

ERTAPENEM

BRAND NAME	INVANZ, ERTAPENEM JUNO
DRUG CLASS	Carbapenem antibiotic
AVAILABILITY	Vial contains 1 g of ertapenem as ertapenem sodium. Also contains sodium bicarbonate and sodium hydroxide. ¹ Contains approximately 6 mmol of sodium. ¹
WARNING	Seek specialist advice for patients with severe immediate (IgE mediated) or delayed (T-cell mediated) hypersensitivity to penicillins
pH	7.5 ²
PREPARATION	For IM injection: reconstitute the vial with 3.2 mL of lidocaine 1% to make an approximate concentration of 250 mg/mL. ¹ Do not inject solutions that have been reconstituted with lidocaine intravenously. For IV injection: reconstitute the vial with 10 mL of sodium chloride 0.9% to make an approximate concentration of 100 mg/mL. ³ Shake well to dissolve. The solution is colourless to pale yellow. ¹ For IV infusion: reconstitute the vial with 10 mL of water for injections or sodium chloride 0.9% to make an approximate concentration of 100 mg/mL. Further dilute immediately. ¹
STABILITY	Vial: store below 25 °C. ¹ Reconstituted solution: if reconstituted with lidocaine 1%, use immediately or store for up to 1 hour at 2 to 8 °C. ¹ Infusion solution: stable for 6 hours below 25 °C or for 24 hours at 2 to 8 °C. Use within 4 hours of removal from the fridge. ¹ For CoPAT use: there is no information about stability above 25 °C. Infusion solutions of 10 mg/mL and 20 mg/mL in sodium chloride 0.9% prepared in a sterile production unit are stable for 5 days at 2 to 8 °C. ⁴
ADMINISTRATION	
IM injection	Inject into the vastus lateralis or gluteal muscle. ¹ The ventrogluteal site is preferred for injection into the gluteal muscle.
SUBCUT injection	Has been given as a 30 minute subcutaneous infusion in the treatment of bone and joint infections in patients with limited venous access. ⁵
IV injection	Suitable in CoPAT settings. ⁶ Check your local guidelines. Inject a 1 g dose over 5 minutes, or at a rate of 2 mL/minute. ³
IV infusion	Dilute the dose in 50 mL of sodium chloride 0.9% and infuse over 30 minutes. ¹
IV use for infants and children	Dilute the dose to a concentration of 20 mg/mL or less with sodium chloride 0.9% and infuse over 30 minutes. ¹
COMPATIBILITY	
Fluids	Sodium chloride 0.9% ¹ , water for injections ¹
Y-site	Ceftolozane-tazobactam ² , heparin sodium ² , potassium chloride ² , tigecycline ²
INCOMPATIBILITY	
Fluids	Glucose 5% ^{1,2} , Hartmann's ² , mannitol ² , Ringer's ² , sodium bicarbonate ²
Drugs	Amiodarone ⁷ , anidulafungin ² , caspofungin ² , dobutamine ⁷ , droperidol ⁷ , hydralazine ⁷ , isavuconazole ² , midazolam ⁷ , nicardipine ⁷ , ondansetron ⁷ , pentamidine ⁷ , promethazine ⁷ , thiopental sodium ⁷ , verapamil ⁷

REFERENCES

1. Product information. Available from www.tga.gov.au. Accessed 03/03/2020.
2. McEvoy GK editor. Handbook on injectable drugs. 20th ed. Bethesda, MD: American Society of Health-System Pharmacists; 2018.
3. Wiskirchen DE, Housman ST, Quintiliani R, Nicolau DP, Kuti JL. Comparative pharmacokinetics, pharmacodynamics, and tolerability of ertapenem 1 gram/day administered as a rapid 5-minute infusion versus the standard 30-minute infusion in healthy adult volunteers. *Pharmacotherapy* 2013; 33: 266-74.
4. McQuade MS, Van Nostrand V, Schariter J, Kanike JD, Forsyth RJ. Stability and compatibility of reconstituted ertapenem with commonly used i.v. infusion and coinfusion solutions. *Am J Health-Syst Pharm*, 2004; 61: 38-45.
5. Goutelle S, Valour F, Gagnieu MC, Laurent D, Chidiac C, Ferry T. Population pharmacokinetics and probability of target attainment of ertapenem administered by subcutaneous or intravenous route in patients with bone and joint infection. *J Antimicrob Chemother* 2018; 73: 987-94.
6. Oon JEL, Salada B, Lim YS, Archuleta S, Fisher D. Safety and efficacy of a 5-minute infusion versus the standard 30-minute infusion for antibiotics in an outpatient setting. *Int J Infect Dis* 2021; 110: 160-1.
7. Ertapenem sodium. In: IV index [internet]. Trissel's 2 clinical pharmaceuticals database (parenteral compatibility). Greenwood Village, CO: Truven Health Analytics. Accessed 26/08/2019.