

# Technical Data Sheet

## Protein-free Insect Medium for sf9/sf21 cells with L-Glutamine and NaHCO<sub>3</sub> for cell biology

Order number: 1433

neoFroxx' Protein-free Insect Medium for sf9/sf21 cells is a ready-to-use serum-free and protein-free culture medium perfectly suited for insect cells such as sf9 and sf21 (*Spodoptera frugiperda*). It is the medium of choice for:

- x Cultivation of insect cells (e.g., sf9 and sf21) in suspension culture
- x Production of recombinant proteins (Baculovirus expression vector system, BEVS)

Protein-free Insect Medium for sf9/sf21 cells is an optimized mixture of amino acids (including L-Glutamine), salts, vitamins, trace elements, lipids and growth factors. It does not contain any human or animal proteins, but it might contain traces of animal-derived components and hydrolysates (in a range of < 0.9 % w/v).

The pH (between 6.2 and 6.4) and the osmolality (345 – 360 mOsm/kg) of Protein-free Insect Medium for sf9/sf21 cells perfectly matches the needs of Lepidoptera cells.

Store at 2-8°C and protected from light.

### Instructions for Use

The optimal temperature range for most insect cells is 25°C to 30°C (27°C incubation  $\pm$  0.5°C). For optimized oxygen supply, slightly unscrew the caps of the culture vessels or use filter screw caps.

Suspension cells should be taken from the middle exponential growth phase with a viability of over 90% (Trypan blue staining). Insect cells from a serum-containing culture should be adapted to the protein-free culture. This can be done either by direct or sequential adaptation.

#### Direct adaptation

- x Transfer the cells from the serum-containing culture (e.g. TNM-FH, FBS 5-10%) directly into pre-warmed (27°C) Protein-free Insect Medium for sf9/sf21 cells with a cell density of  $5 \times 10^5$  cells/ml.
- x When the culture reaches a cell density of  $> 2 \times 10^6$  cells/ml (after 4-7 days) subculture cells in new protein-free medium with a cell density of  $5 \times 10^5$  cells/ml.
- x Repeat subculture until a viability of at least 80% is obtained.

#### Indirect adaptation

- x Subcultivate cells from the serum-containing culture in a 1:1 ratio with the original culture medium and Protein-free Insect Medium for sf9/sf21 cells. Seeding density  $5 \times 10^5$  cells/ml.
- x When the culture reaches a cell number of  $> 1 \times 10^6$  cells/ml subculture the cells with fresh protein-free medium in a 1:1 ratio.
- x Repeat this process until serum levels are below 0.1% and the cell viability is  $> 80\%$ . The cell number should exceed  $1 \times 10^6$  cells/ml.

JB29092021

