



SYNONYMS

Nitroglycerine , GTN

BRAND NAME

GLYCERYL TRINITRATE CONCENTRATE INJECTION DBL, WOCKHARDT

DRUG CLASS

Nitrate

AVAILABILITY

DBL ampoule contains 50 mg/10 mL of glyceryl trinitrate. Also contains ethanol and propylene glycol.¹
Wockhardt vial contains 50 mg/50 mL of glyceryl trinitrate. Also contains glucose, glucose monohydrate and propylene glycol. Contains 2.53 g of glucose.¹
The solution is clear and colourless.¹

pH

3–6.5²

PREPARATION

Dilute before use¹

STABILITY

Ampoule and vial: store below 25 °C. Protect from light.¹ Do not freeze.²
Infusion solution: concentrations up to 800 microgram/mL are stable for 24 hours below 25 °C in glass bottles.^{1,2}
Stable in polypropylene syringes for 24 hours below 25 °C.²

ADMINISTRATION

IM injection : Not recommended

SUBCUT injection : Not recommended

IV injection : Not recommended¹

IV infusion : Dilute the 50 mg ampoule or vial to 500 mL with a compatible fluid to make a concentration of 100 microgram/mL, or dilute 50 mg ampoule or vial to 100 mL to make a concentration of 500 microgram/mL, or dilute the 50 mg/10 mL ampoule with 40 mL of a compatible fluid to make a concentration of 1 mg/mL. See SPECIAL NOTES

Start the infusion at a rate of 5–10 microgram/minute and titrate to effect.^{1,3}

If possible, use non-PVC bags and giving sets to reduce adsorption of glyceryl trinitrate onto the plastic.¹

If PVC bags and giving sets are used, titrate the dose and rate to effect.²

IV use for infants and children : Dilute to 400 microgram/mL or weaker in a compatible fluid and administer by continuous infusion using a rate-controlled infusion device.^{4,5} A maximum concentration of 1 mg/mL may be infused into a central venous access device.⁴

COMPATIBILITY

Fluids : Glucose 5%^{1,2} , glucose in sodium chloride solutions² , Hartmann's² , Plasma-Lyte 148 via Y-site⁶ , sodium chloride 0.9%^{1,2} , sodium chloride 0.45%²

Y-site : Giving other drugs via Y-site may change the infusion rate of glyceryl trinitrate .

At **400 microgram/mL or less** of glyceryl trinitrate² : amiodarone² , argatroban² , bivalirudin² , ceftolozane-tazobactam² , cisatracurium² , dexmedetomidine² , eptifibatide¹ , isavuconazole² , levosimendan⁷ , linezolid² , micafungin² , milrinone² , remifentanyl² , tirofiban² , vecuronium²

At **0.5 mg/mL or 1 mg/mL** of glyceryl trinitrate: insulin (Novorapid)⁸

At **1.6 mg/mL** of glyceryl trinitrate⁹ : amikacin⁹ , atracurium^{2,9} , azathioprine⁹ , aztreonam⁹ , buprenorphine⁹ , calcium chloride⁹ , calcium gluconate⁹ , cefalotin⁹ , cefazolin⁹ , cefotaxime⁹ , cefoxitin⁹ , ceftazidime⁹ , ceftriaxone⁹ , ciclosporin⁹ , clindamycin⁹ , dexamethasone⁹ , digoxin⁹ , dobutamine^{2,9} , dopamine^{2,9} , ephedrine sulfate⁹ , erythromycin⁹ , esmolol^{2,9} , fentanyl⁹ , fluconazole^{2,9} , ganciclovir⁹ , gentamicin⁹ , haloperidol lactate (in glucose)^{2,9} , heparin sodium² , hydrocortisone sodium succinate⁹ , labetalol^{2,9} , lidocaine^{2,9} , magnesium sulfate⁹ , methylprednisolone sodium succinate⁹ , metoclopramide⁹ , midazolam^{2,9} , morphine sulfate⁹ , noradrenaline (norepinephrine)⁹ , potassium chloride⁹ , ranitidine^{2,9} , sodium bicarbonate⁹ , sodium nitroprusside^{2,9} , suxamethonium⁹ , tobramycin⁹ , vancomycin⁹ , verapamil⁹

INCOMPATIBILITY

Fluids : No information

Drugs : Alteplase² , daptomycin¹⁰ , caffeine citrate² , hydralazine² , hydroxocobalamin¹⁰ , metoprolol² , tramadol¹

SPECIAL NOTES

Onset of action is 1 to 2 minutes, duration of effect is 3 to 5 minutes and half-life is less than 1 to 4 minutes.¹

Monitoring of blood pressure and heart rate every 2-3 minutes is required during titration. Continuous cardiac monitoring may be required.¹ Check your local guidelines.

More concentrated solutions may not be suitable for all indications.¹¹

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. Cardiovascular [March 2018]. In eTG complete [internet]. Melbourne, Vic: Therapeutic Guidelines Ltd; April 2019.
4. Paediatric Formulary Committee. BNF for children. Basingstoke, UK: Pharmaceutical Press; 2018-2019.
5. Phelps SJ, Hageman TM, Lee KR, Thompson AJ. Pediatric injectable drugs. 11th ed. Bethesda, MD: Am Soc Health-System, Pharmacists; 2018.
6. OneCall Medical Information Service. Y-Site compatibility of intravenous drugs with Plasmalyte 148. Toongabbie, NSW: Baxter; 2015.
7. Simdax. NZ product information. Auckland, New Zealand: Pharmacy Retailing (NZ) Limited; May 2019.
8. Voirol P, Berger-Gryllaki M, Pannatier A, Eggimann P, Sadeghipour F. Visual compatibility of insulin aspart with intravenous drugs frequently used in ICU. Eur J Hosp Pharm 2015; 22: 123-4.
9. Trissel LA, Leissing NC. Trissel's Tables of physical compatibility. Lake Forest IL: Multimatrix; 1996.
10. Glyceryl trinitrate. In: IV index [internet]. Trissel's 2 clinical pharmaceuticals database (parenteral compatibility). Greenwood Village, CO: Truven Health Analytics. Accessed 23/05/2019.
11. Reed MJ. Administering a glyceryl trinitrate infusion: big is not always best. Emerg Med J 2007; 24: 423-4.