

Precipitation

Precipitation

- *Soluble antigen combines with its specific antibody.**
- *Antigen-antibody complex is too large to stay in solution and precipitates.**

Done on gel agar media

Single radial immunodiffusion

Double Radial Immunodiffusion

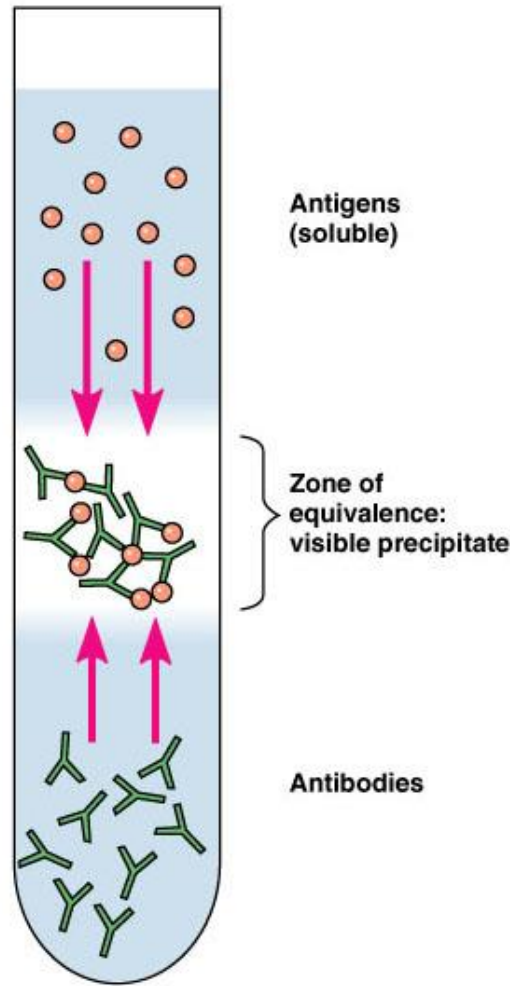
Tube method precipitation

Precipitation

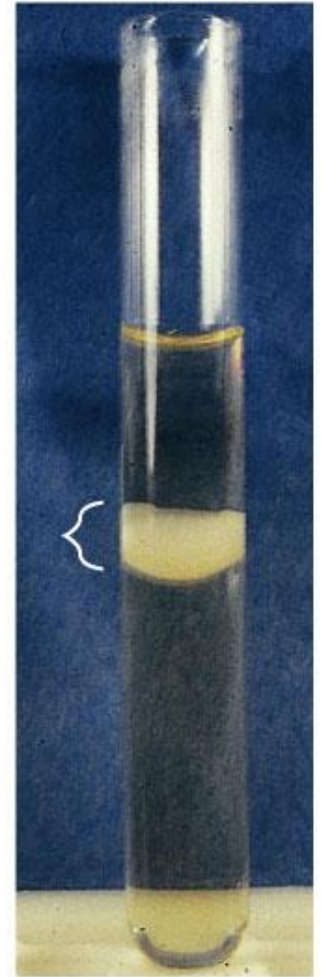
Reactions:

- Involve soluble antigens with antibodies
- Ring test (Ascoli test)

(*B. anthracis*)

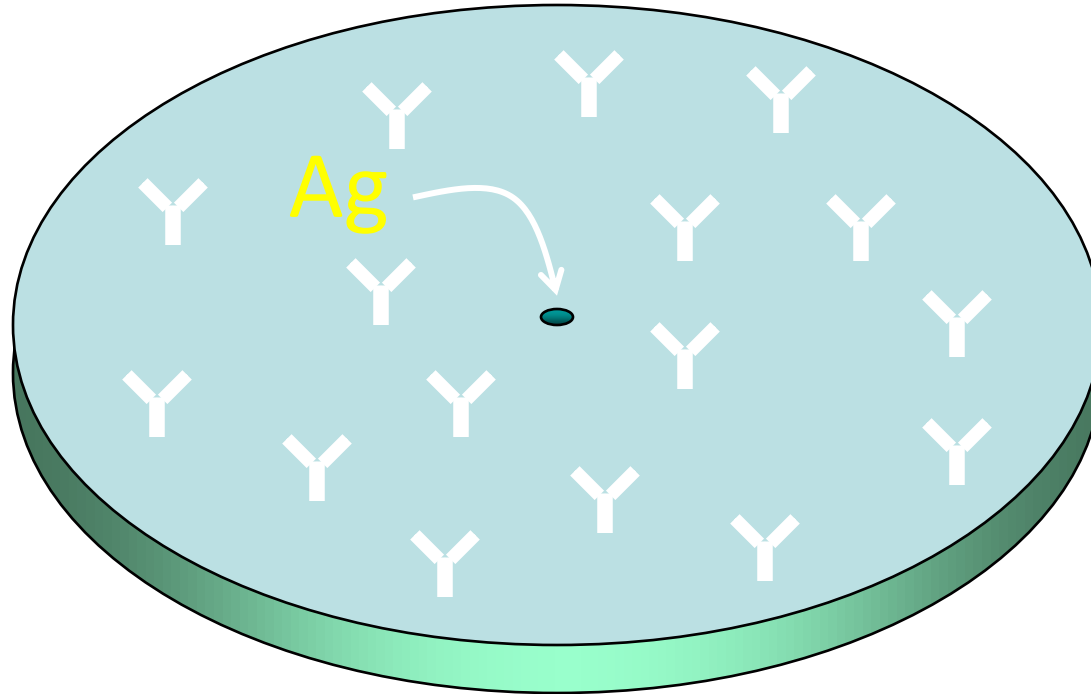


(a)

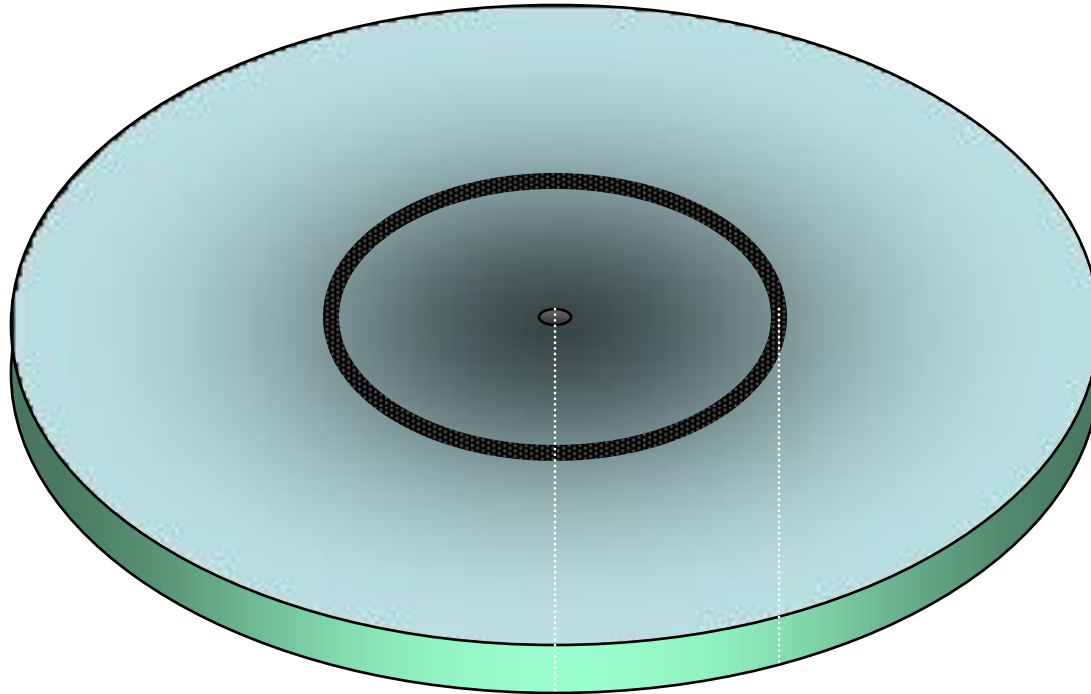


(b)

Single radial immunodiffusion



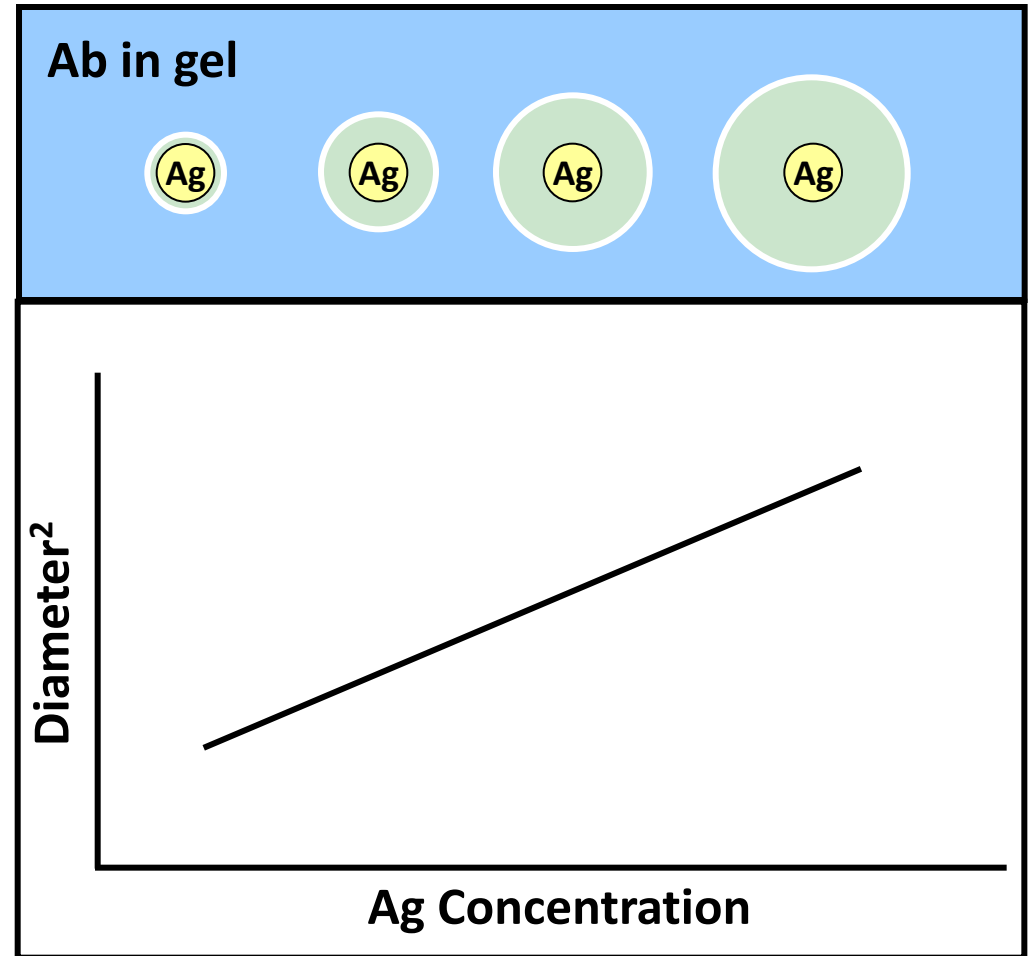
Single radial immunodiffusion

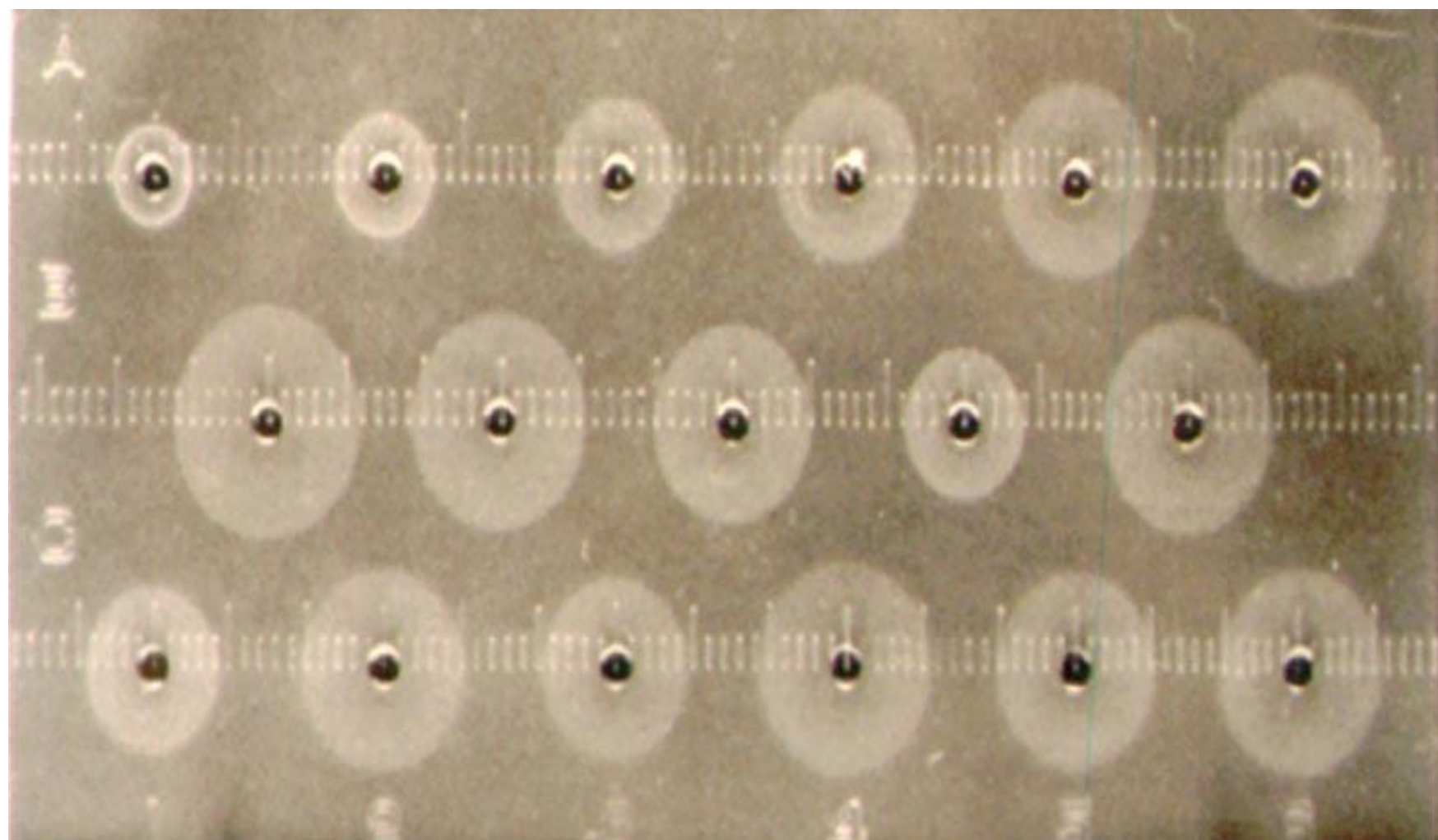


$r \propto \text{Ag conc.}$

single Radial Immunodiffusion

- **Method**
 - Ab in gel
 - Ag in a well
- **Interpretation**
 - Diameter of ring is proportional to the concentration
- **Quantitative**
 - Ig levels

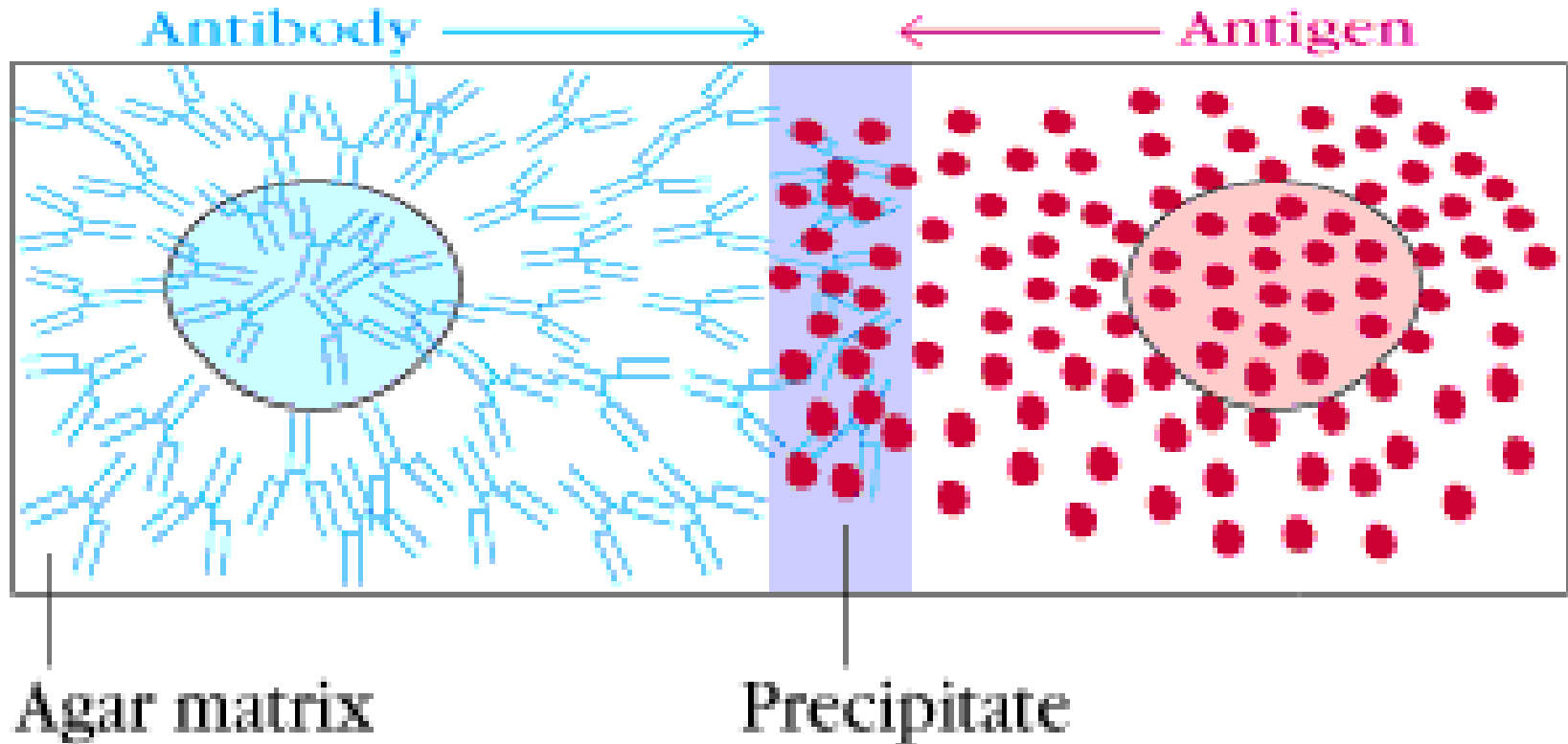




Double Immunodiffusion (Ouchterlony)

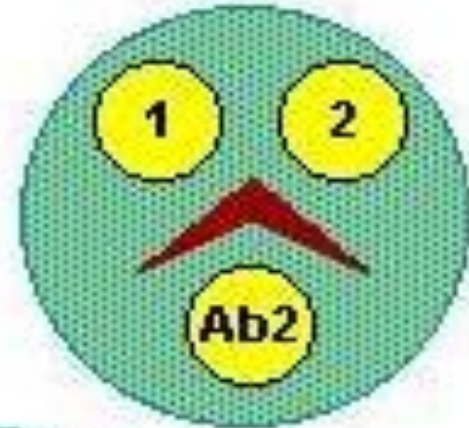
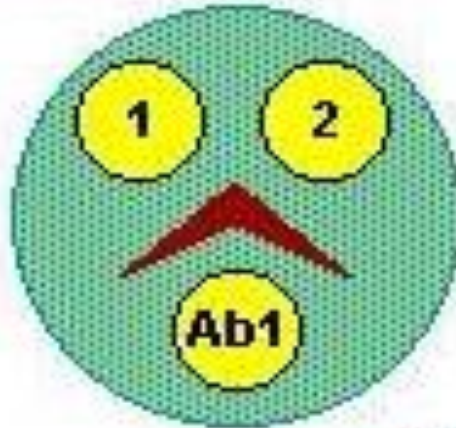
Diffusion of antibody and antigen towards each other in an agarose gel. A line of precipitate will form if the antibody binds to antigen.

DOUBLE IMMUNODIFFUSION

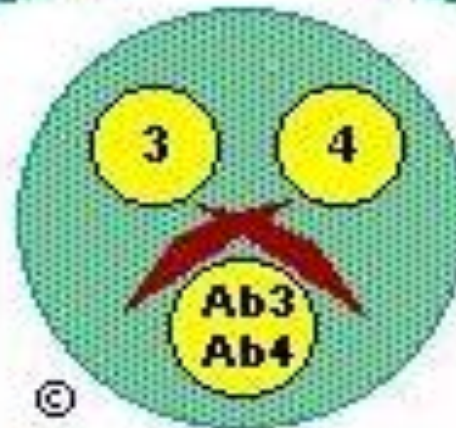


Double Radial Immunodiffusion (Ouchterlony)

**Identity
between
antigens**

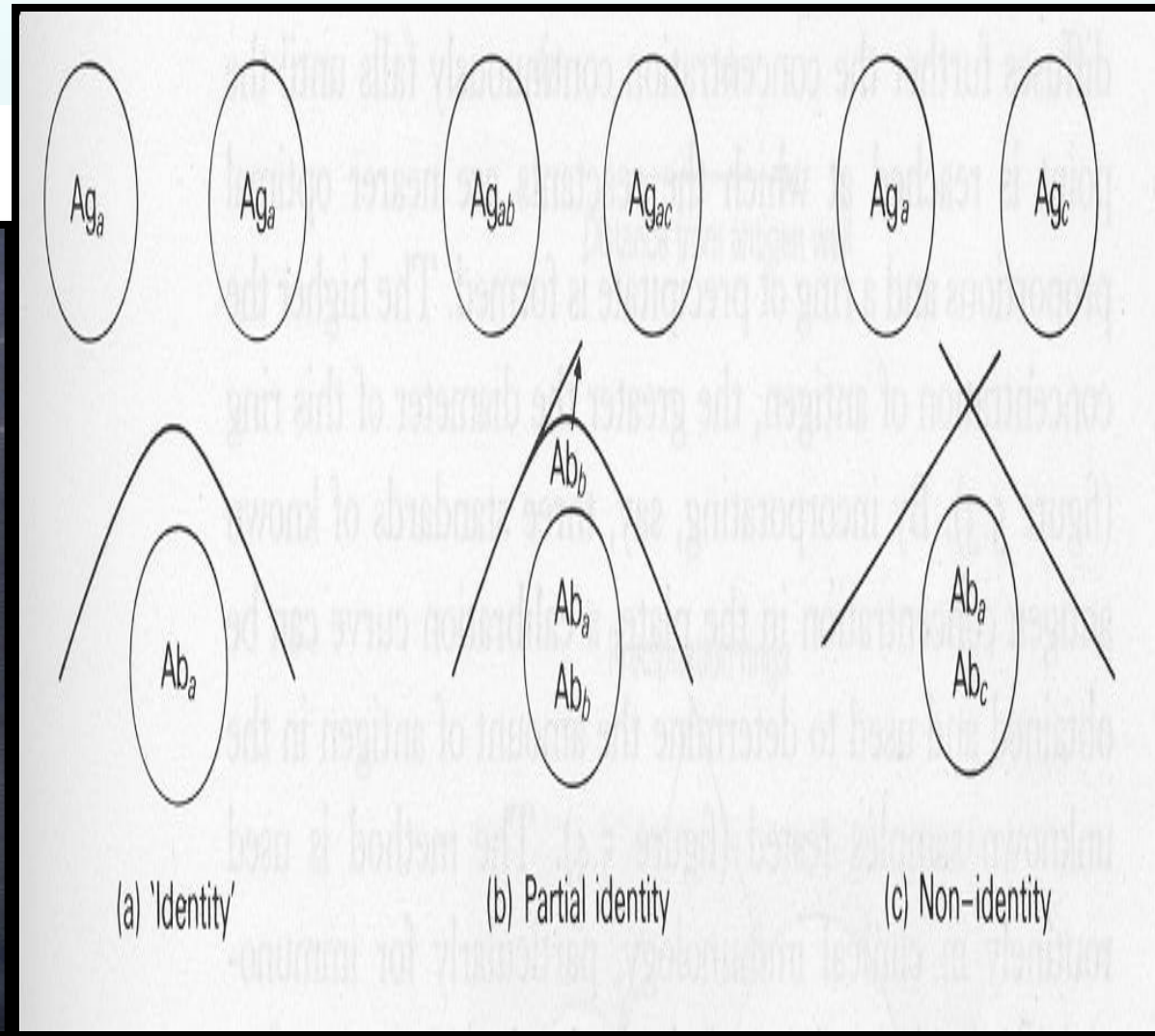
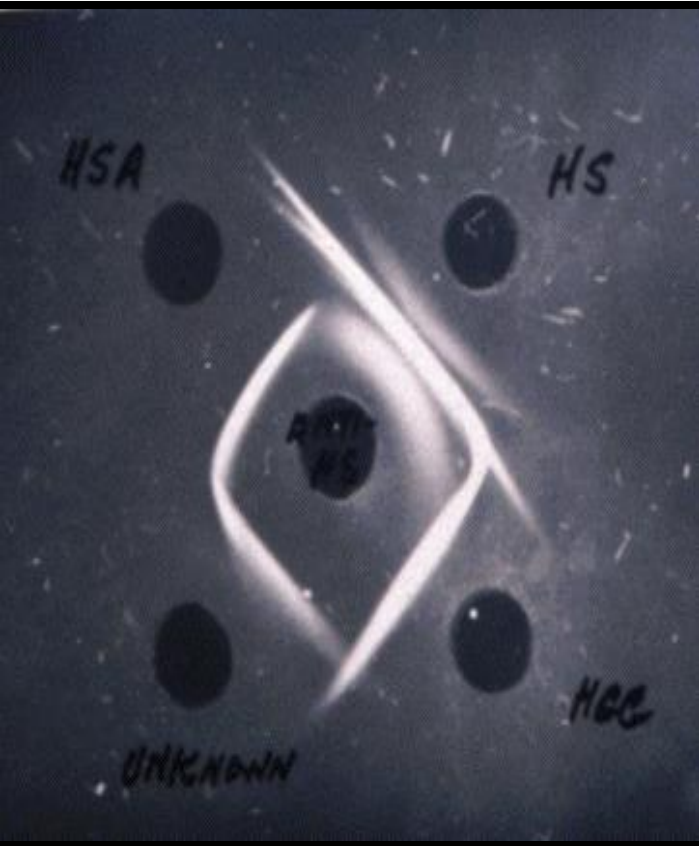


**Nonidentity
between
antigens**



©

Ouchterlony test



Similar
precipitin lines

Precipitin lines
do not form
a complete cross

Precipitin lines
completely
cross

Ouchterlony immunodiffusion

