DEPLETE RBCs WITHOUT LYSIS

EasySep™ RBC Depletion Reagent

In many laboratories, the standard protocols for obtaining leukocytes from human whole blood samples involve density gradient centrifugation or lysing red blood cells (RBCs) with ammonium chloride. However, these methods can be time consuming, difficult to automate, and can leave residual cell debris that may alter cellular function or interfere with downstream assays.

The EasySep™ RBC Depletion Reagent immunomagnetically depletes RBCs without lysis, washes, or centrifugation steps. The resulting highly purified leukocytes are untouched and ready for downstream applications, including cell culture, RNA isolation, or enzyme activity testing. The EasySep™ RBC Depletion Reagent can also be used on cord blood, bone marrow, buffy coats, and leukapheresis products in order to meet all of your laboratory needs.

Why Use EasySep™ RBC Depletion Reagent?

GENTLE. Avoid lysis buffer, centrifugation, or additional washing steps.

RELIABLE. Deplete 99.9% of RBCs immunomagnetically without leaving additional debris that may interfere with downstream assays.

FAST. Obtain leukocytes in as little as 9 minutes.

CONVENIENT. Automate blood sample processing with RoboSep™ instruments to increase laboratory throughput.

EasySep™ RBC Depletion Reagent

PRODUCT NAME	VOLUME PROCESSED	CATALOG #
EasySep™ RBC Depletion Reagent	100 mL	18170
EasySep™ RBC Depletion Reagent for RoboSep™	100 mL	18170RF

To learn more, visit **www.stemcell.com/RBCdepletion**.

*Includes EasySep™ RBC Depletion Reagent formatted for use on the RoboSep™-S, RoboSep™ buffer and RoboSep™ filter tips.

Cell Isolation Platforms

Manual Sample Processing with EasySep™ Magnets

Choose the right EasySep™ magnet at **www.stemcell.com/magnets**.

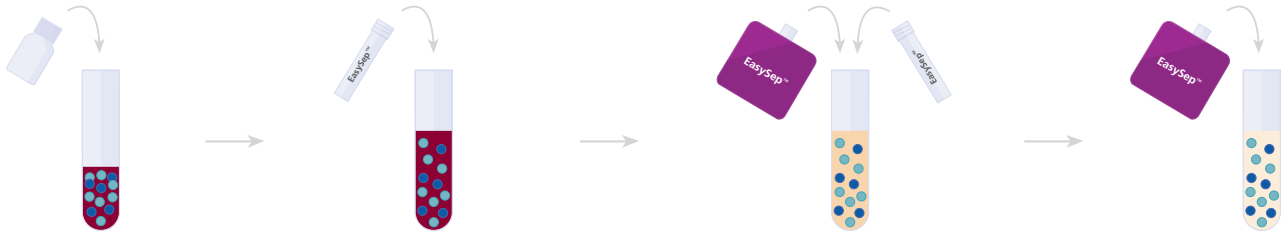
Automated Sample Processing with RoboSep™ Instruments

For more information on how to automate your blood sample processing, visit **www.RoboSep.com**.

How Does It Work?

Typical EasySep™ RBC Depletion Reagent Protocol

1. Add EDTA to sample and dilute with PBS + 2% FBS.
2. Add EasySep™ RBC Depletion Reagent and mix well.
3. Place sample into magnet and incubate for 5 minutes*.
4. Pour or pipette off sample into a new tube. Add EasySep™ RBC Depletion Reagent and mix well.
5. Place the tube in magnet and incubate for 5 minutes*.
6. Pour or pipette off sample into a new tube. Cells are now ready for downstream applications.



*Times will vary depending on the starting sample and EasySep™ magnet platform that is used.

To learn more, visit **www.stemcell.com/RBCdepletion**.

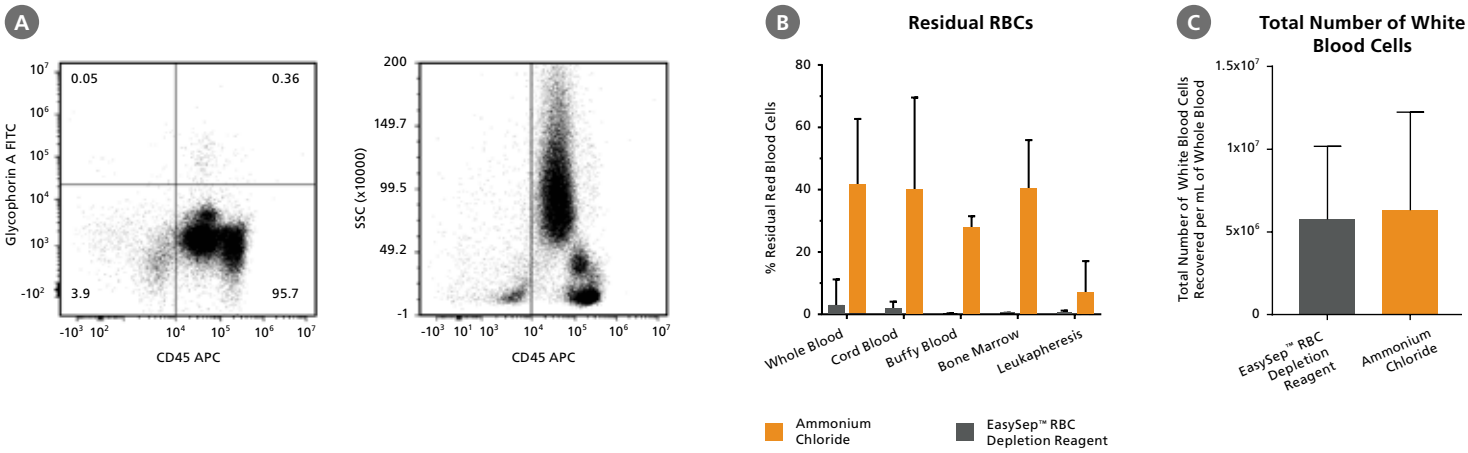


Figure 1. EasySep™ RBC Depletion Reagent Provides Superior RBC Depletion Compared to Ammonium Chloride Lysis

Different types of RBC-containing samples from normal healthy donors were processed to remove RBCs by using either ammonium chloride (NH_4Cl) lysis or immunomagnetic depletion with EasySep™ RBC Depletion Reagent. After RBC removal, samples were stained with fluorochrome-conjugated anti-CD45 and anti-Glycophorin A antibodies and analyzed by flow cytometry. Residual RBCs were identified as Glycophorin $A^+/CD45^-$ events. (A) Typical flow cytometry plots to assess residual RBCs of human whole blood samples following RBC removal with EasySep™ RBC Depletion Reagent (ungated). The typical percentage of residual RBCs is 2 ± 3 % (mean ± SD; n = 31). In the example above, residual RBC content is 0.05%. (B) The percentages of residual RBCs in various samples following use of EasySep™ RBC Depletion Reagent was significantly lower compared to samples treated with ammonium chloride (mean ± SD; n = 31). (C) Both, RBC lysis with ammonium chloride and RBC removal using EasySep™ RBC Depletion Reagent resulted in an equivalent total number of white blood cells recovered from whole blood samples (mean ± SD; n = 37).