VIROLOGY LECTURE

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These are the most sensitive techniques for detection of Ag or Ab.

They have the same principles.

They are carried out in two steps.

The first step is formation of Ag-Ab complex.

The second step is addition of conjugate, which binds to the Ag-Ab-complex, if it is there.

There are four types of conjugates:

- Ag-labelled
- Ab-labelled
- Anti-human IgG
- Anti-human IgM
In EIA:

- Only in EIA, substrate and stopping solution are added.
- The conjugate is labelled with enzyme.
- The enzyme will hydrolyse the substrate and a colour will develop.
- EIA reader, measures the intensity of the colour.
- Results are printed and expressed in the form of absorbance value (Abs) or optical density (O.D.)
- Generally, specimen is positive when the abs-value of the specimen equal or greater than the cutoff value.
- In competitive –EIA the opposite is true.
In RIA:

- The conjugate is labeled with $^{125}$I, which is a radioactive material.
- The reader is gamma counter, measures the amount of radioactive material incorporated in the test.
- Results are expressed in the form of count per minute (cpm)
- No substrate or stopping solution are used.
**In IF:**

- The conjugate is labelled with IF-dye.
- No printed or calculated results
- IF - microscope is used for reading the slides.
Drugs Approved for HIV Infection

**Nucleoside/Nucleoside RT Inhibitors:**

- Abacavir
- ddC Zalcitabine
- Ddl Didanosine
- d4T Stavudine
- 3TC Lamivudine
- ZDV
- Tenofovir
Non-Nucleoside RT Inhibitors:

- Delavirdine
- Nevirapine
- Efavirenz
**Drugs Approved for HIV Infection (Continued)**

**Protease Inhibitors:**
- Ritonavir
- Saquinavir
- Indinavir
- Amprenavir
- Nelfinavir
- Lopinavir
- Atazanavir
- Entricitabine
- Fosamprenavir calcium
Fusion Inhibitors:

- Enfuvirtide