

Preparation of gold nanoparticles and coating onto TiO₂ particles for IVD testing

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The reduction of AuCl₄ by trisodium citrate to produce gold nanoparticles (AuNPs) strongly depends on the exact condition used. Via the adsorption of Au (III) complex ions on the surface of TiO₂ (P-25) particles, AuNPs could be formed and directly deposited onto TiO₂ by adding trisodium citrate as a reducing agent. To find the best condition, zeta potentials of TiO₂ suspended solution were measured. Au/TiO₂ particles are not only used as a catalyst but also for IVD testing because of available interactions between AuNPs and the biomolecules.