

# TwinSpin Protocol

## TwinSpin® - Specification

	TwinSpin - Leuko	TwinSpin - PBMC	TwinSpin - PBMC 24+	TwinSpin - PLT
Order No.	45-91006-10	45-92006-10	45-93006-10	45-94006-10
	6 ml, pre-filled	6 ml, pre-filled	6 ml, pre-filled	6 ml, pre-filled

## Product Description

The TwinSpin® centrifugation tubes pre-filled with PBMC Spin Medium® can be used for an optimal separation peripheral blood mononuclear cells (PBMC) from whole blood and bone marrow. The TwinSpin is comprised of a standard 15 and an inner tube. The inner tube has an open bottom which is submerged in the Density Gradient Medium (DGM). Anti-coagulated blood or bone marrow can simply be pipetted directly from the blood sampling tube into the TwinSpin. The sample lays on top of the DGM inside the inner tube. During centrifugation, Leukocytes, lymphocytes and PBMCs are separated from unwanted erythrocytes and granulocytes, depending on the density gradient used (Leuko Spin, PBMC Spin, PBMC 24+ or PLT Spin Medium) on the basis of their density. The result is an inter-phase enriched with target cells above the DGM. The erythrocytes will sediment through the DGM out of the inner tube at the bottom of the outer tube. When separation is complete, just remove the inner tube. The elastic cap functions as valve. By pushing the cap down, the collection tube becomes a pipette. The contents can be collected drop by drop.

## 1 Directions for the use of the TwinSpin® Tube

- 1.1 Check that (diluted blood) sample, TwinSpin and centrifuge are all at room temperature.
- 1.2 Make sure that the inner tube is partially filled and submersed in the DGM. If not, do a rotating movement of the TwinSpin device by maintaining the vertical position.
- 1.3 Remove and discard the transport stopper

## 2 Add Sample Material

- 2.1 Pipette the sample material on top of the DGM in the inner tube by holding the TwinSpin in a inclined position at 45° angle and let the sample run down the inside of the dropper.
- 2.2 Close the TwinSpin with the elastic cap by pushing the cap firmly into the opening.  
Note: To reduce platelet contamination you can add pluriSpin® PLT Depletion (Order No. 19-00002-31)

## 3 Spin

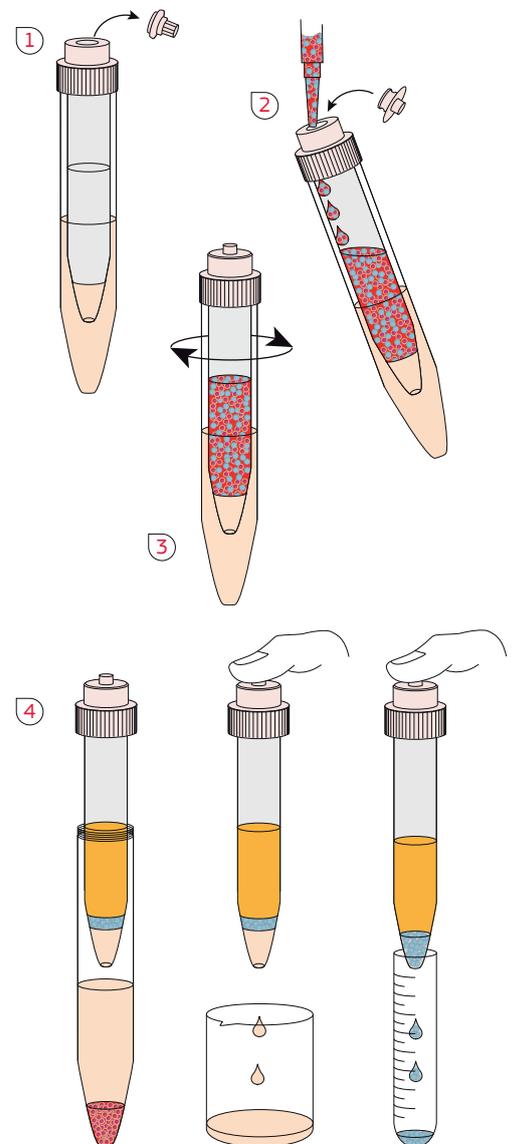
- 3.1 Centrifuge for 20 minutes at 800 x g at room temperature with in a swing bucket rotor, brake off. Using blood older than 4 hours centrifuge for 30 minutes at 1000g.

## 4 Collect

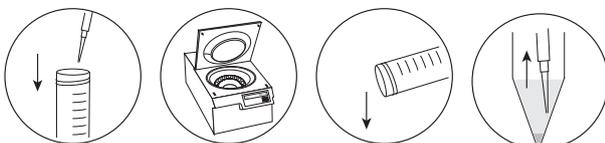
- 4.1 Unscrew and remove the inner separation tube.
- 4.2 Collect cells in the opaque layer in a fresh tube by pushing the elastic cup down.

## 5 Wash (if necessary)

- 5.1 Fill the reaction tube with wash buffer.
- 5.2 Spin down cells 10 minutes with 300 x g (no or small brake) at 4°C.
- 5.3 Pour out supernatant, leave the reaction tube on the table for 20 sec.  
Wash buffer excess will run down from the tube wall and collect at the bottom.
- 5.4 Aspirate most of the liquid above the pellet. The liquid will look foggy, these are mostly platelets – aspiration will improve washing result.
- 5.5 Reconstitute pellet with 1 ml of wash buffer by carefully pipetting.
- 5.6 Repeat steps 5.1 to 5.4.
- 5.7 Reconstitute pellet at your desired volume.



● Density gradient medium (DGM)
 ● RBCs and unwanted cells
 ● Plasma
 ● Desired cells



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