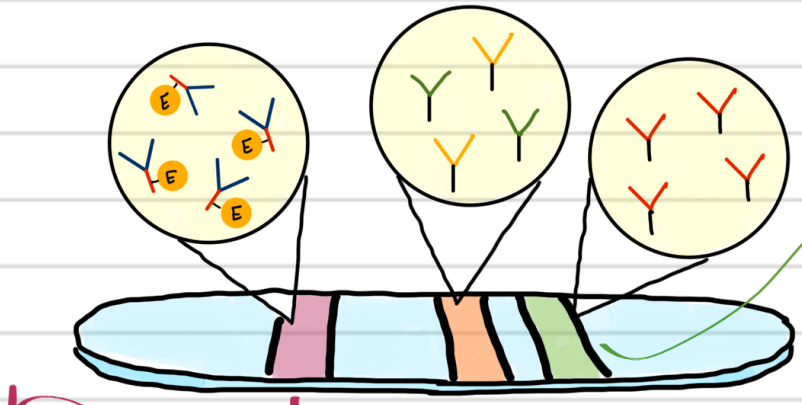
How Pregnancy Test Works?!

The urine of pregnant women contains a hormon called Human Chorionic Gonadotropin HCG produced by the developing placenta, however some of this hormon is also excreted in the pregnant women's urine.

The test contains 3 zones of function: R, T and C to indicate reaction zone, test zone and control zone.



C-Zone contains dye molecules + anti-mouse, these will bind antibodies currently in R-zone

R-Zone

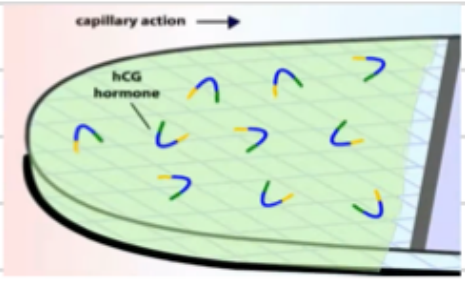
T-Zone

Contains anti-bodies that binds to HCG (anti-HCG)

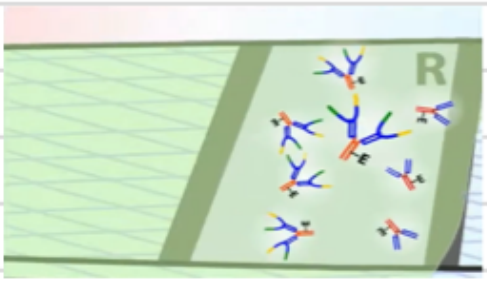
Also contains (anti-HCG) and dye molecules that will participate in color rxns

(E) enzymes that can participate in color rxns.

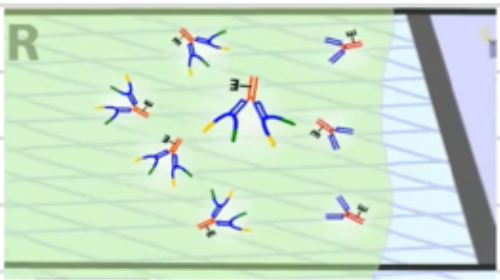
POSITIVE TEST (pregnant!)



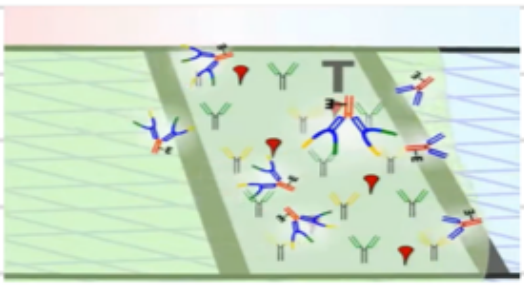
1. The test strip is clipped in the urine sample



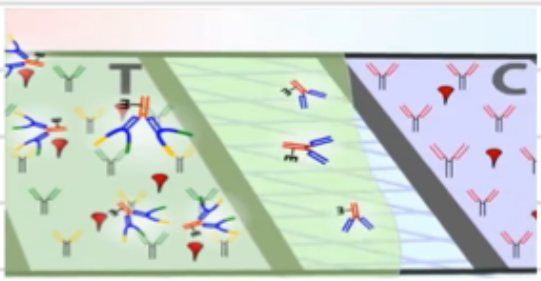
2. The enzyme E reognise parts of HCG and bind to them



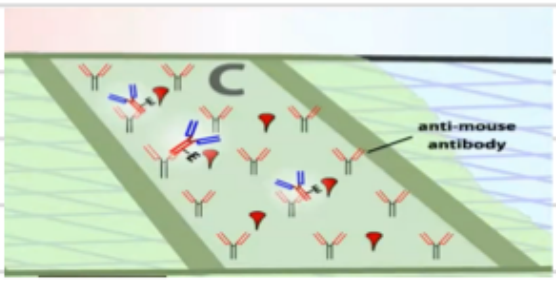
3. The complex of HCG and antibodies and the unbound antibodies flow at the test zone.



4. Anti-HCG in T-zone bind to HCG portions of the complex and they're affixed to the strip.
enzyme linked antibodies catalyse ion with the dye



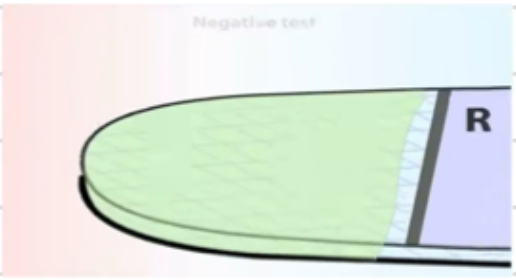
5. The free antibodies continue to flow to reache C-zone



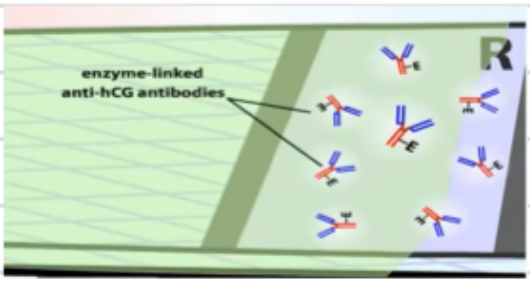
6. Anti-mouse antibodies bind to the free antibodies
enzyme linked antibodies catalyse ion with the dye

SO, in POSITIVE test the T and C zones are colored.

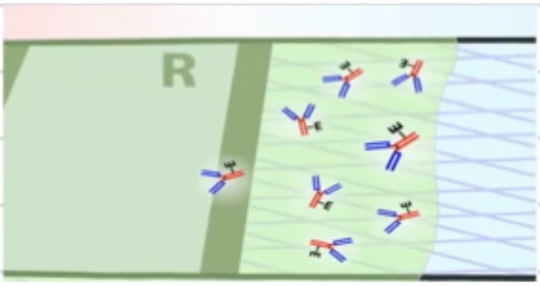
NEGATIVE TEST (Not pregnent)



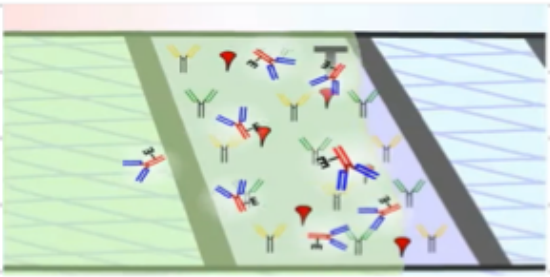
1. The test strip is clipped in the urine sample



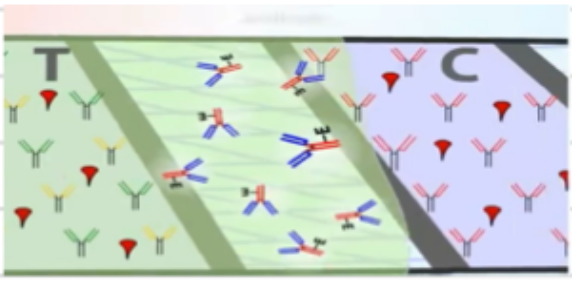
2. Anti-HCG has nothing to bind to



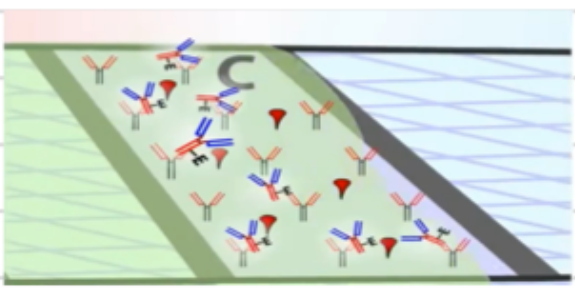
3. Anti-HCG flows to reach the T-zone



4. Because the anti-HCG don't carry HCG, the anti-HCG in the T-zone unable to bind them



5. Continue to flow to reach the C-zone



6. The C-zone immobilize them and the enzyme linked antibodies catalyse rxn with the dye this zone is important to check if the strip is working

SO, in NEGATIVE test only the C-zone is colored