METHOD FOR DETECTING AN ANALYTE USING SURFACE ENHANCED RAMAN SPECTROSCOPY

ABSTRACT

According to the present disclosure, a method for detecting an analyte using surface enhanced Raman spectroscopy (SERS) is provided. The method comprises (a) contacting one or more analyte-binding molecules with the analyte under conditions that allow binding of the analyte to the one or more analyte-binding molecules to form a first mixture, wherein the analyte is preferably haptogloblin and the analyte-binding molecule may comprise haemoglobin or is a haptogloblin antibody, (b) contacting a liquid reagent comprising a peroxidase substrate and a peroxide source with the first mixture to form a second mixture, while maintaining pH of the second mixture at 10 or less, (c) quenching the second mixture to form a third mixture, (d) optionally contacting the third mixture with a SERS-active substrate, and (e) detecting a surface enhanced Raman signal from the third mixture and/or a surface of the SERS-active substrate.

Figure 15