

## Technical Information

### D-(+)-Glucose Solution 45%, autoclaved With 45% D-(+)-Glucose in sterile tissue culture grade water

#### Product Code:TCL1077

##### Application:-

**Molecular Weight:** 180.16

**Molecular Formula :** C<sub>6</sub>H<sub>12</sub>O<sub>6</sub>

**CAS No:** 50-99-7

**Synonym :** Dextrose

Glucose is a carbohydrate consisting of six carbon atoms and an aldehyde group. Glucose is used as a primary energy source in wide range of cell culture media including classical and serum-free media. It is one of the essential nutrients and is responsible for cell longevity and gene expression. High initial levels of glucose in the medium can contribute to an early boost in culture expansion but later results in formation of excess of lactic acid which lowers the pH of the medium causing stress and toxicity to the cells. High glucose concentration has shown to promote the proliferation of many tumor cell lines like HT29, MCF-7, MDA MB468. It also supports high cell growth in insect cell culture.

##### Applications:

·In bio-manufacturing:

Glucose is one of the major components of nutritional supplement solutions used in fed-batch biomanufacturing of recombinant proteins, monoclonal antibodies, viral vectors for gene therapy and viral vaccines from mammalian and insect cell cultures. Addition of such glucose containing supplements in mid-run results in improvement in the quantity of the harvested product.

·*In vitro* diabetes research:

Glucose is the principle insulin secretagogue and a potent regulator of beta cell activity. It stimulates betacell proliferation and destruction. Addition of tritiated glucose to the culture medium and studying extent of glucose uptake in *in vitro* diabetes model is a very widely used system for evaluation of potency of anti-diabetic drug.

TCL1077 is sterile solution formulated to contain 45% w/v glucose in tissue culture grade water. This solution is sterilized by autoclaving.

## Quality control

##### Appearance

Clear colorless to light yellow viscous solution.

##### pH

5.00 -6.00

##### Sterility

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

##### Cell Culture Test

Passes

##### Endotoxin Content

NMT 5EU/ml

## Storage and Shelf Life

Store at 15-30°C.

Shelf life of the product is 24 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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