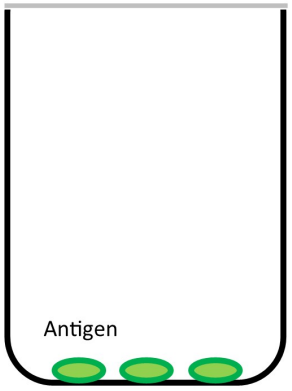
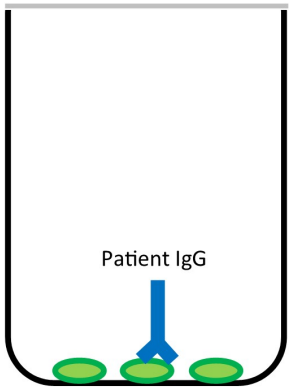
Patient Sample 1

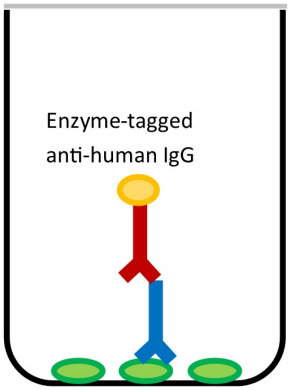
(has few antibodies specific to the infection)



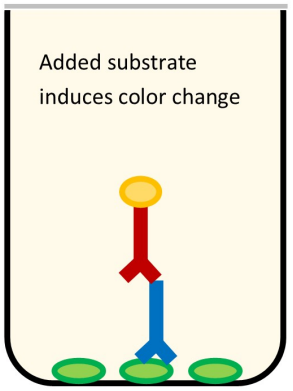
96-well plate is coated in de-activated antigen of interest. Coating antigen is chosen to induce specific binding of patient antibodies, if present in serum sample.



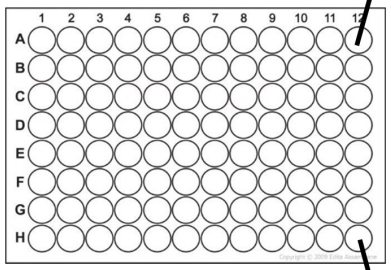
Patient serum is added to the well and the plate is incubated. Antigen-specific IgG will bind to the antigen coating the well, forming an antibody-antigen complex.



Anti-human IgG is added to the well. This antibody will bind to the antibody-antigen complex. Anti-human IgG is tagged with an enzyme that will allow for color readout in the final steps.



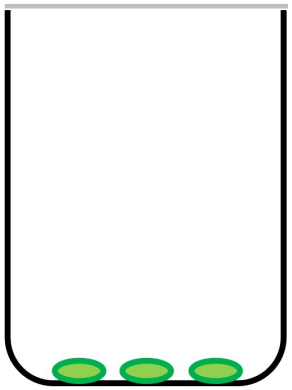
A substrate is added which causes change in color. Intensity of color change corresponds to the amount of antibody-antigen complexes

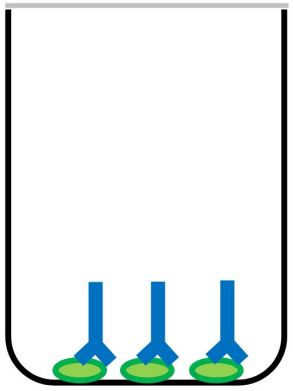


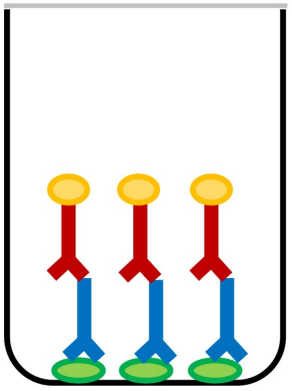
96-well plate

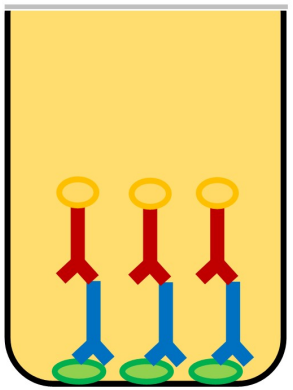
Patient Sample 2

(has many antibodies specific to the infection)









The indirect ELISA method is shown above. Other methods include direct, competitive, and sandwich. While there can be variations in design, all methods utilize using color or fluorescence change to qualify or quantify the amount of antibodies in a serum sample that are specific to the antigen or compound of interest.