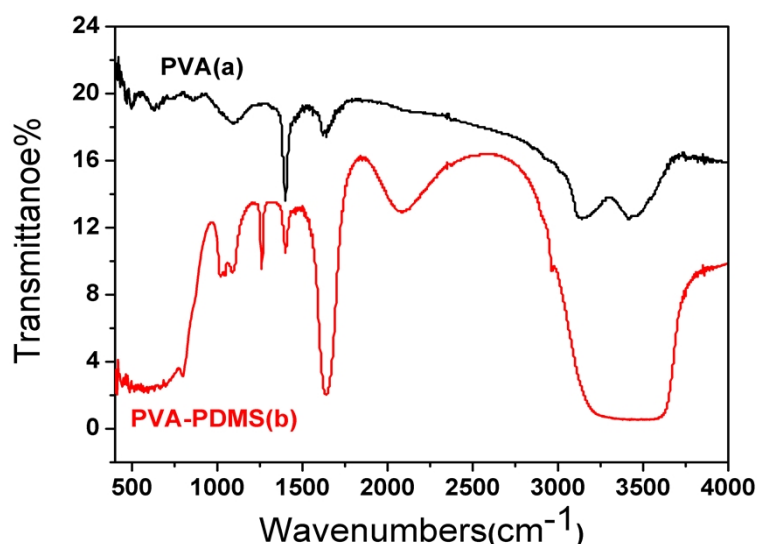


**Enzyme-functionalized electrochemical immunosensor  
based on electrochemically reduced graphene oxide and  
polyvinyl alcohol-Polydimethylsiloxane for detection of  
*Salmonella pullorum* & *Salmonella gallinarum***

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Supplementary material

Fig.S1 FTIR spectrum of PVA (a) and PVA/PDMS (b).



Spectroscopic characterization of the graft copolymer composition PVA-PDMS by FTIR analysis. FTIR reveals that chemically synthesized PVA-PDMS is well adhesion with each other which recorded in dry KBr pellet in the range of 400–4000 cm<sup>-1</sup>,

As shown in Fig. 1(a) that the characteristic C–H stretching vibrations at 1400.14 cm<sup>-1</sup>, this is characteristic absorbing peaks of the PVA. In Fig. 2(b), FTIR of PVA-PDMS, the absorption peak appeared at 1261.28 cm<sup>-1</sup> and 793cm<sup>-1</sup>, these were Si-O-

Si stretching vibration and Si-CH<sub>3</sub> stretching vibration. C=O stretching vibrations reflected at 1639.28cm<sup>-1</sup>. -OH stretching vibrations at 3322-3471 cm<sup>-1</sup>, in part because of -OH of PVA, the other part is that -OH of H<sub>2</sub>O. Stretching vibrations at 2086.70 cm<sup>-1</sup> possibly because of CO<sub>2</sub> impurity in the air mixed while PVA-PDMS preparation. This means that the PVA and PDMS cross-links together and forming a layer of polymer film.