# CytoPure™ XF

Human Platelet Lysate, Fibrinogen-Depleted, Xeno-Free (Research Grade)

## 1. Product description

CytoPure™ XF is a fibrinogen-depleted human platelet lysate for use as a growth supplement in mammalian cell culture, in place of fetal bovine serum. It is xeno-free: no animal-derived component is used at any stage of manufacture.

Because the product is fibrinogen-depleted, no supplemental heparin is required in culture. Intended for xeno-free research and cell therapy development workflows. Performance data for the CytoPure™ family is in CYT-TDS-078 (Technical Data Sheet).


## 2. Contents, storage and shelf life

| Catalog number | Fill volume | Bottle |
|---|---|---|
| 1909-C050 | 50 mL | 60 mL |
| 1909-C100 | 100 mL | 125 mL |
| 1909-C500 | 500 mL | 500 mL |

| | |
|---|---|
| **Storage** | Store at ≤ –20°C. –80°C recommended for storage beyond 12 months. |
| **Shelf life** | 3 years from date of manufacture when stored at ≤ –20°C. The expiration date for this lot is on the product label and on its Certificate of Analysis. |
| **Container** | Nalgene™ Square PETG media bottle with a polyethylene closure and tamper-evident seal. Inspect seal integrity before use. |

## 3. Instructions for use

### Thawing

Thaw in a 37°C water bath until no ice remains, then mix by gentle inversion. Do not thaw overnight at room temperature or at 2–8°C.

Aliquot on first thaw into single-use volumes and return the aliquots to **≤ –20°C**. CytoPure products have been evaluated through up to three freeze-thaw cycles, with less than 5% loss of total protein, minimal precipitate formation, and stable pH.

### Preparing complete medium

- Add **2–10% (v/v)** to your basal medium. 5% (v/v) is the usual starting point for primary human mesenchymal stromal cells.
- Validated in DMEM (low glucose), DMEM (high glucose), α-MEM, RPMI-1640 and DMEM/F-12. Compatible with other standard basal media.

  

- Add other supplements — L-glutamine, antibiotics, growth factors — as your protocol requires.
- Complete medium may be stored for **up to 30 days at 2–8°C**.

**No supplemental heparin** Supplemental heparin is not required. CytoPure™ XF is fibrinogen-depleted and does not form gel or fibrin clots in culture. Adding heparin is unnecessary and introduces a variable into the workflow.

### Selecting a working concentration

Add CytoPure™ to basal medium at 2–10% (v/v). For primary human mesenchymal stromal cells, 5% (v/v) is the recommended starting point and is the concentration used in the performance data published by Cytologics.

The optimal concentration depends on the cell type, the cell line, the basal medium, and the endpoint being optimized, and must be determined for each application. Titrate across the 2–10% (v/v) range before committing a workflow.

**Optimal concentration** The ideal CytoPure™ concentration depends on the cell type and culture system. Increasing the concentration beyond the optimal range may provide no additional performance and, for some cell types, may reduce proliferation or alter phenotype. Published studies report optimal hPL concentrations both below and above the range commonly used for mesenchymal stromal cells. Titrate both up and down to determine the optimal concentration for your application.

Published starting concentrations for a range of cell types, with references, are tabulated in **CYT-TDS-078**.

## 4. Appearance and what is normal

| | |
|---|---|
| **Normal appearance** | A clear to slightly opalescent amber liquid. Color may vary between lots due to the donor pool and is not indicative of product performance. |
| **Particulates** | Particulates may be visible after thawing or during storage at 2–8°C. This is normal and does not affect product performance. Particulates may be dispersed by centrifugation at 2000 × g for 8 minutes or brief incubation at 37°C. Do not filter the undiluted product. If filtration is desired, dilute CytoPure™ XF into complete medium first, then filter the complete medium. |
| **When to stop and call** | A compromised closure or tamper-evident seal, visible gel or fibrin strands, or cloudiness in complete medium that persists after 30 minutes at 37°C. See CYT-TRB-012 (Troubleshooting Guide). |

## 5. Composition and origin

- Manufactured in the United States from human platelet units collected at FDA-licensed and AABB-accredited U.S. blood centers, from donor pools typically greater than 300 individuals.
- **Xeno-free** — no animal-derived component is used at any stage of manufacture. Heparin is not used.
- Every lot is released against the specification published in **CYT-QTS-031**, with lot-specific results on the accompanying Certificate of Analysis.

## 6. Precautions

**Human-origin material** This product is of human origin. As with any such product, no testing regimen can entirely exclude the presence of infectious agents. Handle as potentially infectious material using Biosafety Level 2 practices. Donor screening and testing are described in CYT-VSD-009; hazard and handling information is in the Safety Data Sheet for this product.

## Related documentation

This document is part of the CytoPure™ technical documentation library. Refer to the following companion documents:

- **CYT-TDS-078** Technical Data Sheet — CytoPure™ Human Platelet Lysate
- **CYT-QTS-031** Quality and Testing Standards — CytoPure™ Human Platelet Lysate
- **CYT-TRB-012** Troubleshooting Guide — CytoPure™ Human Platelet Lysate
- **CYT-TRG-003** Transition Guide — Fetal Bovine Serum to CytoPure™
- **CYT-VSD-009** Viral Safety and Donor Qualification Statement
- **CYT-TSE-002** TSE/BSE Risk Mitigation Statement
- **CYT-COO-016** Certificate of Origin — CytoPure™ Human Platelet Lysate

**IMPORTANT** For research use only. Not for use in diagnostic or therapeutic procedures. Not for human or animal use. This product contains human-derived material and must be handled as potentially infectious; observe universal precautions and handle at Biosafety Level 2 or higher.

**Cytologics, Inc.** • +1 (866) 298-6077 • info@cytologicsbio.com • cytologicsbio.com