

**Vimala College (Autonomous)  
Thrissur**



**PG Department of Zoology**

**Standard Operating Procedure  
For  
BSc Zoology Practical**

**Funded by**

**DBT STAR College Scheme  
Department of Biotechnology  
Govt. of India**

**June 2023**

New equipment purchased under DBT star College Scheme correlated with new additional practicals for BSc students under the following core course practical sessions

<b>Purchased item</b>	<b>Practical Core course title and code</b>	<b>Practical performed</b>	<b>SOP</b>
ELISA kit	Core course practical III: VZO6BPL3- Biotechnology, Microbiology, Immunology, Molecular Biology	Study of Principle and applications of ELISA	<p>ELISA is an abbreviation for “Enzyme Linked Immunosorbent Assay” and it is a laboratory technique to measure the <b>analyte’s</b> (antibodies or antigens most likely) <b>concentration</b> in solutions taken</p> <p><b>SOP of Direct ELISA technoque</b></p> <ol style="list-style-type: none"> <li>1. Prepare a surface to which a known quantity of capture antibody is bound.</li> <li>2. Block any nonspecific binding sites on the surface.</li> <li>3. Add an antigen-containing sample to the plate.</li> <li>4. Wash the plate, so that unbound antigen is removed.</li> <li>5. A specific antibody is added, and binds to antigen</li> <li>6. Add enzyme-linked secondary antibodies as detection antibodies that also bind specifically to the antibody’s Fc region (non-specific).</li> <li>7. Wash the plate, so that the unbound antibody-enzyme conjugates are removed.</li> <li>8. Add a substrate that is converted by the enzyme into a colour or fluorescent or electrochemical signal.</li> <li>9. Measure the absorbance or fluorescence or electrochemical signal of the plate wells to determine the presence and quantity of antigen.</li> </ol>