

This technique also referred to as the Ouchterlony method, may be used to determine the relationship between antigen and antibodies. Principle: Antibody dilutions and specific soluble antigens are placed in adjacent wells. If the well size and shape, distance between wells, temperature, and incubation time are optimal, these solutions diffuse out, bind to each other, cross-link, and form a visible precipitate at the point of equivalence perpendicular to the axis line between the wells the precipitation bands will be compared with a standard antigen. The precise location of the band depends on the concentration and rate of diffusion of antigen and antibody. In a condition of antibody excess, the band will be located nearer the antigen well. If two antigens are present in the solution that can be recognized by the antibody, two precipitin bands form independently. Antibodies associated with autoimmune disorders such as rheumatoid arthritis and systemic lupus erythematosus can be identified by double diffusion.