Technical data sheet

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CAT No: PM-E1155

MEM Alpha Modification w/ Earle's Salts w/ L-Glutamine w/o Sodium Bicarbonate

Theoretical pH:	3.7 ± 0.3
Osmolality:	255 mOsm/kg ± 10%
Storage conditions:	Store dry medium at +2 to +8°C Store hydrated medium at +2 to +8°C protect from light
Shelf life:	36 months
Endotoxin:	< 1 EU/ml
Composition:	Available on request

Recommended use:
For in vitro laboratory use only, not for drug, human or veterinary use.
Powdered media are extremely hygroscopic and should be protected from atmospheric moisture. The entire contents of each package should be used immediately after opening. Preparing a concentrated solution of medium is not recommended as precipitates may form.
Supplements can be added prior to filtration or introduced aseptically to sterile medium. The nature of the supplement may affect storage conditions and shelf life of the medium.

Application:
Minimum Essential Medium (MEM), developed by Harry Eagle, is one of the most widely used of all synthetic cell culture media. Early attempts to cultivate normal mammalian fibroblasts and certain subtypes of HeLa cells revealed that they had specific nutritional requirements that could not be met by Eagle's Basal Medium (BME).
Subsequent studies using these and other cells in culture indicated that additions to BME could be made to aid growth of a wider variety of fastidious cells. MEM, which incorporates these modifications, includes higher concentrations of amino acids so that the medium more closely approximates the protein composition of cultured mammalian cells. MEM has been used for cultivation of a wide variety of cells grown in monolayers. Optional supplementation of non-essential amino acids to the formulations that incorporate either Hanks' or Earle's salts has broadened the usefulness of this medium. The formulation has been further modified by optional elimination of calcium to permit growth of cells in suspension culture.

Preparation instructions:
1) Measure out 90% of final required volume of water. Water temperature should be 15-20°C.
2) While gently stirring the water, add the powdered medium (10.131g/liter). 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) To the solution in step 3, add 2.20g of sodium bicarbonate (PM-S2011) or 29.3ml of sodium bicarbonate solution (7.5% w/v) (LM-S2046) for each liter of final volume of medium being prepared. Stir until dissolved.
5) While stirring, adjust the pH of the medium to 6.9 – 7.1 using 1 N HCl or 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.