

33% Percoll Solution

Abdullah Lab, IMMEI, University Hospital Bonn

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Protocol ID: BUF-PERC-33-v1.0

Version: v1.0

Author: Dillon Corvino

Purpose

This buffer is used as a 33% Percoll solution for density-based enrichment of leukocytes from digested liver. It separates hepatocytes (floating) from leukocyte- and erythrocyte-enriched pellets during centrifugation.

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Linked protocols

This buffer is used in:

- Mouse Liver Dissociation to Single-Cell Suspension – LIV-001 (v1.0)

Composition (per 10 mL 33% Percoll)

Based on the original SOP:

Component	Stock	Volume for 10 mL	Approx. final composition	Notes
Percoll (sterile)	100%	3.33 mL	33% (v/v)	Undiluted stock
PBS 1×	—	6.29 mL	—	Isotonic medium
PBS 10×	10×	370.37 µL	Adjusts osmolarity	Added last

Preparation

1. Equilibrate **Percoll stock** to **room temperature** before preparation.
2. For each **10 mL** of 33% Percoll:
 1. In a sterile 15 mL or 50 mL tube, add **3.33 mL** Percoll (sterile).
 2. Add **6.29 mL** PBS 1×.
 3. Add **370.37 µL** PBS 10×.
 4. Mix gently by inversion until homogeneous.
3. If preparing multiple aliquots (e.g. **10 mL per liver**), scale volumes accordingly.
4. Aliquot **10 mL** per labeled 15 mL tube for each liver sample.
5. Label tubes with:
 - “33% Percoll”
 - Date of preparation
 - Version (BUF-PERC-33-v1.0)

i Note

Maintain sterility by preparing the solution in a biosafety cabinet or sterile environment if it will contact viable cells used for culture or sensitive downstream applications.

Storage and stability

- **Working 33% Percoll solution** is generally prepared **fresh on the day of use**.
- Short-term storage (same day) at **room temperature** is acceptable.
- Do not freeze 33% Percoll; discard any unused working solution at the end of the day.
- Stock Percoll (100%) should be stored according to manufacturer's instructions (typically at room temperature), protected from contamination.

Reagent details

Component	Supplier	Cat#	Notes
Percoll (100%)	[TBD]	[TBD]	Sterile Percoll; density gradient medium
PBS 1×	[TBD]	[TBD]	Sterile, $\text{Ca}^{2+}/\text{Mg}^{2+}$ -free recommended
PBS 10×	[TBD]	[TBD]	Sterile concentrate; used to adjust osmolarity

Safety (brief)

- Percoll solutions should be handled with gloves and standard lab PPE.
- Dispose of Percoll-containing waste according to local chemical and biohazard regulations when mixed with biological material.
- Avoid ingestion and contact with eyes; consult the manufacturer's safety data sheet (SDS) for details.

Version history

Version	Date	Author	Change summary
v1.0	2025-11-20	Dillon Corvino	Initial buffer definition