DMEM-F 12 (L-Glutamine)
For research use only

Catalogue number: BI-1012

Product Description

Since Eagle's first reports, studies to determine the nutritional requirements of many cells have been in progress. The major essential nutrients were identified and works were focused on requirements of individual cell types. Many media designed for these purposes are now available. Among the first of these media, developed initially to study hormonal requirements of cells in culture, was a mixture of DMEM medium and Ham's F12 medium, known as DMEM Ham's F12 (DMEM/F-12). DMEM/F-12 is a widely used basal medium for supporting the growth of many different mammalian cells. Cells successfully cultured in DMEM/F-12 include MDCK, glial cells, fibroblasts, human endothelial cells, and rat fibroblasts. This product (BI-1012) is DMEM/Nutrient Mixture F-12 with L-Glutamine, sodium bicarbonate, and phenol red. HEPES (4-(2-hydroxyethyl)-1-piperazineethanesulfonic acid), a zwitterionic organic chemical buffering agent is used for better maintaining the physiological pH changes in carbon dioxide concentrations.

Notes

- Respect storage conditions of the product.
- Do not use the product after the expiry date.
- Protect the product from light.
- 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, and hygiene cap).
- Supplements, such as antibiotics, should be added aseptically to the medium. Storage conditions and shelf-life of the supplemented product would be affected by the nature of the Supplements.
- The medium should be clearand free of particulate and flocculent material. Do not use, if the medium is cloudy or contains a precipitate.
- In the case of using the medium in several steps, notice that after the first discharge, the air-to-medium ratio will increase inside. So, the medium will become alkaline earlier than expected. It's recommended to fill the remaining medium in 50ml sterile tubes, close tightly and use until the expiry date.
- Users are advised to review the literature for recommendations regarding medium supplementation and physiological growth requirements specific to different cell lines.
- For research use only.

Quality Control

- **Appearance:** Red, clear solution
- **pH:** 7.40 -7.60
- **Sterility:** tested
- **Storage:** 2-8° C; Protect from light
- **Shelf life:** 6 months

References

1. Dulbecco, R. and Freeman, G.(1959). Plaque Production by the Polyoma Virus. Virology. 8, 396-397.
2. Morton, H.J., (1970). A Survey of Commercially Available Tissue Culture Media. In Vitro. 6, 89.
3. Eagle, H., Media for Animal Cell Culture. Tissue Culture Association Manual, 517-520 (1976)
4. Eagle, H., Nutrition Needs of Mammalian Cells in Culture. Science, 122, 501 (1955).

Citations

1. Nikbakht Dastjerdi, Mehdi, et al. "The effect of adenosine A1 receptor agonist and antagonist on p53 and caspase 3, 8, and 9 expressions and apoptosis rate in MCF-7 breast cancer cell line." Research in Pharmaceutical Sciences 4.11 (2016): 303-310.
2. Rajaei, Bahareh, et al. "Pancreatic Endoderm Derived from Diabetic Patient Specific Induced Pluripotent Stem Cell Generates Glucose Responsive Insulin Secreting Cells." Journal of Cellular Physiology (2016).
3. Alizadeh, Effat, et al. "The effect of dimethyl sulfoxide on hepatic differentiation of mesenchymal stem cells." Artificial cells, nanomedicine, and biotechnology 44.1 (2016): 157-164.