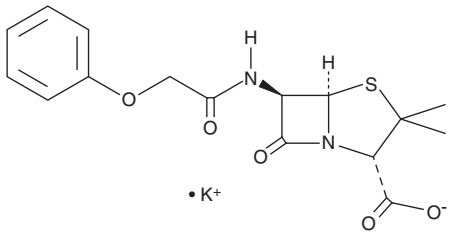
# PRODUCT INFORMATION

## Penicillin V (potassium salt)

*Item No. 23635*

**CAS Registry No.:** 132-98-9
**Formal Name:** (2S,5R,6R)-3,3-dimethyl-7-oxo-6-[(2-phenoxyacetyl)amino]-4-thia-1-azabicyclo[3.2.0]heptane-2-carboxylic acid, monopotassium salt
**Synonym:** Phenoxymethylpenicillin
**MF:** $C_{16}H_{17}N_2O_5S \bullet K$
**FW:** 388.5
**Purity:** ≥98%
**Supplied as:** A crystalline solid
**Storage:** -20°C
**Stability:** ≥4 years



*Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.*

### Laboratory Procedures

Penicillin V (potassium salt) is supplied as a crystalline solid. Aqueous solutions of penicillin V (potassium salt) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of penicillin V (potassium salt) in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Penicillin V is a β-lactam antibiotic that inhibits the growth of bacteria.[1-3] *In vitro*, penicillin V inhibits the growth of clinical isolates of *Streptococci* (MICs = 0.004-0.008 mg/l) and *C. difficile* (MICs = 1 to >256 mg/l).[1,2] Penicillin V also inhibits growth of *S. aureus in vitro* (MIC = 0.016 mg/l) and *in vivo* in a thigh model of infection in mice.[3] It inhibits the growth of *S. pyogenes* in mice following one or two dose therapy with curative dose ($CD_{50}$) values of 0.207 and 0.031 mg, respectively.[4] Penicillin V (100 mg/kg per day, p.o.) prevents experimental acute otitis media in rats when administered prior to infection by pneumococci.[5] Formulations containing penicillin V have been used to treat bacterial infections of the skin, throat, ear, mouth, and respiratory tract.

### References


1. Kamme, C. and Petersson, A.C. In vitro effect on group A streptococci of loracarbef versus cefadroxil, cefaclor and penicillin V. *Scand. J. Infect. Dis.* **25(1)**, 37-42 (1993).
2. Norén, T., Alriksson, I., Akerlund, T., *et al. In vitro* susceptibility to 17 antimicrobials of clinical *Clostridium difficile* isolates collected in 1993-2007 in Sweden. *Clin. Microbiol. Infect.* **16(8)**, 1104-1110 (2010).
3. Overbosch, D., Mattie, H., and Van Furth, R. Comparative pharmacodynamics and clinical pharmacokinetics of phenoxymethylpenicillin and pheneticillin. *Br. J. Clin. Pharmacol.* **19(5)**, 657-668 (1985).
4. Powell, H.M. and Culbertson, C.G. Effectiveness of phenoxymethyl penicillin V, and sodium penicillin G against hemolytic Streptococcus infection in white mice. *Proc. Soc. Exp. Biol. Med.* **90(1)**, 186-187 (1955).
5. Hermansson, A., Prellner, K., and Hellström, S. Prevention of experimental acute otitis media with penicillin V. *Acta Otolaryngol.* **109(1-2)**, 119-123 (1990).





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