

# ELISA Comparison Graphic Organizer and Venn Diagram

Use the graphic organizer below to summarize information about 3 methods of ELISA.

## Direct ELISA

Draw an example:	Antigen first attaches to: <b>Surface of a plate</b>	Time needed to Complete Assay: 1                      2                      3 slow.....fast
	Number of binding steps in process:  <b>4</b>	Number of Antibodies needed:  <b>1</b>
When you would use the method: <b>Vaccine Testing, Water testing, fecal testing</b>	Detects: <b>Antigen</b> Antibody	

## Indirect ELISA

Draw an example:	Antigen first attaches to: <b>Surface of a plate</b>	Time needed to Complete Assay: 1                      2                      3 slow.....fast
	Number of binding steps in process:  <b>5</b>	Number of Antibodies needed:  <b>2</b>
When you would use the method: <b>Test if your vaccine worked, Test if you had been exposed to a pathogen</b>	Detects: Antigen <b>Antibody</b>	

## Sandwich ELISA

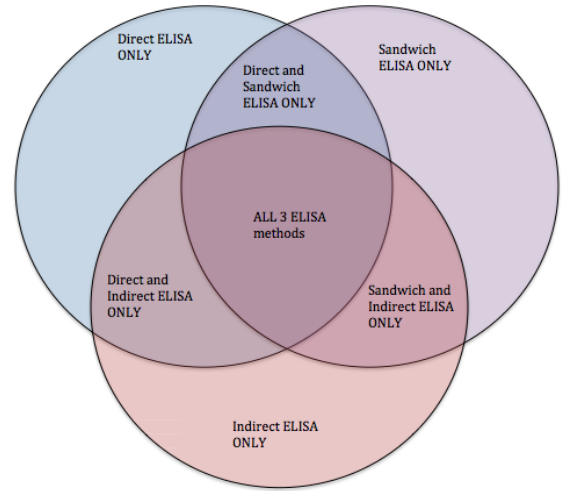
Draw an example:	Antigen first attaches to: <b>Coating Antibody</b>	Time needed to Complete Assay: 1                      2                      3 slow.....fast
	Number of binding steps in process:  <b>6</b>	Number of Antibodies needed:  <b>3</b>
When you would use the method: <b>Drug test, Detecting small molecules/small amounts of antigen, Pregnancy/hormone test</b>	Detects: <b>Antigen</b> Antibody	

**Venn diagrams** are visual representations of **logical relationships between different subjects**.

How to fill out a venn diagram:

1. Where the circles of different subjects overlap, write features of those subjects that they share in common.
2. Where the circles do not overlap write aspects of the features that are specific only to that subject.

Use the information from your graphic organizer to compare and contrast 3 methods of ELISA on the below.  
See Example to the right for help getting started.



Direct Only:

Fastest, 4 steps, 1 antibody, Need a lot of antigen to detect

Indirect Only:

5 steps, detects antibodies, medium speed

Sandwich Only:

Slowest, 6 steps, detects small amount of antigen and small molecules

Direct and Indirect:

Antigen bonds to plate

Direct and Sandwich:

Detects antigen

Indirect and Sandwich:

Secondary antibodies, can amplify

Direct, Indirect, and Sandwich:

Blocking, Antigens, Antibody with enzyme, color change, wash, plates, coating

**Be sure to include the following:**

Antigen attachment

Number of Antibodies needed

Time needed to Complete Assay

Number of Binding Steps

When you would use the method