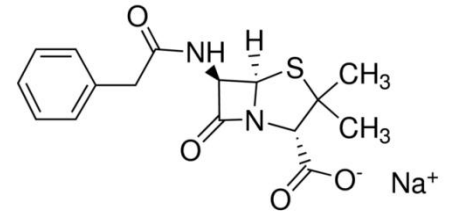




Penicillin G sodium salt

Synonym: **Benzylpenicillin sodium salt**

CAS Number 69-57-8 Empirical Formula (Hill Notation) C₁₆H₁₇N₂NaO₄S Molecular Weight 356.37



Properties

solubility	H ₂ O: soluble 100 mg/mL
antibiotic activity spectrum	Gram-negative bacteria
	Gram-positive bacteria
Form	Liquid

Description

Biochem/physiol Actions

Mode of Action: Penicillin G acts by inhibiting cell wall synthesis through binding to penicillin binding proteins (PBPs), inhibiting peptidoglycan chain cross-linking.

Antimicrobial spectrum: This product is active against gram-positive and gram-negative bacteria.

Caution

Solutions should be filter sterilized and stored at 2-8°C for 1 week or at -20°C for more lengthy periods. Solutions are stable at 37°C for 3 days. The sodium salt is soluble in H₂O at 100 mg/mL.

Application

Penicillin G is a narrow spectrum antibiotic. It is the drug of choice for *Streptococcus pneumoniae*, groups A, B, C and G streptococci, nonenterococcal group D streptococci, viridans group streptococci, and non-penicillinase producing staphylococcus. Penicillin G sodium salt is used to study the diagnostic and therapeutic implications of gentamicin-resistant *Enterococcus faecalis* sequence type 6 with reduced penicillin susceptibility. It is used in cell culture alone as well as in combination with streptomycin and other antibiotics.

General description

Penicillin G is a narrow spectrum antibiotic. It is effective against *Streptococcus pneumoniae*, groups A, B, C and G streptococci, nonenterococcal group D streptococci, viridans group streptococci, and non-penicillinase producing staphylococcus.