ClearLine	Technical data sheet Media Powder	Ref : 509157

Dulbecco's Modified Eagle's Medium / Ham's Nutrient Mixture F12
(DMEM / F12)
w/ L-Glutamine w/ 15mM HEPES w/o Sodium Bicarbonate

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

Colour: Off-white powder

Composition: Displayed on website; also available on request

pH: 5.8 ± 0.3

Osmolality: 279 mOsm/kg ± 10%

Endotoxin: < 1 EU/ml

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 for research or further manufacturing only and not for use as an Active Pharmaceutical Ingredient or food or animal feed.

Application:
DMEM-F12 contains 15mM HEPES to provide additional buffering capacity to the medium. A zwitterionic buffer, HEPES has a pKa of 7.3 at 37°C, which is more compatible with most culture systems than the pKa of sodium bicarbonate which is 6.2 under similar conditions. HEPES will reduce sudden, drastic pH shifts, but as with other buffers, it will not prevent pH shifts entirely.

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Uses:

1) Measure 80 - 90% of final required volume of water. Water temperature should be 15-30°C.
2) While gently stirring the water, add slowly the powdered medium (15.601 g/litre). 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 1.20g sodium bicarbonate (CAT N° : P2060) or 16.0 ml of 7.5% sodium bicarbonate solution (CAT N° : L0680). Mix until completely dissolved.
5) While stirring the solution, adjust the pH of the medium to 6.9 – 7.1 using 1 N HCl or 1 N NaOH. The pH of bicarbonate buffered solutions usually rises 0.1 – 0.2 units during filtration.
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.

Signs 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.

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