ProductInformation

Antibiotics

The following table is designed as a guide for selecting appropriate antibiotics and working concentrations. Care should be exercised when using 2 or more antibiotics in the same culture system. Combined antibiotics frequently exert cytotoxic effects at lower concentrations than those indicated as appropriate for the individual antibiotics. Refer to a comprehensive pharmacology guide for more information on antibiotic incompatibilities, as well as other properties of antibiotics not included in this table.

Product Name	Product Number	Form[A]	Storage	Solubility	Stability at 37°C[B]	Gram (+) bacteria	Gram (□) bacteria	Yeasts	Molds	Myco-plasma	Mode of Action	Suggested Working Conc.
Amphotericin B	A 2411	CT	2-8°C	DMSO, DMF	3 days			□	□		Interferes with the permeability of cell membrane of sensitive fungi by binding sterols.	2.5 mg/L
Amphotericin B-Solubilized (Approx. 45%)	A 9528	G	2-8°C	H_2O	3 days			□	□			5.6 mg/L (of solid)
Amphotericin B-(250 µg/ml solution)	A 2942	AF	-20°C		3 days			□	□			10 ml/L
Ampicillin	A 0166	CT	2-8°C	H_2O	3 days	□	□				Interferes with the final stage of synthesis of bacterial cell wall.	100 mg/L
Ampicillin	A 0797	L,G	2-8°C	H_2O	3 days	□	□					10 ml/L
Antibiotic Antimycotic Solution (100X) (10,000 units penicillin, 10 mg strepto-mycin, and 25 µg amphotericin B per ml)	A 9909 A 4668 A 5955	AF	-0°C		3 days	□	□	□	□		See action of Amphotericin B, Penicillin and Streptomycin.	10 ml/L
Antibiotic-Antimycotic (100X)	A 7292	L,G	-0°C	H_2O	3 days	□	□	□	□			10 ml/L
Cephalothin	C 3050	CT	2-8°C	H_2O	3 days	□	□				Inhibits synthesis of cell wall	100 mg/L
Dihydrostreptomycin	D 5155	CT	2-8°C	H_2O	5 days	□	□				Interferes with bacterial protein synthesis by binding to 30S subunit of ribosomes	100 mg/L
Erythromycin	E 5389	CT	RT	2M HCl, Alcohol	3 days	□	□				Inhibits elongation at transpepti-dation step	100 mg/L
Gentamicin Sulfate	G 1264	CT	2-8°C	H_2O	5 days	□	□			□	Interferes with bacterial protein synthesis by binding to 30S subunit of ribosomes	50 mg/L
Gentamicin Sulfate (10 mg/ml solution)	G 1272	AF	2-8°C		5 days	□	□			□		5 ml/L
Gentamicin Sulfate (50 mg/ml solution)	G 1397 G 1522	AF	2-8°C		5 days	□	□			□		1 ml/L
L-Glutamine-Penicillin-Streptomycin Solution (200 mM L-glutamine, 10,000 units penicillin, and 10 mg streptomycin per ml)	G 1146 G 6784	AF	-0°C		3 days	□	□				See action of Penicillin and Streptomycin	10 ml/L

Antibiotics continued

Product Name	Product Number	Form[A]	Storage	Solubility	Stability at 37°C[B]	Gram (+) bacteria	Gram (□) bacteria	Yeasts	Molds	Myco-plasma	Mode of Action	Suggested Working Conc.
Kanamycin Monosulfate	K 1377	CT	RT	H_2O	5 days	□	□			□	Interferes with bacterial protein synthesis by binding to 30S subunit of ribosomes	100 mg/L
Kanamycin Sulfate (10 mg/ml solution)	K 0129	AF	2-8ºC		5 days	□	□			□		10 ml/L
Kanamycin Sulfate (50 mg/ml solution)	K 0254 K 0379	AF	2-8ºC		5 days	□	□			□		2 ml/L
Lincomycin HCl	L 2774	CT	2-8ºC	H_2O	4 days	□					Alters 50S subunit of bacterial ribosomes	100 mg/L
Neomycin Sulfate	N 6386	CT	RT	H_2O	5 days	□	□				Causes miscoding and inhibits initiation and elongation	50 mg/L
Neomycin Sulfate (10 mg/ml solution)	N 1142	AF	2-8ºC		5 days	□	□					5 ml/L
Nystatin (5,000 units nystatin per mg)	N 6261	CT	-0ºC	Suspension in H_2O	3 days			□	□		Interferes with the permeability of the cell membrane of sensitive fungi by binding to sterols	2.5×10^5 U/L (50 mg/L)
Nystatin (240,000 units nystatin per vial)	N 4014	G	-0ºC	Suspension in H_2O	3 days			□	□			2.4×10^5 U/L
Nystatin Suspension (10,000 units nystatin per ml)	N 1638	AF	-0ºC		3 days			□	□			24 ml/L
Paromomycin Sulfate	P 5057	CT	RT		5 days	□					Inhibits initiation	100 mg/L
Penicillin-G (potassium salt)	P 7794	CT	RT	H_2O	3 days	□					Interferes with the final stage of synthesis of the bacterial cell wall	100,000 U/L
Penicillin-G (sodium salt)	P 3032	CT	RT	H_2O	3 days	□						100,000 U/L
Penicillin-G (sodium salt)	P 3414	L,G	2-8ºC	H_2O	3 days	□						100,000 U/L

Antibiotics continued

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Penicillin-Streptomycin Solution (5,000 units penicillin-G and 5 mg streptomycin per ml)	P 0906 P 4458	AF	-0ºC		3 days	□	□				See action of Penicillin and Streptomycin	20 ml/L
Penicillin-Streptomycin Solution (10,000 units penicillin-G and 10 mg streptomycin per ml)	P 0781 P 7539 P 4333	AF	-0ºC		3 days	□	□					10 ml/L
Penicillin G-Streptomycin	P 3539	L,G	2-8ºC	H_2O	3 days	□	□					10 ml/L
Penicillin-Streptomycin-Neomycin solution (5,000 units penicillin-G, 5 mg streptomycin and 10 mg neomycin per ml)	P 9032 P 4083	AF	-0ºC		3 days	□	□				See action of Penicillin, Streptomycin and Neomycin	10 ml/L
Penicillin-G Streptomycin-Neomycin	P 3664	L,G	2-8ºC	H_2O	3 days	□	□					10 ml/L
Phenoxymethylpenicillinic Acid (potassium salt) [Penicillin V]	P 4807	CT	RT	H_2O	3 days	□					Interferes with final stage of synthesis of the bacterial cell wall	100,000 U/L
Polymyxin B Sulfate	P 4932	CT	2-8ºC	H_2O	5 days		□				Binds to and interferes with the permeability of the bacterial cytoplasmic membrane	50 mg/L
Spectinomycin Dihydrochloride	S 4014	CT	2-8ºC	H_2O		□ [C]	□				Inhibits elongation at transpeptidation step	7.5-20 mg/L
Streptomycin Sulfate	S 9137	CT	2-8ºC	H_2O	3 days	□	□				Binds to 30S subunit to cause misreading	100 mg/L
Streptomycin Sulfate	S 0890	L,G	2-8ºC	H_2O	3 days	□	□					10 ml/L
Tetracycline Hydrochloride	T 7660	CT	-0ºC	H_2O	4 days	□	□				Inhibits elongation by blocking binding of aminoacyl-tRNA to the A-site on the 30S subunit	10 mg/L

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Tylosin Tartrate	T 6271	CT	2-8ºC	H_2O	3 days	□				□	Interferes with bacterial protein synthesis by binding to the 50S subunit	8 mg/L
Tylosin Tartrate (8 mg/ml soln.)	T 3397	AF	2-8ºC		3 days	□				□		1 ml/L
Tylosin Tartrate	T 3151	L,G	2-8ºC	H_2O	3 days	□				□		1 ml/L

[A]All products are cell culture tested and offered either as a powder (CT); g-irradiated powder (G); membrane filtered and aseptically filled solution (AF); or lyophilized (L).

[B]Data from TCA Manual

[C]Gonococcus

■ AMPHOTERICIN B (Product No. A 9528)

Amphotericin B is an anti-fungal agent produced by *Streptomyces*. Amphotericin B is offered as a γ-irradiated, lyophilized powder containing 43% amphotericin B, 35% sodium deoxycholate and 22% sodium phosphate, pH 7.5. The quantity shown on the vial refers to the amount of Amphotericin B per vial.

PRODUCT USE

For 50 mg of lyophilized powder, quickly add 10-20 ml of sterile deionized-distilled water. Swirl or gently pipet to dissolve powder. Further dilutions may be made as desired. For recommended concentrations, please see the antibiotic chart on the preceding page.