

Technical Information

Gentamicin L-Glutamine solution

With 200mM L-Glutamine and 5mg/ml Gentamicin in 0.9% normal saline

Product Code: A01006

Application:-

Molecular Weight:

C1 - 477.6

C2 - 463.6

C1a - 449.5

Molecular Formula:

C1 - $C_{21}H_{43}N_5O_7$

C2 - $C_{20}H_{41}N_5O_7$

C1a - $C_{19}H_{39}N_5O_7$

CAS number: 1405-41-0

Gentamicin is a broad spectrum bacteriocidal agent of aminoglycoside group and is effective against Gram positive bacteria and Gram negative bacteria. It is a mixture of the three major components C1, C1a and C2. The ratio of the three components is as follows:

C1 - 25 - 50%

C2 - 25 - 55%

C1a - 10 - 35%

Gentamicin binds to four nucleotides of 16S rRNA and a single amino acid of protein S12. This interferes with decoding site in the vicinity of nucleotide 1400 in 16S rRNA of 30S subunit. This region interacts with the wobble base in the anticodon of tRNA. This leads to interference with the initiation complex, misreading of mRNA so incorrect amino acids are

inserted into the polypeptide leading to non-functional or toxic peptides and the breakup of polysomes into nonfunctional monosomes.

L-Glutamine is an essential amino acid required by all mammalian and insect cells grown in culture. It functions as an additional source of carbon and energy. A01006 is sterile filtered solution formulated to contain 200mM L-glutamine and 5mg gentamicin per ml.

Methodology

Recommended use concentration is 10ml/L. Sensitive cell lines may react differently to this product. Hence it is recommended to determine optimum usage dose empirically for individual cell line.

Quality control

Appearance

Colorless, clear solution.

pH

3.50 -5.50

Osmolality in mOsm/Kg H₂O

460.00 -500.00

Sterility

No bacterial or fungal growth is observed after 14 days of incubation, as per USP specification.

Gentamicin Concentration

5 mg/ml

Cultural Response

1. No toxicity to cells.
2. Antibiotic sensitivity test

Endotoxin Content

NMT 0.5EU/ml

Storage and Shelf Life

Store at -20°C. Repeated freezing and thawing should be avoided. Once thawed, remaining portion can be aseptically dispensed into sterile container and frozen for future use.

Solution is stable for 3 days at 37°C and for approximately 2 to 3 weeks at 2 - 8°C.

Shelf life of the product is 18 months.

Use before expiry date given on the product label.

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
- The product conforms solely to the technical information provided in this booklet and to the best of knowledge research and development work carried at **CDH** is true and accurate.
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