


RPMI 1640 Medium

For various human clinical samples

Pub. No. MAN0018935 Rev. 1.0

 **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).

Intended Use

For *in vitro* diagnostic use

The isolation of human viruses from clinical samples using cell culture remains necessary because it is the only technique capable of providing a viable isolate that can be used for antiviral susceptibility testing. An additional advantage is that in contrast to most antigen and nucleic acid detection methods, viral culture allows detection of multiple viruses, not all of which may have been suspected at the time diagnostic culture was requested.

RPMI 1640 cell culture media products are for professional use. They are used in medical laboratories by personnel who have received specialized education and training with regard to procedures utilizing In Vitro Diagnostic products. IVD products of this type are not intended as sole determinant in a diagnostic situation. Test results are interpreted by a healthcare professional as part of the clinical management of a patient.

Principle and explanation of procedure

RPMI is a commonly used cell culture media for diagnostic virology (1, 2). RPMI 1640 Medium was originally developed to culture human leukemic cells in suspension and as a monolayer. Roswell Park Memorial Institute (RPMI) 1640 Medium has since been found suitable for a variety of mammalian cells, including HeLa, Jurkat, MCF-7, PC12, PBMC, astrocytes, and carcinomas.

RPMI 1640 Medium is unique from other media because it contains the reducing agent glutathione and high concentrations of vitamins. RPMI 1640 Medium contains biotin, vitamin B12, and PABA, which are not found in Eagle's Minimal Essential Medium or Dulbecco's Modified Eagle Medium. In addition, the vitamins inositol and choline are present in very high concentrations. RPMI 1640 Medium contains no proteins, lipids, or growth factors. Therefore, RPMI 1640 Medium requires supplementation, commonly with 10% Fetal Bovine Serum (FBS). RPMI 1640 Medium uses a sodium bicarbonate buffer system (2.0 g/L), and therefore requires a 5–10% CO₂ environment 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 ^[1]
RPMI 1640 (1X) [+] L-Glutamine [-] Phenol Red	11835030 ^[2] 11835055 ^[2] 11835063 ^[3]	2°C to 8°C Protect from light	12 months
RPMI Medium (1X) 1640 [+] L-Glutamine	11875085 ^[4] 11875093 ^[4] 11875101 ^[2] 11875119 ^[4] 11875127 ^[2] 11875135 ^[4] 11875168 ^[2] 11875176 ^[2]	2°C to 8°C Protect from light	12 months





For In Vitro Diagnostic Use.

Product	Cat. No.	Storage	Shelf life ^[1]
RPMI Medium (1X) 1640 [-] L-Glutamine	21870076 ^[4] 21870084 ^[4] 21870092 ^[4] 21870100 ^[4]	2°C to 8°C Protect from light	24 months
RPMI 1640 W/GLUT (1X) (CE)	21875034 ^[3] 21875042 ^[3] 21875059 ^[3]	2°C to 8°C Protect from light	12 months
RPMI 1640 (1X) [+] L-Glutamine [+] HEPES	22400071 ^[2] 22400089 ^[4] 22400097 ^[2] 22400105 ^[4] 22400121 ^[2] 22400197 ^[2]	2°C to 8°C Protect from light	12 months
RPMI 1640 W/O L-GLUTAMINE (CE)	31870017 ^[3] 31870025 ^[3]	2°C to 8°C Protect from light	12 months
RPMI 1640 W/O PHENOL RED	32404014 ^[3]	2°C to 8°C Protect from light	12 months
RPMI 1640 W/25MMHEPES W/OL-GLUT	42401018 ^[3] 42402016 ^[3]	2°C to 8°C Protect from light	12 months
RPMI MEDIUM 1640 W/HEPES (CE)	52400017 ^[3] 52400025 ^[3]	2°C to 8°C Protect from light	12 months
RPMI 1640 W/GLUTAMAX-I (1X)	61870010 ^[3] 61870036 ^[2] 61870127 ^[2] 61870143 ^[2] 61870150 ^[2]	2°C to 8°C Protect from light	12 months
RPMI 1640 W/HEPES W/GLUTAMAX-I	72400013 ^[3] 72400021 ^[3]	2°C to 8°C Protect from light	12 months
RPMI (1X) + GlutaMAX -I	72400047 ^[2] 72400120 ^[2] 72400146 ^[2] 72400153 ^[2]	2°C to 8°C Protect from light	12 months

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

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

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

^[4]  Dual manufactured.

Precautions

Do not use the product if packaging, including bottles and vials, have been compromised and/or show evidence of microbial contamination, cloudy appearance, discoloration, drying, cracking, or other signs of deterioration.



CAUTION! Human samples are potentially biohazardous. Follow standard precautions for handling, storage and disposal.



WARNING! Do not use for injection or infusion! Please report any serious incidents in relation to the device to the manufacturer and the Competent Authority of the EU Member State in which the user and/or patient is established.

- Once opened, use RPMI 1640 Medium within 14 days for maximal growth performance.
- Avoid repeated warming/cooling and prolonged exposure to light.
- Do not use beyond labeled expiration date.
- All solutions that come into contact with clinical samples must be sterile. Always use proper aseptic techniques and work inside a laminar flow hood. Consult our **Gibco Cell Culture Basics** for aseptic handling.

Test protocol

There is no single type of cell culture that can support the growth of all medically relevant viruses. As such, virology laboratories must maintain several different cell culture types. The choice of cell line used for a specific specimen is determined by the information communicated from the ordering physician to the laboratory and by knowledge of the specimens usually isolated from a given specimen type.

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

- Always wipe your hand 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.
- Avoid pouring media and reagents directly from bottles or flasks.
- 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 rapidly 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.

Related products

Product	Source
Gentamicin 50 mg/mL	15750078
Gibco Amphotericin B	15290018
Penicillin Streptomycin 10,000 U/mL	15140122
PBS, pH 7.4	10010031
Phytohemagglutinin, M form (PHA-M)	10576015
FBS	16000044

References

1. Winn, W. C., & Koneman, E. W. (2006). Koneman's color atlas and textbook of diagnostic microbiology (6th ed.). Philadelphia: Lippincott Williams & Wilkins.
2. WHO Guidelines on the Establishment of Virology Laboratories in Developing Countries, 2008.
3. Griffith, B P. "Principles of laboratory isolation and identification of the human immunodeficiency virus (HIV)" Yale journal of biology and medicine vol. 60,6 (1987): 575-87.
4. Krowicka, Halina et al. "Use of tissue culture cell lines to evaluate HIV antiviral resistance" AIDS research and human retroviruses vol. 24,7 (2008): 957-67.

Labeling symbols

The symbols present on the product label are explained in the following table.

	MANUFACTURER		USE BY
	IN VITRO DIAGNOSTIC MEDICAL DEVICE		CONSULT INSTRUCTIONS FOR USE
	CATALOG NUMBER		CAUTION, CONSULT ACCOMPANYING DOCUMENTS
	BATCH CODE		UPPER AND LOWER LIMITS OF TEMPERATURE
	Sterilized using aseptic processing technique		PROTECT FROM LIGHT
	European Mark of Conformity		AUTHORISED REPRESENTATIVE IN THE EUROPEAN COMMUNITY

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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Manufacturer:
Dual manufactured products

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Revision history: Pub. No. MAN0018935

Revision	Date	Description
1.0	12 November 2019	New document

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