Intravenous Delivery

CD Bioparticles is a leading manufacturer and supplier of various drug delivery products, including metal nanostructures, biomacromolecules, synthetic polymer and biopolymers and lipid system, for R&D and commercialization in a variety of application areas. We also have developed mature technology platforms for drug delivery, such as inorganic nanomaterials, biomacromolecules, polymeric and lipid system. In addition, we can offer a wide range of custom services including drug delivery nanoparticles formulation, bioparticles analysis and characterization, and drug targeting strategy. We are delicated to providing the most comprehensive list of products and fit-for-purpose custom analysis and synthesis services to academia as well as industrial researchers and assay developers all around the world. One of our focus areas is Intravenous (IV) delivery which is defined as the administration of pharmaceutically active agents into your vein to obtain local or systemic effects.

Introduction to Intravenous Delivery

Intravenous (IV) delivery is an injection or infusion method of drug administration, which means drugs are sent directly into your vein using a needle or tube. The term "intravenous" actually refers to "into the vein". When doing IV administration, doctors or nurses will use a thin plastic tube, namely an IV catheter, to insert into your vein and thus multiple safe doses of medication could be given to you without poking you each time.

The direct IV route is usually used for administering a small volume of medicine, up to 20 ml, which is completed by manually pushing medicine into the patient's vein. When treating emergent concerns, drugs could be given by IV route intermittently. For direct IV route, drugs would be given very slowly and at least one minute is required. Because drugs are administered directly into the blood in the IV route, this would eliminate the process of drug absorption and breakdown. As a result, the level of active pharmaceutical ingredient (API) in both serum and vital organs (e.g. heart, brain, and kidneys) would be immediately elevated. Recovery from intravenously administered drugs is often more rapid than that from drugs delivered through the oral or intramuscular route. However, just as the rapid therapeutic effects, the adverse effects may also occur quickly in IV route.