

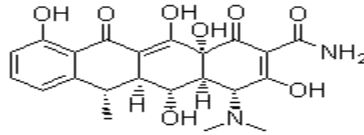
DOXYCYCLINE

CAS NO.: 564-25-0

Molecular Weight: 4444.44

Molecular Formula: C₂₂H₂₄N₂O₈

Molecular Structure:



Property:

Doxycycline is a member of the tetracycline antibiotics group and is commonly used to treat a variety of infections. Doxycycline is a semi-synthetic tetracycline invented and clinically developed in the early 1960s by Pfizer Inc. and marketed under the brand name Vibramycin. Vibramycin received U.S. Food and Drug Administration (FDA) approval in 1967, becoming Pfizer's first once-a-day broad-spectrum antibiotic. Other brand names include Monodox, Microdox, Periostat, Vibra-Tabs, Oracea, Doryx, Vibrox, Adoxa, Doxyhexal, Doxylin, Doxoral, and Atridox (topical doxycycline hyclate for periodontitis).

Specifications:

Item	Index
Appearance	Yellow Crystalline Powder
Identification	A)Tr of HPLC Test B)Sulohuric Acid Yellow Color Reaction C)Chloride's Reaction
PH	2.0-3.0
Specific Optical Rotation	-105 to -120, Calculated On The Anhydrous, Ethanol-free Substance
Specific Absorbance	300-335 at 349nm, calculated on the anhydrous, Ethanol-free Substance
Light Absorbing Impurities	Not More Than 0.07 at 490nm, calculated on the Anhydrous, Ethanol-free Substance
Related Substances	
Metacycline	Not More Than 2.0%
6-Epidoxycycline	Not More Than 2.0%
Any Individual Impurities	Not More Than 0.5%
Disregard Limit	Not More Than 0.1%
Ethanol	4.3%-6.0%
Heavy Metals	Less Than 50 ppm
Water	1.4% to 2.8%
Sulphated Ash	Not More Than 0.4%
Assay	95.0%-102.0%



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Usage:

As well as the general indications for all members of the tetracycline antibiotics group, doxycycline is frequently used to treat chronic prostatitis, sinusitis, syphilis, chlamydia, pelvic inflammatory disease, acne, rosacea, and Rickettsial infections.

Antiprotozoal

Doxycycline is used in prophylaxis against malaria.

Doxycycline should not be used alone for initial treatment of malaria, even when the parasite is Doxycycline -sensitive, because the antimalarial effect of doxycycline is delayed. This delay is related to its mechanism of action, which is to specifically impair the progeny of the apicoplast genes, resulting in their abnormal cell division.

Doxycycline can be used in a treatment plan in combination with other agents, such as quinine.

Antibacterial

Doxycycline is used in the treatment and prophylaxis of Bacillus anthracis (anthrax).

Doxycycline is also effective against Yersinia pestis (the infectious agent of bubonic plague) and is prescribed for the treatment of Lyme disease, ehrlichiosis and Rocky Mountain spotted fever. In fact, because doxycycline is one of the few medications

shown to be effective in treating Rocky Mountain spotted fever (with the next-best alternative being chloramphenicol), doxycycline is indicated even for use in children

for this illness. Otherwise, doxycycline is not indicated for use in children under the age of eight years. Doxycycline, like other antibiotics, will not work for colds, influenza,

or other viral infections.

Package and Storage:

Doxycycline is kept in shaded, cool 25kg fiber drum and air places. The shelf time is 4 years.

Keyword:

Doxycycline ,(4S,4aR,5S,5aR,6R,12aS)-4-(Dimethylamino)-1,4,4a,5,5a,6,11,12a-octa hydro-3,5,10,12,12a-pentahydroxy-6-methyl-1,11-dioxo-2-naphthacenecarboxamide