

Sodium Pyruvate 100mM

CAT N° : L0642

CAS N° : 113-24-6

Molecular Weight : 110.0 g/mol

Chemical formula : $C_3H_3NaO_3$

Theoretical pH : 7 ± 1

Osmolality : 200 mOsm/kg \pm 10%

Colour : colourless, clear solution

Storage conditions : +2°C to +8°C

Shelf life : 48 months

Sterility tests :

- Bacteria in aerobic and anaerobic conditions
- Fungi and yeasts

Endotoxin : < 1 EU/ml

Composition : Sodium Pyruvate 11 g/l

Recommended use :

- Respect storage conditions of the product
- Do not use the product after its expiry date
- Store product in an area protected from light (not necessary for saline solutions).
- Manipulate the product in aseptic conditions (e.g. : under laminar air flow)
- Wear clothes adapted to the manipulation of the product to avoid contamination (e.g. : gloves, mask, hygiene cap, overall...)

The product is intended to be used in vitro, in laboratory only. Do not use it in therapy, human or veterinary applications.

Application :

This product is a 100mM (11g/l) solution prepared in cell culture grade water. It is suitable for cell culture research at 1mM (0.11g/l).

Pyruvate, the anion of pyruvic acid, is the end product of the glycolysis pathway, whereby glucose is converted to pyruvate with the production of ATP. In the mitochondria of aerobic organisms, pyruvate is converted to acetyl coenzyme A, which in turn is oxidized completely to CO₂. When oxygen is not present in sufficient quantities, pyruvate is metabolized to lactate. In anaerobic organisms such as yeast, pyruvate is converted to ethanol. In gluconeogenesis, pyruvate is converted to glucose (1). Other metabolic fates of pyruvate include its conversion to alanine by transamination and to oxaloacetate by carboxylation (2).

Indications of deterioration :

This solution should be clear and free of particulate and flocculent material.

Do not use if the solution is cloudy or contains precipitate.

Other evidence of deterioration may include degradation of physical or performance characteristics.

References :

1. Biochemistry, 3rd ed., Stryer, L., W. H. Freeman (New York, NY: 1988), pp. 349-394.
2. Textbook of Biochemistry with Clinical Correlations, Devlin, T. M., ed., Wiley-Liss (New York, NY: 1992), p. 248.