

# Cell Culture Media Quick Reference Guide

## Cell Culture Essentials

Whether you're seeding starter cultures, analyzing field samples, or feeding bioreactors, Corning's high-performance media, sera, and reagents can help to ensure consistent, repeatable results. This quick reference guide is intended to help you choose the right cell culture media products to support your cell types and objectives.

| Task                                   | You will need*  |
|--|---|
| Cell detachment                        | <ul style="list-style-type: none"> <li>• Trypsin</li> <li>• Corning® Cellstripper®</li> <li>• Accutase®</li> </ul>  |
| Lymphocyte separation                  | <ul style="list-style-type: none"> <li>• LSM (Lymphocyte Separation Medium)</li> </ul>  |
| Cell washing                           | <ul style="list-style-type: none"> <li>• PBS (Phosphate-Buffered Saline)</li> <li>• DPBS (Dulbecco's Phosphate-Buffered Saline)</li> <li>• HBSS (Hank's Balanced Salt Solution)</li> </ul>  |
| Cell viability counts                  | <ul style="list-style-type: none"> <li>• Trypan blue</li> </ul>   |
| Contamination: microbial               | <ul style="list-style-type: none"> <li>• Penicillin-Streptomycin solution</li> <li>• Gentamicin</li> </ul>  |
| Contamination: fungal                  | <ul style="list-style-type: none"> <li>• Amphotericin B</li> </ul>  |
| Contamination: microbial and/or fungal | <ul style="list-style-type: none"> <li>• Antibiotic-Antimycotic solution</li> </ul>   |
| Contamination: mycoplasma              | <ul style="list-style-type: none"> <li>• Ciprofloxacin Hydrochloride</li> </ul>   |
| Cryopreservation                       | <ul style="list-style-type: none"> <li>• DMSO (Dimethyl Sulfoxide)</li> </ul>   |
| Supplementation Transfection**         | <ul style="list-style-type: none"> <li>• Corning transfectagro™ reduced serum medium</li> <li>• DMEM (Dulbecco's Modification of Eagle's Medium) without phenol red</li> <li>• DMEM/Ham's F-12 50/50 Mix</li> <li>• MEM (Minimum Essential Medium)</li> <li>• FBS (Fetal Bovine Serum)</li> </ul> |

\*See product listing for more information

\*\*Do not wash cells with DPBS/PBS prior to transfection

## Common Cell Lines

The cell culture medium recommendations for these common cell lines (not sold by Corning) are to be used only as a guideline, as these cells may be successfully propagated in other media. It is best to follow the recommendation of the cell repository.

| Cell Line | Cell Type  | Species | Tissue                | Medium   |
|-----------|------------|---------|-----------------------|--|
| 3T6       | Fibroblast | Mouse   | Embryo                | DMEM and 10% FBS                                       |
| A549      | Epithelial | Human   | Lung carcinoma        | F-12K and 10% FBS                                      |
| A9        | Fibroblast | Mouse   | Connective tissue     | DMEM and 10% FBS                                       |
| AtT-20    | Epithelial | Mouse   | Pituitary tumor       | F-10, 15% horse serum and 2.5% FBS                     |
| BALB/3T3  | Fibroblast | Mouse   | Embryo                | DMEM and 10% FBS                                       |
| BHK-21    | Fibroblast | Hamster | Kidney                | Glasgow's MEM and 10% FBS or MEM and 10% FBS plus NEAA |
| BHL-100   | Epithelial | Human   | Breast                | McCoy's 5A and 10% FBS                                 |
| BT        | Fibroblast | Bovine  | Turbinate cells       | MEM and 10% FBS plus NEAA                              |
| Caco-2    | Epithelial | Human   | Colon adeno carcinoma | MEM and 20% FBS plus NEAA                              |
| Chang     | Epithelial | Human   | Liver                 | BME (Basal Medium Eagle) and 10% calf serum            |

## Common Cell Lines, continued

| Cell Line                 | Cell Type                    | Species       | Tissue   | Medium  |
|---------------------------|------------------------------|---------------|--|---|
| CHO-K1                    | Epithelial                   | Hamster       | Ovary  | F-12 and 10% FBS  |
| Clone 9                   | Epithelial                   | Rat           | Liver  | F-12K and 10% FBS   |
| Clone M-3                 | Epithelial                   | Mouse         | Melanoma                                       | F-10, 15% horse serum and 2.5% FBS  |
| COS-1, COS-3, COS-7       | Fibroblast, SV40 transformed | Monkey        | Kidney   | DMEM and 10% FBS  |
| CRFK                      | Epithelial                   | Cat           | Kidney   | MEM and 10% FBS plus NEAA   |
| CV-1                      | Fibroblast                   | Monkey        | Kidney   | MEM and 10% FBS   |
| D-17                      | Epithelial                   | Dog           | Osteosarcoma                                   | MEM and 10% FBS and NEAA  |
| Daudi                     | Lymphoblast                  | Human         | Blood from a lymphoma patient                  | RPMI-1640 and 10% FBS   |
| EB-3                      | B Lymph                      | Human         | Lymphoma                                       | RPMI-1640 and 10% FBS   |
| GH1, GH3                  | Epithelial                   | Rat           | Pituitary tumor                                | F-10, 15% horse serum, and 2.5% FBS   |
| H9                        | Lymphoblast                  | Human         | T-cell lymphoma                                | RPMI-1640 and 20% FBS   |
| HaK                       | Epithelial                   | Hamster       | Kidney   | BME and 10% calf serum  |
| HCT-15                    | Epithelial                   | Human         | Colorectal adenocarcinoma                      | RPMI-1640 and 10% FBS   |
| HEK-293                   | Unknown                      | Human         | Embryonic kidney                               | MEM and 10% FBS plus NEAA   |
| HeLa                      | Epithelial                   | Human         | Cervix carcinoma                               | MEM and 10% FBS plus NEAA (in suspension, S-MEM)                              |
| HEp-2                     | Epithelial                   | Human         | Larynx carcinoma (suspected HeLa contaminated) | MEM and 10% FBS   |
| HL-60                     | Lymphoblast                  | Human         | Promyelocytic leukemia                         | RPMI-1640 and 20% FBS   |
| HT-1080                   | Epithelial                   | Human         | Fibrosarcoma                                   | MEM and 10% FBS plus NEAA   |
| HT-29                     | Epithelial                   | Human         | Colon adenocarcinoma                           | McCoy's 5A and 10% FBS  |
| HUVEC                     | Endothelial                  | Human         | Umbilical vein                                 | F12K, 10% FBS, Heparin 100 µg/mL, endothelial cell growth supplement 50 mg/mL |
| I-10                      | Epithelial                   | Mouse         | Testicular tumor                               | F-10, 15% horse serum, and 2.5% FBS   |
| IM-9                      | Lymphoblast                  | Human         | Marrow from myeloma patient                    | RPMI-1640 and 10% FBS   |
| JEG-2                     | Epithelial                   | Human         | Choriocarcinoma                                | MEM and 10% FBS   |
| Jensen                    | Fibroblast                   | Rat           | Sarcoma  | McCoy's 5A and 5% FBS   |
| Jurkat                    | Lymphoblast                  | Human         | Lymphoma                                       | RPMI-1640 and 10% FBS   |
| K-562                     | Lymphoblast                  | Human         | Myelogenous leukemia                           | RPMI-1640 and 10% FBS   |
| KB                        | Epithelial                   | Human         | Oral carcinoma                                 | MEM and 10% FBS plus NEAA   |
| KG-1                      | Myeloblast                   | Human         | Marrow from erythroleukemia patient            | IMDM (Iscove's Modification of DMEM) and 20% FBS                              |
| L2                        | Epithelial                   | Rat           | Lung   | F-12K and 10% FBS   |
| LLC-WRC 256               | Epithelial                   | Rat           | Carcinoma                                      | Medium 199 and 5% horse serum   |
| McCoy                     | Fibroblast                   | Mouse         | Unknown  | MEM and 10% FBS   |
| MCF7                      | Epithelial                   | Human         | Breast adenocarcinoma                          | MEM and 10% FBS plus NEAA and 10 µg/mL insulin                                |
| MRC-5                     | Fibroblast                   | Human         | Lung   | MEM and 10% FBS plus NEAA   |
| NIH-3T3                   | Fibroblast                   | Mouse         | Embryo   | DMEM and 10% FBS  |
| Schneider 2 (S2), D.Mel-2 | –                            | Fruit fly     | –  | Corning® insectagro® DS2 medium   |
| Sf9, Sf21                 | –                            | Fall armyworm | Pupal ovary                                    | Hink's TNM-FH and 10% FBS; Corning insectagro Sf9                             |
| VERO                      | Epithelial                   | Monkey        | Kidney   | MEM and 10% FBS plus NEAA   |
| WI-38                     | Epithelial                   | Human         | Embryonic lung                                 | BME and 10% FBS   |
| WISH                      | Epithelial                   | Human         | Amnion   | BME and 10% FBS   |
| XC                        | Epithelial                   | Rat           | Sarcoma  | MEM and 10% FBS plus NEAA   |
| Y-1                       | Epithelial                   | Mouse         | Tumor of adrenal                               | F-10, 15% horse serum, and 2.5% FBS   |

## Ordering Information

### Classical Media

| Fisher Scientific Cat. No. | Corning Cat. No. | Description   | Unit Size | Qty/Pk |
|----------------------------|------------------|---|-----------|--------|
| 15313531                   | 10-010-CV        | MEM (Minimum Essential Medium) with Earle's salts and L-glutamine   | 500 mL    | 6      |
| 15363591                   | 10-010-CM        | MEM with Earle's salts and L-glutamine  | 1L        | 6      |
| 15303571                   | 17-305-CV        | MEM with Earle's salts, without L-glutamine and phenol red  | 500 mL    | 6      |
| 15343531                   | 10-016-CV        | Iscove's Modification of DMEM with L-glutamine and 25 mM HEPES, without $\alpha$ -thioglycerol and $\beta$ -mercaptoethanol | 500 mL    | 6      |
| 15313601                   | 10-016-CM        | Iscove's Modification of DMEM with L-glutamine and 25 mM HEPES, without $\alpha$ -thioglycerol and $\beta$ -mercaptoethanol | 1L        | 6      |
| 15303541                   | 10-040-CV        | RPMI 1640 with L-glutamine  | 500 mL    | 6      |
| 15343601                   | 10-040-CM        | RPMI 1640 with L-glutamine  | 1L        | 6      |
| 15353531                   | 10-017-CV        | DMEM (Dulbecco's Modified Eagle's Medium) with 4.5 g/L glucose and L-glutamine, without sodium pyruvate                     | 500 mL    | 6      |
| 15323601                   | 10-017-CM        | DMEM with 4.5 g/L glucose and L-glutamine, without sodium pyruvate  | 1L        | 6      |
| 15323531                   | 10-013-CV        | DMEM with 4.5 g/L glucose, L-glutamine, and sodium pyruvate   | 500 mL    | 6      |
| 15373591                   | 10-013-CM        | DMEM with 4.5 g/L glucose, L-glutamine, and sodium pyruvate   | 1L        | 6      |
| 15383561                   | 17-205-CV        | DMEM with 4.5 g/L glucose and sodium pyruvate, without L-glutamine and phenol red   | 500 mL    | 6      |
| 15353781                   | 90-013-PB        | DMEM with 4.5 g/L glucose, sodium pyruvate, without L-glutamine and phenol red, powder                                      | 10L       | 1      |
| 15303791                   | 90-113-PB        | DMEM without sodium bicarbonate, glucose, L-glutamine, sodium pyruvate, and phenol red, powder                              | 10L       | 1      |
| 15373541                   | 10-090-CV        | DMEM/Ham's F-12 50/50 Mix with L-glutamine  | 500 mL    | 6      |
| 15313611                   | 10-090-CM        | DMEM/Ham's F-12 50/50 Mix with L-glutamine  | 1L        | 6      |
| 15383781                   | 90-090-PB        | DMEM/Ham's F-12 50/50 Mix without sodium bicarbonate, L-glutamine, and phenol red, powder                                   | 10L       | 1      |
| 15383541                   | 10-092-CV        | DMEM/Ham's F-12 50/50 Mix with L-glutamine and 15 mM HEPES  | 500 mL    | 6      |
| 15323611                   | 10-092-CM        | DMEM/Ham's F-12 50/50 Mix with L-glutamine and 15 mM HEPES  | 1L        | 6      |
| 15353561                   | 16-405-CV        | DMEM/Ham's F-12 50/50 Mix with L-glutamine, without phenol red  | 500 mL    | 6      |

### Salt Solutions

|          |           |   |        |   |
|----------|-----------|---|--------|---|
| 15363571 | 21-021-CV | HBSS (Hank's Balanced Salt Solution), 1X, without calcium and magnesium     | 500 mL | 6 |
| 15303631 | 21-021-CM | HBSS, 1X, without calcium and magnesium                                     | 1L     | 6 |
| 15373571 | 21-022-CV | HBSS, 1X, without calcium, magnesium, and phenol red                        | 500 mL | 6 |
| 15313631 | 21-022-CM | HBSS, 1X, without calcium, magnesium, and phenol red                        | 1L     | 6 |
| 15313581 | 21-040-CV | PBS (Phosphate-Buffered Saline), 1X, without calcium and magnesium          | 500 mL | 6 |
| 15373631 | 21-040-CM | PBS, 1X, without calcium and magnesium                                      | 1L     | 6 |
| 15316257 | 46-013-CM | PBS, 10X, pH 7.4, without calcium and magnesium                             | 1L     | 6 |
| 15393571 | 21-030-CV | DPBS (Dulbecco's Phosphate-Buffered Saline), 1X, with calcium and magnesium | 500 mL | 6 |
| 15333631 | 21-030-CM | DPBS, 1X, with calcium and magnesium  | 1L     | 6 |
| 15303581 | 21-031-CV | DPBS, 1X, without calcium and magnesium                                     | 500 mL | 6 |
| 15343631 | 21-031-CM | DPBS, 1X, without calcium and magnesium                                     | 1L     | 6 |
| 15363631 | 21-031-LX | DPBS, 1X, without calcium and magnesium                                     | 10L    | 1 |
| 15353631 | 21-031-LB | DPBS, 1X, without calcium and magnesium                                     | 20L    | 1 |
| 15333571 | 20-030-CV | DPBS, 10X, with calcium and magnesium                                       | 500 mL | 6 |
| 15343571 | 20-031-CV | DPBS, 10X, without calcium and magnesium                                    | 500 mL | 6 |

### Specialty Media

|          |           |                                    |        |   |
|----------|-----------|------------------------------------|--------|---|
| 15363661 | 25-072-CI | LSM (Lymphocyte Separation Medium) | 100 mL | 1 |
| 15373661 | 25-072-CV | LSM                                | 500 mL | 1 |

### Serum

|          |           |  |        |   |
|----------|-----------|--|--------|---|
| 15377636 | 35-079-CV | FBS (Fetal Bovine Serum), regular, South American Origin | 500 mL | 1 |
| 15399906 | 35-015-CV | FBS, premium, US Origin                                  | 500 mL | 1 |
| 15313701 | 35-076-CV | FBS, premium, Australian Origin                          | 500 mL | 1 |

## Ordering Information, continued

### Cell Culture Reagents

| Fisher Scientific Cat. No. | Corning Cat. No. | Description   | Unit Size | Qty/Pk |
|----------------------------|------------------|---|-----------|--------|
| 15303681                   | 30-234-CR        | G418 Sulfate, liquid 50 mg/mL solution  | 20 mL     | 1      |
| 15393671                   | 30-234-CI        | G418 Sulfate, liquid 50 mg/mL solution  | 100 mL    | 1      |
| 15303771                   | 61-234-RF        | G418 Sulfate, powder  | 1 g       | 1      |
| 15313771                   | 61-234-RG        | G418 Sulfate, powder  | 5 g       | 1      |
| 15323771                   | 61-234-RK        | G418 Sulfate, powder  | 50 g      | 1      |
| 15323661                   | 25-060-CI        | HEPES, liquid 1M solution (238.3 mg/mL)   | 100 mL    | 6      |
| 15393641                   | 25-050-CI        | Trypsin 1X, 0.25% Trypsin in HBSS without calcium and magnesium, Porcine Parvovirus tested  | 100 mL    | 6      |
| 15303651                   | 25-051-CI        | Trypsin EDTA 1X, 0.05% Trypsin/0.53 mM EDTA in HBSS without calcium and magnesium, Porcine Parvovirus tested                        | 100 mL    | 6      |
| 12739716                   | 25-052-CI        | Trypsin EDTA 1X, 0.05% Trypsin/0.53 mM EDTA in HBSS without calcium and magnesium, Porcine Parvovirus tested                        | 100 mL    | 6      |
| 15323651                   | 25-052-CV        | Trypsin EDTA 1X, 0.05% Trypsin/0.53 mM EDTA in HBSS without calcium and magnesium, Porcine Parvovirus tested                        | 500 mL    | 6      |
| 15333651                   | 25-053-CI        | Trypsin EDTA 1X, 0.25% Trypsin/2.21 mM EDTA in HBSS without sodium bicarbonate, calcium and magnesium, Porcine Parvovirus tested    | 100 mL    | 6      |
| 15343651                   | 25-054-CI        | Trypsin 10X, 2.5% Trypsin in HBSS without calcium, magnesium, and phenol red, Porcine Parvovirus tested                             | 100 mL    | 6      |
| 13271914                   | 25-056-CI        | Corning® Cellstripper®, liquid  | 100 mL    | 6      |
| 15323609                   | 25-058-CI        | Accutase® Cell Detachment Solution  | 100 mL    | 1      |
| 15393661                   | 25-900-CI        | Trypan Blue solution (w/v) in PBS 0.4%, (w/v) in normal saline (8.1 g/L NaCl with 0.6 g/L K <sub>2</sub> HPO <sub>4</sub> )         | 100 mL    | 1      |
| 15313671                   | 30-001-CI        | Penicillin-Streptomycin solution, 50X, 5,000 I.U. Penicillin (per mL), 5,000 µg/mL Streptomycin                                     | 100 mL    | 6      |
| 15356247                   | 30-002-CI        | Penicillin-Streptomycin solution, 100X, 10,000 I.U. Penicillin, 10,000 µg/mL Streptomycin   | 100 mL    | 6      |
| 15373671                   | 30-009-CI        | Penicillin-Streptomycin-L-Glutamine, 100X, 10,000 I.U. Penicillin (per mL), 10,000 µg/mL Streptomycin, 29.2 mg/mL L-glutamine       | 100 mL    | 6      |
| 15333671                   | 30-003-CF        | Amphotericin B, liquid 250 µg/mL solubilized  | 50 mL     | 6      |
| 15343671                   | 30-004-CI        | Antibiotic-Antimycotic solution, 10,000 I.U. Penicillin (per mL) 10,000 µg/mL Streptomycin 25 µg/mL, Amphotericin with 8.5 g/L NaCl | 100 mL    | 6      |
| 15303761                   | 61-098-RA        | Gentamicin Sulfate, powder  | 100 mg    | 1      |
| 15313761                   | 61-098-RF        | Gentamicin Sulfate, powder  | 1 g       | 1      |
| 15383771                   | 61-277-RF        | Ciprofloxacin Hydrochloride, powder   | 1 g       | 1      |
| 15303671                   | 25-950-CQC       | DMSO (Dimethyl Sulfoxide)   | 250 mL    | 1      |

### Water

|          |           |  |    |   |
|----------|-----------|--|----|---|
| 15373581 | 25-055-CM | Water, cell culture grade, tested to USP sterile WFI specifications  | 1L | 6 |
| 15303711 | 46-000-CM | Water, molecular biology grade, tested to the chemical and physical properties found in the USP monograph for sterile purified water | 1L | 6 |

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