

# DMEM (Dulbecco's Modified Eagle Medium)

Pub. No. MAN0018898 Rev. 4.0

 **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

Dulbecco's Modified Eagle Medium (DMEM) can be used to culture a variety of suspension and adherent mammalian cells, including primary fibroblasts, neurons, glial cells, HUVECs, and smooth muscle cells, as well as cell lines such as HeLa, 293, Cos-7, and PC-12. DMEM is unique from other media because it contains 4 times the concentration of amino acids and vitamins than the original Eagle's Minimal Essential Medium. DMEM was originally formulated with low glucose (1 g/L) and sodium pyruvate, but it is often used with higher glucose levels, with or without sodium pyruvate. DMEM contains no proteins, lipids, or growth factors. Therefore, DMEM requires supplementation, commonly with 10% fetal bovine serum (FBS). DMEM uses a sodium bicarbonate buffer system (3.7 g/L) and requires a 5–10% CO<sub>2</sub> environmental atmosphere to maintain physiological pH.

## 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 <sup>[1]</sup> |
|---------------------------------|-------------------------|----------------------------------|---------------------------|
| DMEM F12                        | 10565018 <sup>[2]</sup> | 2°C to 8°C<br>Protect from light | 12 months                 |
| DMEM F12                        | 10565042 <sup>[2]</sup> |                                  |                           |
| DMEM (HIGH GLUCOSE) W/O L-GLUT  | 10938025 <sup>[3]</sup> |                                  |                           |
| DMEM NUTRIENT MIX F12           | 11320033 <sup>[4]</sup> |                                  |                           |
| D-MEM/F:12(1:1)                 | 11320074 <sup>[3]</sup> |                                  |                           |
| DMEM NUTRIENT MIX F12           | 11320082 <sup>[4]</sup> |                                  |                           |
| DMEM NUTRIENT MIX F12           | 11330032 <sup>[2]</sup> |                                  |                           |
| DMEM NUTRIENT MIX F12           | 11330057 <sup>[2]</sup> |                                  |                           |
| DMEM NUTRIENT MIX F12           | 11330099 <sup>[4]</sup> |                                  |                           |
| DMEM NUTRIENT MIX F12           | 11330107 <sup>[4]</sup> |                                  |                           |
| DMEM W/O PR W/O L-GLUT          | 11880028 <sup>[3]</sup> | 2°C to 8°C<br>Protect from light | 12 months                 |
| DMEM                            | 21063029 <sup>[2]</sup> |                                  |                           |
| DMEM/F12 (1:1) W/O L-GLUT       | 21331020 <sup>[3]</sup> |                                  |                           |
| DMEM W/GLUTAMAX-I PYR,IG/L, GLU | 21885025 <sup>[3]</sup> |                                  |                           |
| D-MEM(LG)W/NA PYR & HEPES       | 22320022 <sup>[3]</sup> |                                  |                           |
| DMEM:F12(1:1) W/HEPES           | 31330038 <sup>[3]</sup> |                                  |                           |
| DMEM/NUT.MIX F-12 W/GLUT-I      | 31331028 <sup>[3]</sup> |                                  |                           |
| D-MEM (LG)W/NA PYR.             | 31885023 <sup>[3]</sup> |                                  |                           |
| DMEM W/GLUTAMAX-I,PYR,4.5G GLU  | 31966021 <sup>[3]</sup> |                                  |                           |
| DMEM W/GLUT-I,HEPES,W/O PYR     | 32430027 <sup>[3]</sup> |                                  |                           |
| D-MEM (HG) W/O NA PYR           | 41965039 <sup>[3]</sup> |                                  |                           |

| Product                                            | Cat. No.                | Storage                          | Shelf life <sup>[1]</sup> |
|----------------------------------------------------|-------------------------|----------------------------------|---------------------------|
| D-MEM (HG) W/O NA PYR (1X)                         | 41965047 <sup>[3]</sup> | 2°C to 8°C<br>Protect from light | 12 months                 |
| D-MEM (HG) W/NA PYR                                | 41966029 <sup>[3]</sup> |                                  |                           |
| D-MEM (HG) W/NA PYR                                | 41966161 <sup>[3]</sup> |                                  |                           |
| D-MEM (HG)W/O PYR W/HEPES                          | 42430025 <sup>[3]</sup> |                                  |                           |
| DMEM HIGH W/GLUTAMAX - I                           | 61965026 <sup>[3]</sup> |                                  |                           |
| DMEM HIGH W/GLUTAMAX - I                           | 61965240 <sup>[3]</sup> |                                  |                           |
| DMEM, 0.11 G/L PYR w/o L-Glut                      | 21969035 <sup>[4]</sup> |                                  |                           |
| DMEM, high glucose, GlutaMAX™ Supplement, HEPES    | 10564011 <sup>[4]</sup> |                                  |                           |
| DMEM, high glucose, GlutaMAX™ Supplement, HEPES    | 10564029 <sup>[4]</sup> |                                  |                           |
| DMEM, high glucose, GlutaMAX™ Supplement, HEPES    | 10564037 <sup>[4]</sup> |                                  |                           |
| DMEM, high glucose, GlutaMAX™ Supplement, HEPES    | 10564045 <sup>[4]</sup> | 2°C to 8°C<br>Protect from light | 12 months                 |
| DMEM, high glucose, GlutaMAX™ Supplement           | 10566016 <sup>[4]</sup> |                                  |                           |
| DMEM, high glucose, GlutaMAX™ Supplement           | 10566024 <sup>[4]</sup> |                                  |                           |
| DMEM, high glucose, GlutaMAX™ Supplement           | 10566032 <sup>[4]</sup> |                                  |                           |
| DMEM, high glucose, no glutamine                   | 11960044 <sup>[4]</sup> |                                  |                           |
| DMEM, high glucose, no glutamine                   | 11960051 <sup>[4]</sup> |                                  |                           |
| DMEM, high glucose, no glutamine                   | 11960069 <sup>[4]</sup> |                                  |                           |
| DMEM, high glucose, no glutamine                   | 11960077 <sup>[4]</sup> |                                  |                           |
| DMEM (1X) - Manufactured in Inchinnan only         | 11960085 <sup>[4]</sup> |                                  |                           |
| DMEM, high glucose, pyruvate                       | 11995040 <sup>[4]</sup> |                                  |                           |
| DMEM, high glucose, pyruvate                       | 11995065 <sup>[4]</sup> | 2°C to 8°C<br>Protect from light | 12 months                 |
| DMEM, high glucose, pyruvate                       | 11995073 <sup>[4]</sup> |                                  |                           |
| DMEM, high glucose, pyruvate                       | 11995081 <sup>[4]</sup> |                                  |                           |
| DMEM, high glucose, pyruvate                       | 11995115 <sup>[4]</sup> |                                  |                           |
| DMEM, high glucose, pyruvate                       | 11995123 <sup>[4]</sup> |                                  |                           |
| DMEM, high glucose, GlutaMAX™ Supplement, pyruvate | 10569010 <sup>[4]</sup> |                                  |                           |
| DMEM, high glucose, GlutaMAX™ Supplement, pyruvate | 10569044 <sup>[4]</sup> |                                  |                           |
| DMEM, high glucose, GlutaMAX™ Supplement, pyruvate | 10569069 <sup>[4]</sup> |                                  |                           |
| DMEM, high glucose, GlutaMAX™ Supplement, pyruvate | 10569077 <sup>[4]</sup> |                                  |                           |
| DMEM, high glucose                                 | 11965084 <sup>[4]</sup> |                                  |                           |
| DMEM, high glucose                                 | 11965126 <sup>[4]</sup> | 2°C to 8°C<br>Protect from light | 12 months                 |
| DMEM, low glucose, GlutaMAX™ Supplement, pyruvate  | 10567014 <sup>[4]</sup> |                                  |                           |
| DMEM, low glucose, GlutaMAX™ Supplement, pyruvate  | 10567022 <sup>[4]</sup> |                                  |                           |
| DMEM, low glucose, pyruvate                        | 11885076 <sup>[4]</sup> |                                  |                           |
| DMEM, low glucose, pyruvate                        | 11885084 <sup>[4]</sup> |                                  |                           |
| DMEM, low glucose, pyruvate                        | 11885092 <sup>[4]</sup> |                                  |                           |
| DMEM                                               | 11885099 <sup>[4]</sup> |                                  |                           |
| DMEM, high glucose                                 | 11965092 <sup>[4]</sup> |                                  |                           |
| DMEM, high glucose                                 | 11965118 <sup>[4]</sup> |                                  |                           |

| Product                                    | Cat. No.                | Storage                          | Shelf life <sup>[1]</sup> |
|--------------------------------------------|-------------------------|----------------------------------|---------------------------|
| DMEM, high glucose                         | 11965167 <sup>[4]</sup> | 2°C to 8°C<br>Protect from light | 12 months                 |
| DMEM, high glucose                         | 11965175 <sup>[4]</sup> |                                  |                           |
| DMEM, low glucose, pyruvate, HEPES         | 12320032 <sup>[4]</sup> |                                  |                           |
| DMEM                                       | 12320098 <sup>[4]</sup> |                                  |                           |
| DMEM, high glucose, pyruvate, no glutamine | 10313021 <sup>[4]</sup> |                                  |                           |
| DMEM, high glucose, pyruvate, no glutamine | 10313039 <sup>[4]</sup> |                                  |                           |
| DMEM, high glucose, HEPES                  | 12430047 <sup>[4]</sup> |                                  |                           |
| DMEM, high glucose, HEPES                  | 12430054 <sup>[4]</sup> |                                  |                           |
| DMEM, high glucose, HEPES                  | 12430062 <sup>[4]</sup> |                                  |                           |
| DMEM, high glucose, HEPES                  | 12430104 <sup>[4]</sup> |                                  |                           |

<sup>[1]</sup> Shelf life is determined from Date of Manufacture. Do not use beyond the labeled expiration date.

<sup>[2]</sup>  Dual manufactured.

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

<sup>[4]</sup>  Manufacturer: Life Technologies Corporation | 3175 Staley Road | Grand Island, New York 14072 USA

## 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                   |
|---------------------------------------|--------------------------|
| Gentamicin (50 mg/mL)                 | <a href="#">15750078</a> |
| Amphotericin B                        | <a href="#">15290018</a> |
| Penicillin-Streptomycin (10,000 U/mL) | <a href="#">15140122</a> |
| PBS, pH 7.4                           | <a href="#">10010031</a> |
| Fetal Bovine Serum (FBS)              | <a href="#">16000044</a> |

## 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](https://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](https://www.thermofisher.com/support).



**Manufacturer:**  
Life Technologies Corporation |  
3175 Staley Road |  
Grand Island, New York 14072 USA



Life Technologies Europe B.V.  
Kwartsweg 2, 2665 NN Bleiswijk  
The Netherlands



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



**Manufacturer:**  
Dual manufactured products

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**Revision history:** Pub. No. MAN0018898

| Revision 5 | Date              | Description                                                                                                                                                                                                                                                                                                                                                                                      |
|------------|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4.0        | 14 March 2022     | <ul style="list-style-type: none"><li>The regulatory label was changed to "For Research Use or Further Manufacturing. Not for diagnostic use or direct administration into humans or animals."</li><li>The content required by previous IVD label was deleted or updated.</li><li>The document type was changed to Product Information Sheet to reflect changed scope of the document.</li></ul> |
| 3.0        | 02 October 2020   | DMEM skus were added to contents and storage table.                                                                                                                                                                                                                                                                                                                                              |
| 2.0        | 01 September 2020 | DMEM skus were added to contents and storage table.                                                                                                                                                                                                                                                                                                                                              |
| 1.0        | 12 November 2019  | New document for DMEM (Dulbecco's Modified Eagle Medium).                                                                                                                                                                                                                                                                                                                                        |

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