

## MEM w/ Hanks' Salts

w/ L-Glutamine, w/ Non Essential Amino Acids, w/o Sodium Bicarbonate

**CAT N°** : P0515

**Theoretical pH** : 6.3 ± 0.3

**Osmolality** : 287 mOsm/kg ± 10%

**Storage conditions** : Store dry powder medium at +2°C to +8°C  
Store hydrated medium at +2°C to +8°C, protected from light

**Shelf life** : 36 months

**Endotoxin** : < 1 EU/ml

**Composition** : Displayed on website and in catalogue; also available on request.

### Recommended use :

- Respect storage conditions of the product
- Do not use the product after its expiry date
- Store the product in a dry area
- Wear clothes adapted to the manipulation of the product to avoid contamination (e.g. : gloves, mask, hygiene cap, overall...)
- Protect the product from any form of humidity
- Use, in one time, after opening, the entire quantity of product of the container, without making a concentrated solution (to avoid the formation of precipitates). If it is not possible, close the container immediately after sampling the quantity of powder required.
- Supplements can be added prior to sterile filtration of the medium or aseptically introduced to sterile medium (respect the final concentration of the media). The nature of the supplements may affect storage conditions and shelf life of the medium.

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

### Description :

Minimum Essential Medium (MEM) is one of the most used medium compared to other synthetic cell culture media. The culture of mammalian fibroblastic cells and of some sorts of HeLa cells revealed they have specific nutritional needs absent from Basal Medium Eagle (BME).

Other studies using those cells and other cells in culture showed that a complementation of the BME medium could contribute to the growth of a wide range of cells. The MEM medium, which take into account those modifications, have a higher concentration in amino acids and is more similar to the protein composition of cultivated mammalian cells. The MEM medium has been used for the culture of a wide range of cells in monolayer. The complementation of the formula with non essential amino acids and the incorporation of Hanks' salts had increased the possibilities of use of this medium.

### Preparation instructions :

- 1) Measure 90% of final required volume of water. Water temperature should be 15-30°C.
- 2) While gently stirring the water, add the powdered medium (10.762 g/l). Stir until dissolved. Do not heat.
- 3) Rinse original package with a small amount of water to remove all traces of powder. Add to solution in step 2.
- 4) For each litre being prepared, add 0.35g of sodium bicarbonate (BioWest CAT N° P2060) or 4.7 ml of sodium bicarbonate solution at 7.5% (BioWest CAT N° L0680).
- 5) While stirring, adjust the pH of the medium to 7.0 – 7.2 using a solution of 1 N NaOH.

- 6) Add additional water to bring the solution to final volume.
- 7) Sterilize immediately by filtration using a membrane with a porosity of 0.22 microns.
- 8) Aseptically dispense medium into sterile container.

**Indications of deterioration :**

Dry powder medium should be free flowing. Do not use if powder caked. Prepared medium should be cleared of particulates and flocculent material. Do not use if liquid medium is cloudy or contains precipitate. Other evidence of deterioration may include colour change or degradation of physical or performance characteristics.

**Product code : P0515**

**Product name : MEM w/ Hanks' Salt w/ L-Glutamine w/ NEAA w/o Sodium Bicarbonate**

CAS Number	Components	Quantity in g/l
10035-04-8	Calcium Chloride Dihydrate	0.18500000
7487-88-9	Magnesium Sulfate Anhydrous	0.09767000
7447-40-7	Potassium Chloride	0.40000000
7778-77-0	Potassium Phosphate Monobasic Anhydrous	0.06000000
7647-14-5	Sodium Chloride	8.00000000
7558-79-4	Sodium Phosphate Dibasic Anhydrous	0.04788000
50-99-7	D-Glucose Anhydrous	1.00000000
56-40-6	Glycine	0.00750000
56-41-7	L-Alanine	0.00890000
1119-34-2	L-Arginine Monohydrochloride	0.12600000
5794-13-8	L-Asparagine Monohydrate	0.01500000
56-84-8	L-Aspartic acid	0.01330000
30925-07-6	L-Cystine Dihydrochloride	0.03130000
56-86-0	L-Glutamic Acid	0.01470000
56-85-9	L-Glutamine	0.29200000
5934-29-2	L-Histidine Monohydrochloride Monohydrate	0.04200000
73-32-5	L-Isoleucine	0.05200000
61-90-5	L-Leucine	0.05200000
657-27-2	L-Lysine Monohydrochloride	0.07250000
63-68-3	L-Methionine	0.01500000
63-91-2	L-Phenylalanine	0.03200000
147-85-3	L-Proline	0.01150000
56-45-1	L-Serine	0.01050000
72-19-5	L-Threonine	0.04800000
73-22-3	L-Tryptophan	0.01000000
69847-45-6	L-Tyrosine Disodium Salt Dihydrate	0.05190000
72-18-4	L-Valine	0.04600000
67-48-1	Choline Chloride	0.00100000
137-08-6	D-Ca Pantothenate	0.00100000
59-30-3	Folic Acid	0.00100000
87-89-8	Myo-Inositol	0.00200000
98-92-0	Nicotinamide (Nicotinic acid amide)	0.00100000
65-22-5	Pyridoxal Hydrochloride	0.00100000
83-88-5	Riboflavin	0.00010000
67-03-8	Thiamine Hydrochloride	0.00100000
34487-61-1	Phenol Red Sodium Salt	0.01100000
WATER		989.23825000