

## Product Information / Instruction for Use



LymphoPrime 2  
 Complete Medium for Peripheral Blood Lymphocytes  
 Cat. No. LPR2-A (500 ml), LPR2-B (100 ml)

### Intended purpose

LymphoPrime2 Medium is a ready-to-use medium for human peripheral blood lymphocytes. It is mainly used for karyotyping and other cytogenetic studies.

### General Information

LymphoPrime2 is a newly designed and optimized formulation. With years of know-how, we have developed a formulation which results in a better performance and longer stability.

Our LymphoPrime2 is intended for use in short-term cultivation of peripheral blood lymphocytes for chromosome evaluation. The proprietary formulation contains L-Glutamine, pre-tested fetal bovine serum, antibiotics, phytohemagglutinin-M (PHA-M), and an optimized concentration growth promoting factors. The modified formulation allows an extension of the shelf life to two years. It is supplied as frozen medium, which is ready for use after thawing. LymphoPrime2 is a non-automatic, *in vitro* Diagnostic class A sterile product intended for laboratory use.

### Product Specifications

Appearance	Clear yellow to red frozen liquid
Composition	Basal medium, phytohemagglutinin (PHA), pretested FBS, phenol red, buffered by NaHCO <sub>3</sub> , Penicillin-Streptomycin and L-Glutamine.
Storage and shelf life	Store at ≤-15 °C protected from light. Do not use this product after its expiry date. Once opened, store at +2 °C to +8 °C and use within 10 days.
Shipping conditions	Frozen (Dry Ice)
Thawing	Thaw LymphoPrime 2 Medium at refrigerator temperatures (+2 °C to +8 °C) or by swirling bottle in a +37 °C water bath. Mix gently after thawing. Note that the medium already contains L-Glutamine, antibiotics, and PHA-M.

For lot specific data (Certificate of Analysis), please refer to our website:  
<https://www.capricorn-scientific.com/en/services/certificate-of-analysis>

### Instructions for Use

Blood cell karyotyping of lymphocytes is an important tool in modern human cytogenetics to detect chromosomal abnormalities. Lymphocytes usually do not undergo subsequent cell divisions. In the presence of a mitogen (e.g. PHA), lymphocytes are stimulated to enter into mitosis. After 48 – 72 hours, a mitotic inhibitor (e.g. colcemid) is added to the culture to stop mitosis in the metaphase stage. After treatment by hypotonic solution, fixation and staining, chromosomes can be microscopically observed and evaluated for abnormalities.

#### Culturing of Peripheral Blood Lymphocytes for Chromosome Analysis:

1. Thaw LymphoPrime 2 Medium and make aliquots of 10 ml (sterile tubes).
2. Thaw the precalculated amount of LymphoPrime 2 Medium (in tubes) until room temperature is reached.
3. Transfer 0.5 ml of heparinized whole blood into a tube containing 10 ml LymphoPrime 2 Medium.
4. Incubate the culture at +37 °C, 5% CO<sub>2</sub> in an incubator for 72 hours.

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### Harvesting of Peripheral Blood Lymphocytes for Chromosome Analysis:

1. Add 0.1 – 0.2 ml of Colcemid Solution (Cat. No. COL-H) to each culture tube (at a final concentration of 0.1 µg/ml). Incubate the culture for additional 15 – 30 minutes.
2. Transfer the culture to a centrifuge tube and spin at 500 *x g* for 5 minutes.
3. Remove the supernatant and resuspend the cells in 5 – 10 ml of hypotonic 0.075 M KCl, prewarmed to +37 °C. Incubate at +37 °C for 10 – 12 minutes.
4. Spin at 500 *x g* for 5 minutes.
5. Remove the supernatant, agitate the cellular sediment and add drop-by-drop 5 – 10 ml of fresh, ice-cold fixative (3 methanol: 1 acetic acid). Leave at +4 °C for 10 minutes.
6. Repeat steps 8 and 9.
7. Spin at 500 *x g* for 5 minutes.
8. Resuspend the cell pellet in a small volume (0.5 – 1 ml) of fresh fixative, drop onto a clean slide and allow to air dry.
9. At this stage, the preparation can be stained with Orcein or Giemsa. For Giemsa staining, the most widely used method, you can use one of the common staining protocols or the protocol established in your laboratory.

### Precautions and Disclaimer

- For *in vitro* diagnostic use. The medium is not intended for therapeutic use with humans or animals.
- Application only by trained specialist personnel.
- Maintaining the sterility of the product is necessary for its use and must be strictly observed by the user.
- Do not use LymphoPrime2 medium if the packaging is damaged and thus sterility is impaired.
- Each laboratory is obliged to perform representative tests according to the valid legal regulations and in its own environment to ensure that it is suitable for this purpose before the medium can be used in routine diagnostics.
- The patient specimens are biological material and therefore safety precautions must be taken according to local regulations for working with potentially infectious material.
- Use of LymphoPrime2 medium does not guarantee the successful outcome of any prenatal diagnostic testing.
- Do not use LymphoPrime2 medium beyond the expiration date indicated on the product label.
- Frozen condition must be maintained until first use.
- Report serious incidents that have occurred in connection with this product to the manufacturer and the appropriate authorities.

### Important Note

Occasionally, the formation of calcium oxalate crystals is possible, but these have not shown any negative influence on cell growth.











### Signs and Symbols

<b>REF</b>	Catalog number
<b>LOT</b>	Batch Code

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	Storage conditions: temperature limit
	Expiration date
	Aseptic filling
	<i>In vitro</i> diagnostics
	Manufacturer
	Protect from sunlight
	Date of manufacture
	CE Marking
	See instruction manual
	Do not use if packaging is damaged

### Manufacturer



Capricorn Scientific GmbH  
 Auf der Lette 13 A  
 35085 Ebsdorfergrund  
 Germany

### Safe disposal

#### Waste treatment methods

The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in accordance with approved disposal technique. Disposal of this product, its solutions or of any by-products, shall comply with the requirements of all applicable local, regional or national/federal regulations.

#### Environmental precautions

Do not let product enter drains.

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### Help Needed?

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If you have any further questions regarding this product, please do not hesitate to contact our cell culture experts by email ([techservice@capricorn-scientific.com](mailto:techservice@capricorn-scientific.com)) or phone (+49 6424 944640).