

Product Data Sheet

□ Cat# ABT-230-100

Tetracycline (>98% pure)

Size: 100 g

General Information

Tetracycline is a broad-spectrum polyketide antibiotic produced by the *Streptomyces* genus of Actinobacteria, indicated for use against many bacterial infections. It is a protein synthesis inhibitor. It is commonly used to treat acne today, and more recently, rosacea, and played a historical role in stamping out cholera in the developed world. It is sold under the brand names Sumycin, Terramycin, Tetracylin, and Panmycin, among others. Actisite is a thread-like fiber form, used in dental applications. It is also used to produce several semi-synthetic derivatives, which together are known as the tetracycline antibiotics.

Tetracyclines work by binding the 30S ribosomal subunit and through an interaction with 16S rRNA, they prevent the docking of amino-acylated tRNA. Resistance to tetracyclines can arise through drug efflux, ribosomal protection proteins, 16S rRNA mutation, and drug inactivation through the action of a monooxygenase.

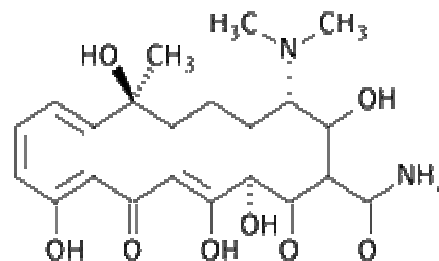
Tetracycline is used in cell biology as selective agent in cell culture systems. It is toxic to prokaryotic and eukaryotic cells and selects for cells harboring the bacterial tetr gene, which encodes a 399-amino acid membrane associated protein. This protein actively exports tetracycline out of the cell rendering cells harboring this gene more resistant to the drug. It is first-line therapy for rocky mountain spotted fever (*Rickettsia*), Lyme disease (*B. burgdorferi*), Q fever (*Coxiella*), psittacosis and lymphogranuloma venereum (*Chlamydia*), mycoplasma pneumoniae and to eradicate nasal carriage of meningococci. Tetracycline tablets were used in the plague outbreak in India in 1992.

Solubility: water (20 mg/ml) or ethanol (5 mg/ml)

Application: in cell culture (10 mg/l). In cell culture at 37 °C it is stable for 4 days.

Trade name: Sumycin

CAS No. 60-54-8



Molecular Formula:
(C₂₂H₂₄N₂O₈)

Molecular Weight:
444.435 g/mol

Analysis Test	Specification	Results
Appearance	Yellow crystalline powder	Conforms
Identification	Positive reaction	Positive Reaction
Absorbance of impurities	≤0.54	0.22
pH	3.0-7.0	4.09
Loss on drying	≤10.0%	6.32%
Heavy metal	≤50ppm	<40ppm
Microbial limit	Total Plate Count : ≤1000cfu/g	<10cfu/g
	Yeast and mold counts : ≤100 cfu/g	10 cfu/g
	Escherichia coli: Negative	Negative
Assay	≥975u/mg (dry basis)	998 u/mg

This item is for LABORATORY RESEARCH USE ONLY. It is not approved by US FDA for use in humans or animals. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

Related items:

Catalog#	ProdDescription
ABT-220-100	Tetracycline, Hydrochloride (>98% pure)
ABT-230-100	Tetracycline (>98% pure)

ABT-230-100 141226P

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