

(MEM) Minimal Essential Medium

Pub. No. MAN0018900 Rev. 2.0

 **WARNING!** Read the Safety Data Sheets (SDSs) and follow the handling instructions. Wear appropriate protective eyewear, clothing, and gloves. Safety Data Sheets (SDSs) are available from [thermofisher.com/support](https://www.thermofisher.com/support).

Product description

MEM (Minimal Essential Medium) can be used with a variety of suspension and adherent mammalian cells in culture, including HeLa, BHK-21, 293, HEP-2, HT-1080, MCF-7, and fibroblasts. MEM is available with Earle's salts for use in a CO₂ incubator, or with Hanks' salts for use without CO₂. MEM with Earle's salts uses a sodium bicarbonate buffer system (2.2 g/L), and therefore requires a 5–10% CO₂ environment to maintain physiological pH. MEM with Hanks' salts does not require a CO₂ environment to maintain physiological pH.

MEM contains no proteins, lipids, or growth factors. Therefore, MEM requires supplementation, commonly with 10% fetal bovine serum (FBS).

Contents and storage

All quality control testing results are reported on lot-specific Certificate of Analysis available on our website: [thermofisher.com](https://www.thermofisher.com).

Product	Cat. No.	Storage	Shelf life ^[1]
MEM (1X) [+] Earle's Salts [+] Non-Essential Amino Acids [-] L-Glutamine	10370021 ^[2] 10370047 ^[3] 10370070 ^[3] 10370088 ^[2]	2°C to 8°C Protect from light	24 months
MEM (1X) [+] Earle's Salts [-] L-Glutamine	11090073 ^[2] 11090081 ^[2] 11090099 ^[2] 11090100 ^[2]	2°C to 8°C Protect from light	24 months
MEM (1X) [+] Earle's Salts [+] L-Glutamine	11095072 ^[2] 11095080 ^[2] 11095098 ^[2] 11095114 ^[2]	2°C to 8°C Protect from light	12 months
MEM Vitamin Solution (100X)	11120001 ^[3] 11120037 ^[3] 11120052 ^[2] 11120061 ^[3] 11120062 ^[3] 11120097 ^[2]	-5°C to -20°C Protect from light	12 months
MEM AMINO ACIDS 50X [-] L-Glutamine	11130036 ^[3] 11130051 ^[2] 11130077 ^[3] 11130097 ^[2]	2°C to 8°C Protect from light	12 months

Product	Cat. No.	Storage	Shelf life ^[1]
MEM NEAA (100X)	11140035 ^[3] 11140050 ^[2] 11140068 ^[3] 11140076 ^[2]	2°C to 8°C Protect from light	18 months
MEM (10X) [+] Earle's Salts [-] L-Glutamine [-] Sodium Bicarbonate	11430030 ^[2] 11430098 ^[2]	2°C to 8°C Protect from light	24 months
MEM (1X) [+] Hanks' Salts [+] L-Glutamine	11575032 ^[2] 11575098 ^[2]	2°C to 8°C Protect from light	12 months
MEM (1X) [+] Earle's Salts [+] 25 mM HEPES [-] L-Glutamine	12360038 ^[2] 12360098 ^[2]	2°C to 8°C Protect from light	24 months
MEM ALPHA	12561049 ^[2] 12561056 ^[2] 12561072 ^[2] 12561099 ^[2]	2°C to 8°C Protect from light	12 months
MEM ALPHA	12571048 ^[2] 12571063 ^[2] 12571071 ^[2] 12571089 ^[2]	2°C to 8°C Protect from light	12 months
MEM (1X) [+] Earle's Salts [-] L-Glutamine	21090022 ^[3] 21090055 ^[3]	2°C to 8°C Protect from light	12 months
Medium 199 (2X)	21157029 ^[3] 21157030 ^[3]	2°C to 8°C Protect from light	12 months
Medium 199 (10X)	21180021 ^[3] 21180022 ^[3]	2°C to 8°C Protect from light	12 months
MEM (10X) [+] Earle's Salts [-] L-Glutamine	21430020 ^[3] 21430079 ^[3]	2°C to 8°C Protect from light	12 months
MEM (1X) [+] Hanks' Salts [+] L-Glutamine	21575022 ^[3] 21575097 ^[3]	2°C to 8°C Protect from light	12 months
Modified Eagle Medium (2X) [+] L-Glutamine	21935028 ^[3] 21935029 ^[3]	2°C to 8°C Protect from light	12 months
Medium 199 (1X) [+] Hanks' Salts [+] L-Glutamine [+] 25 mM HEPES	22350029 ^[3] 22350078 ^[3]	2°C to 8°C Protect from light	12 months
MEM ALPHA W/O NUCLEOSIDES	22561021 ^[3] 22561054 ^[3]	2°C to 8°C Protect from light	12 months

Product	Cat. No.	Storage	Shelf life ^[1]
MEM ALPHA W/NUCLEOSIDES	22571020 ^[3] 22571038 ^[3]	2°C to 8°C Protect from light	12 months
MEM (1X) [+] Earle's Salts [-] L-Glutamine	31095029 ^[3] 31095052 ^[3]	2°C to 8°C Protect from light	12 months
Medium 199 (1X) [+] Earle's Salts [+] L-Glutamine	31150022 ^[3] 31150030 ^[3]	2°C to 8°C Protect from light	12 months
Medium 199 (1X) [+] Earle's Salts [+] L-Glutamine [+] 1.25 g/L NaHCO ₃	31153026 ^[3] 31153027 ^[3]	2°C to 8°C Protect from light	12 months
MEM (1X) [+] Earle's Salts [+] 25 mM HEPES [-] L-Glutamine	32360026 ^[3] 32360034 ^[3]	2°C to 8°C Protect from light	12 months
MEM ALPHA (1X), GlutaMAX-I [-] Ribonucleosides [-] Deoxyribonucleosides	32561029 ^[3] 32561094 ^[3]	2°C to 8°C Protect from light	12 months
MEM ALPHA	32561037 ^[2] 32561102 ^[2]	2°C to 8°C Protect from light	12 months
MEM ALPHA (1X), GlutaMAX-I [+] Ribonucleosides [+] Deoxyribonucleosides	32571028 ^[3] 32571036 ^[2] 32571093 ^[3] 32571101 ^[2]	2°C to 8°C Protect from light	10 months
MEM (1X), GlutaMAX-I [+] Earle's Salts	41090028 ^[3] 41090036 ^[2] 41090093 ^[3] 41090101 ^[2]	2°C to 8°C Protect from light	12 months
Medium 199 (1X), GlutaMAX-I [+] Earle's Salts	41150020 ^[3] 41150087 ^[3]	2°C to 8°C Protect from light	12 months
MEM (1X), GlutaMAX-I [+] Earle's Salts [+] 25 mM HEPES	42360024 ^[3] 42360081 ^[3]	2°C to 8°C Protect from light	12 months
MEM	42360032 ^[2] 42360099 ^[2]	2°C to 8°C Protect from light	12 months
MEM (1X) [+] Earle's Salts [-] L-Glutamine	51200038 ^[2] 51200046 ^[3] 51200087 ^[3] 51200098 ^[2]	2°C to 8°C Protect from light	24 months

^[1] Shelf life is determined from Date of Manufacture. Do not use beyond labeled expiration date.

^[2]  Manufacturer: Life Technologies Corporation | 3175 Staley Road | Grand Island, New York 14072 USA

^[3]  Manufacturer: Life Technologies™ Ltd. | 3 Fountain Drive, Inchinnan Business Park | Paisley PA49RF, Scotland, United Kingdom | Tel: +44 (0)141 81416305

Guidelines for use

Ready-to-use commercial cell culture media undergoes strict quality control to ensure sterility, but may become contaminated while handling. Follow these guidelines for sterile handling to avoid contamination.

- Always wipe your gloved hands and work area with 70% ethanol.
- Wipe the outside of the containers, flasks, plates, and dishes with 70% ethanol before placing them in the cell culture hood.
- Use sterile pipette tips and pipettes to work with liquids, and use each pipette tip only once to avoid cross-contamination. Do not unwrap sterile pipettes until they are ready to be used. Keep pipettes and tips within the clean work area.
- Do not talk while performing sterile procedures and perform your cell culture as efficiently and carefully as possible to minimize contamination.

Quality control

Standard evaluations for cell culture media are pH, osmolality, endotoxins and sterility testing for liquid products. All quality control testing results are reported on lot specific Certificate of Analysis available on our website: [thermofisher.com](https://www.thermofisher.com).

Related products

Unless otherwise indicated, all materials are available through [thermofisher.com](https://www.thermofisher.com).

Item	Source
MEM Amino Acids Solution (50X)	11130051
MEM Non-Essential Amino Acids Solution (100X)	11140050
MEM Vitamin Solution (100X)	11120052
L-Glutamine (200 mM)	A2916801
Antibiotic-Antimycotic (100X)	15240096
PBS, pH 7.4	10010031

Labeling symbols

For descriptions of symbols on product labels or product documents, go to [thermofisher.com/symbols-definition](https://www.thermofisher.com/symbols-definition).

Limited product warranty

Life Technologies Corporation and/or its affiliate(s) warrant their products as set forth in the Life Technologies' General Terms and Conditions of Sale at www.thermofisher.com/us/en/home/global/terms-and-conditions.html. If you have any questions, please contact Life Technologies at www.thermofisher.com/support.



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Revision history: Pub. No. MAN0018900

Revision	Date	Description
2.0	14 March 2022	<ul style="list-style-type: none">• The regulatory label was changed to "For Research Use or Further Manufacturing. Not for diagnostic use or direct administration into humans or animals."• The content required by previous IVD label was deleted or updated.• The document type was changed to Product Information Sheet to reflect changed scope of the document.
1.0	12 November 2019	New document for MEM (Minimal Essential Medium).

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