

PRP Low-Leaching Separation Gel

Cat. No.: L1520192 | Pack size: 500 g | Storage: Room temperature; protect from light; desiccated

Overview

PRP Low-Leaching Separation Gel is a low-extraction separation gel used for the isolation and preparation of platelet-rich plasma (PRP) rich in growth factors. It protects growth-factor activity in plasma and can be combined with anticoagulants to prepare PRP vacuum blood collection tubes.

The gel provides efficient, clean, and stable separation for PRP preparation workflows used in research related to tissue repair, regeneration, and related sample-processing applications.

Key Features

- Low-extraction properties to minimize contamination of PRP by gel-derived substances
- Aseptic production with pyrogen-free process control
- Excellent low-temperature resistance after frozen blood-sample centrifugation workflows
- No tube-climbing residue after centrifugation, reducing sampling and needle-blockage risks
- Yellow transparent colloid with good thixotropy and isolation effect

Contents & Storage

Cat. No.	Component	Size	Storage
L1520192-500g	PRP Low-Leaching Separation Gel	500 g	RT; protect from light; desiccated

Materials Required But Not Supplied

Item	Recommended Specification	Purpose
Gel filling machine	Compatible with target tube format	Gel dispensing
Test tubes	e.g., 16 mm tubes or validated PRP tubes	Tube preparation
Anticoagulant	ACD or sodium citrate as validated	PRP tube preparation
Centrifuge	RCF 1200-2500 x g capability	Gel leveling and PRP separation
Irradiation sterilization	Validated facility/process	Tube sterilization

Protocol

Product Properties

Item	Specification / Description
Main ingredients	High-molecular polymer, silicon dioxide, etc.
Properties	Yellow transparent colloid with good thixotropy and isolation effect; physiologically inert and does not react with blood components or anticoagulants
Specific gravity	1.065-1.070 g/cm ³
Viscosity	(15-20)×10 ⁴ mPa·s

Instructions for Use

1. Gel filling: use a gel filling machine to add 0.8-1.0 g gel per tube. The thickness of inverted gel in the tube is generally 4-5 mm.
2. Auxiliary gel filling: maximum temperature limit is 80 °C. If heating is needed, use water bath or suitable heating method at 60-70 °C until the colloid temperature is uniform for easier operation.
3. Blood collection tube preparation: after gel filling, let stand for more than 24 h before centrifugation. First centrifuge at RCF 1200-1500 x g for 3-5 min to remove residual bubbles; then centrifuge at RCF 1800-2000 x g for 3-5 min to flatten the gel surface. After centrifugation, let stand for 48 h until gel structure is stable. Add anticoagulant, pump vacuum, and perform irradiation sterilization within 24 h.
4. PRP separation: after sampling, centrifuge at RCF 2000-2500 x g for 8-10 min. Collect plasma approximately 1 mL above the gel layer as platelet-rich plasma rich in growth factors.
5. Irradiation/heating: recommended maximum irradiation dose is no more than 25 kGy. If heating is required, recommended temperature is no more than 60 °C, and short-term temperature no more than 80 °C. Yellowing after heating is a normal reducing-agent reaction and does not affect performance.

Storage & Handling

Store sealed, light-proof, and moisture-proof at room temperature. Avoid direct sunlight and humid environments. Product shelf life is 36 months under recommended conditions.

Safety & Precautions

1. Recommended operating temperature range is -20 to +80 °C. Viscosity varies with ambient temperature; if ambient temperature is below 15 °C, water-bath heating to 60-70 °C is recommended to reduce viscosity.
2. If stringing occurs during room-temperature gel filling, increase filling temperature or use vibration to break gel strands.
3. Avoid stirring during transfer and filling to prevent air inclusion that may affect separation.
4. Before replacing gels from different manufacturers or reusing exposed hoppers, thoroughly clean hopper and feed tube to prevent cross-contamination.

Quality Control

QC Item	Method	Acceptable Range
Appearance	Visual inspection	No leakage, abnormal precipitation, or container damage on receipt
Use performance	Application-specific test	Meets laboratory acceptance criteria under validated conditions
Storage condition	Label and storage check	Stored according to label and this instruction document

Troubleshooting

Issue	Possible Causes	Corrective Action
Difficult gel filling	Low ambient temperature and high viscosity	Heat gel to 60-70 °C in water bath before filling
Stringing during filling	Gel strand formation at room temperature	Increase filling temperature or vibrate to break strands
Gel residue or poor layer	Air inclusion or improper centrifugation	Avoid stirring, centrifuge as recommended, and allow stabilization time

Recommended Applications

PRP vacuum blood collection tube preparation · PRP separation · platelet-rich plasma research sample processing

Contact & Global Offices

Whether you have a technical question, need help with a quotation, or want to inquire about an order, our regional teams are ready to assist. Please contact the office for your region; for general inquiries, the North American office is the corporate primary.

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Limitations & Disclaimer

For Research Use Only (RUO). Not for use in human or animal diagnostics, therapeutics, or in vivo applications. Not for food, cosmetic, or household use.

This product is not a CE-marked in vitro diagnostic device under IVDR (EU) 2017/746 and is not an FDA-cleared device under 21 CFR. Use is restricted to verified businesses, institutions, and qualified professionals for research and development purposes.

Where any product component is classified as hazardous under CLP (EC) 1272/2008 or OSHA HCS (29 CFR 1910.1200), the product Safety Data Sheet (SDS) takes precedence over this document for handling, storage, and disposal information.

Performance depends on sample type, sample condition, handling, and operator technique. Users are responsible for validating the product for their specific application.

Aladdin product labels, SDS, COA, and approved specifications take precedence over this document. If product formulation, label, SDS, storage conditions, pack size, or quality specifications change, this document would be reviewed and reissued.