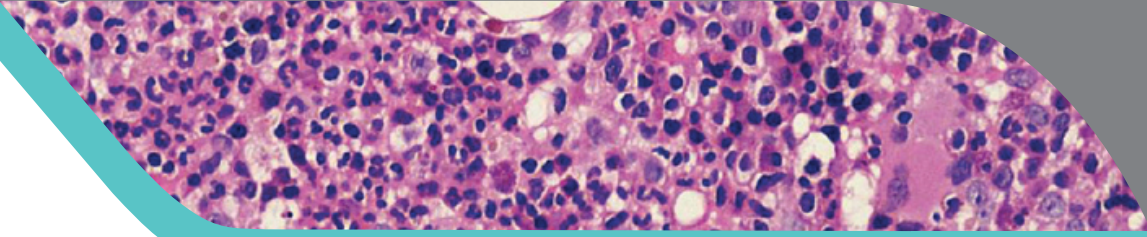


# Roswell Park Memorial Institute Medium (RPMI medium)



## Frequently Asked Questions

### 1) What is RPMI?

Roswell Park Memorial Institute Medium, commonly referred to as RPMI medium, is a nutritive liquid used to support cell viability in biological samples. RPMI has no protein, so it is supplemented separately with bovine serum. It is not a fixative. Formalin, Cytolyt, and Zeus IF, for example, are fixatives. RPMI is used when laboratory testing requires fresh, unfixed specimens such as flow cytometry as well as some FISH, molecular and cytogenetics tests.

### 2) Why is it pink/red?

It has a phenol red pH indicator that will turn from pink to yellow indicating contamination or exposure to air. Any shade of pink/reddish-orange is acceptable. The exact color varies from lot to lot and vendor to vendor, so another lab's supplied RPMI may not be exactly the same color.

### 3) How should it be stored?

Because it is intended to support cell growth, it does not discriminate good growth (blood cells) from bad growth (bacterial contamination). The vial, when opened, should be handled carefully and as aseptically as possible and promptly re-capped tightly. It should be stored long term in the refrigerator (2–8° C). The expiration date is on the label provided. It should not be used past its noted expiration, if the color has changed from pink/red to yellow, or if it is visibly hazy.

### 4) Is it necessary to bring to room temperature before adding specimen?

It is optimal to keep the cells collected at steady temperature and not shock them by placing into a cold tube. If a vial of RPMI is unused and not opened, it can be returned to the refrigerator within 4 hours and rewarmed to room temperature when needed.

### 5) The specimen is too large to fit in the provided RPMI Tube, what can I do?

Use a larger sterile tube or container—a urine collection container works well. You can combine the liquid from several RPMI tubes to pour over the specimen until covered. Work as aseptically as possible. Do not use a container which formalin has been in previously.

### 6) How do I send CSF or Body Fluids in RPMI?

CSF generally has a very low protein and very few nutrients to support cellular integrity. It is very important, if flow cytometry testing is a possible order, to add RPMI in about a 1:1 ratio either by pouring out some of the RPMI in the provided tube and adding the CSF or Body Fluid aseptically, or, by adding the RPMI from the provided tube into the original specimen container. RPMI should be added as soon as possible, preferably before transport. The ratio of RPMI to fluid is not critical, as much specimen as possible should be submitted for testing. Always note on the original specimen if RPMI is added.

**7) When would it be used in bone marrow collections?**

If, during the collection for bone marrow aspirate portion, there is insufficient sample aspirated for all tests requested or a “dry tap” occurs, a piece of the bone marrow core biopsy can be placed directly into RPMI, or after touch preps are made. By placing the core into RPMI, the sample can then be split by the laboratory if additional testing beyond morphology (flow cytometry, cytogenetics, FISH) is needed or requested. If multiple cores are collected, place one in formalin and one in RPMI. Once the core is placed into formalin, it cannot be retrieved for cytogenetics, flow cytometry, or other non-slide based testing. A notation on the requisition is all that is needed to indicate the core biopsy in RPMI is included in the collection kit and should be split for other testing.

**8) We are out of RPMI; what should I do?**

Place the bone marrow core or other tissue into sterile normal saline. It should be transferred to RPMI ASAP, so please alert the laboratory receiving the specimen. Use a sterile tube or cup without added anticoagulant or serum separator (a plain red blood collection tube works perfectly, or a sterile urine collection container without preservative). Do not remove a specimen from the formalin container and place into saline or RPMI as formalin has very immediate fixing properties. Do not use a container in which formalin has been in previously.

**9) How do I transport a tissue or CSF/Body fluid sample in RPMI?**

Samples in RPMI (except CSF) that are expected to be shipped within 12 hours are stable at room temperature—beyond 12 hours should be refrigerated. They should be shipped on a cool pack, but never frozen. CSF should be shipped immediately to the laboratory on a cool pack.

**10) How do I order RPMI?**

RPMI can be ordered online at [www.incytediagnostics.com](http://www.incytediagnostics.com), through the Incyte Connect portal, directly through Incyte’s purchasing department via fax (509.892.2763) or email ([purchasing@incdx.com](mailto:purchasing@incdx.com)), or through your account representative.