

PL Solution-GMP Grade

FAQ

What is human Platelet Lysate?

Human Platelet Lysate ('hPL') is a human platelet-derived solution, which represents the basis of our products.

The human Platelets we use to manufacture our products are recovered from blood donations, where they are tested and admitted for use in humans.

After a few days, Platelets are not applicable for transfusion purposes anymore and usually are thrown away. That is the starting point of a recycling process: We use the idle human platelet units to produce our products.

Why should I change from FBS to your human Platelet Lysate products?

- Replacing FBS (Fetal Bovine Serum) by human Platelet Lysate allows for expansion and potential clinical-grade production of stem cells by eliminating xenogeneic risks and the transmission of bovine prions.
- Furthermore, Human Platelet Lysate contains abundant platelet-derived growth factors and cytokines, which stimulate cellular proliferation and maintain differentiation potential of human stem cells: Changing from FBS to human Platelet Lysate has the advantage that the cells proliferate faster, resulting in a greater number of cells in a shorter time.
- Our human Platelet Lysate products are standardized and safe cell culture supplements ensuring a high cell performance and reproducible results. We offer a large product portfolio in different application grades to support bench experiments as well as clinical applications.

What should I consider if I want to change from FBS to human Platelet Lysate?

- There are no restrictions if you change from FBS (Fetal Bovine Serum) to human Platelet Lysate.
- The only thing that could occur whilst the first 2 passages, is a slight downturn in cell number since cells briefly need to adapt to the changed supplement. Afterwards, you will be rewarded with faster cell proliferation, achieved with a smaller amount of human Platelet Lysate than FBS: 5% of our **PLSOLUTION** replace up to 10% FBS.

Which cell types can be cultivated with human Platelet Lysate?

- Our human Platelet Lysates support the maintenance of numerous cell types. Due to its high amount of growth factors and cytokines, human Platelet Lysate is predestined to expand Mesenchymal Stromal Cells and Dermal Fibroblasts. Furthermore, it supports the growth of Epidermal Keratinocytes and Endothelial Colony Forming Cells.

How much PLSolution should I use?

- **PLSOLUTION** shows optimal growth of MSCs at a concentration of 5% (vol./vol.).

Our experience has shown that this concentration generally achieves best results. However, some of our customers even use less than 5% (vol./vol.) of **PLSOLUTION** and are very satisfied with the cell performance.

- Nevertheless, for higher cell proliferation rates, we recommend to use 10% (vol./vol.) of **PLSOLUTION**.

Why is it necessary to add heparin with PLSolution?

- The raw platelets contain coagulation factors, including fibrinogen, to react to a bleeding by initiating a blood clot. **PLSOLUTION** retains some of the fibrinogen.

Adding heparin to the medium before adding **PLSOLUTION** prevents clotting reactions in the culture medium.

After thawing PLSolution, I observe particulate formation. What does that mean?

- Once the **PLSOLUTION**-supplemented culture medium is stored in the refrigerator at +4 to 8°C, accumulations of clotting or insoluble particles can occur. Don't worry! Particulate formation has no impact on the cell culture performance. We have measured the function and can assure that there is no effect on the results.
- If you are bothered by the accumulations, we recommend centrifuging the pure **PLSOLUTION** or filtering the complete culture medium after diluting in the basal medium, e.g. our enhanced Mesenchymal Stem Cell Medium [PLMEDIUM-KIT](#).

How long can your frozen human Platelet Lysates be stored?

- Our products are stable until the expiry date stated on the product label.
- All **PLSOLUTION** products need to be stored frozen at -20°C (or at -80°C for longer-term storage) until used.
- **PLMATRIX** is most stable when stored at +4°C until use.