

Imipenem and Cilastatin for Injection USP 500 mg
Module 3.2.P.2: Pharmaceutical Development

3.2.P.2.6 COMPATIBILITY

Proposed product, Imipenem and Cilastatin for Injection USP 500 mg have been developed keeping in view the literature available for the reference product. As the excipient for proposed product have been chosen as per the innovator's product composition, there is no issues regarding the incompatibility between the ingredients used in the formulation.

Do not use diluents containing benzyl alcohol to reconstitute Imipenem and Cilastatin for Injection USP 500 mg for administration to neonates because it has been associated with toxicity in neonates. While toxicity has not been demonstrated in pediatric patients greater than three months of age, small pediatric patients in this age range may also be at risk for benzyl alcohol toxicity.

Contents of the vials must be reconstituted by adding approximately 10 mL of the appropriate diluent to the vial. List of appropriate diluents are as follows:

0.9% Sodium Chloride Injection

5% Dextrose Injection, 10% Dextrose

5% Dextrose and 0.9% Sodium Chloride Injection

5% Dextrose Injection with 0.225% or 0.45% saline solution

Reconstituted Solutions of imipenem and Cilastatin for Injection USP 500 mg range from colorless to yellow. Variations of color within this range do not affect the potency of the product.

The reconstituted suspension must not be administered by direct Intravenous Infusion

After reconstitution, shake vial well and transfer the resulting suspension to 100 mL of an appropriate infusion solution before administering by intravenous infusion.

Repeat transfer of the resulting suspension with an additional 10 mL of infusion solution to ensure complete transfer of vial contents to the infusion solution. Agitate the resulting mixture until clear.

Parenteral drug products should be inspected visually for particulate matter and discoloration prior to administration, whenever solution and container permit.

The concentration of the reconstituted solution following the above procedure is approximately 5

Imipenem and Cilastatin for Injection USP 500 mg

Module 3.2.P.2: Pharmaceutical Development

mg/ml for both imipenem and cilastatin.

Conclusion:

Imipenem and Cilastatin for injection USP 500mg/500mg as supplied in vials and when reconstituted in 0.9% sodium chloride for injection, 10 % dextrose injection, 5 % dextrose injection, 5% Dextrose and 0.9% Sodium Chloride Injection, 5% Dextrose Injection with 0.225% or 0.45% saline solution and 5 % mannitol diluents maintains satisfactory potency for 3 hours at room temperature and for 24 hours under refrigeration.