RBC Lysis Buffer

Product No: K.BUF-9101-100ml

RBC Lysis Buffer is a ready-to-use buffer. This allows lysis of red blood cells in human whole blood efficiently. The buffer contains ammonium chloride, which enable red blood cells to lyse with minimal effect on lymphocytes. Nucleated red blood cells are not effectively lysed with ammonium chloride.

Storage and Stability

Store the product at room temperature (21 °C – 25 °C). The product expiration date is printed on the label.

Materials Supplied by Users

- ✓ Centrifuge at 4 °C, 400 × g,
- ✓ 50 mL centrifuge tubes
- ✓ Orbital shaker (100 – 110 rpm)

Protocol: RBC lysis for fresh whole blood

Lysis	1. Transfer 20 mL RBC Lysis Buffer into a new 50 mL centrifuge tube. 2. Add 1 mL whole blood into the tube and mix by pipetting up and down with serological pipette. 3. Place the tube in orbital shaker, incubate for 10 minutes, room temperature with shaking at 100 – 110 rpm. 4. Centrifuge for 5 minutes at 400 x g, 4 °C. Discard the supernatant.
Elution	5. Resuspend the pellet with an appropriate buffer for downstream application. ***Note**: Repeat lysis step can remove more red blood cells. The disproportional distribution of nucleated RBCs in blood samples might lead to different degree of red tint observed in white cell pellet.*

Technical Data

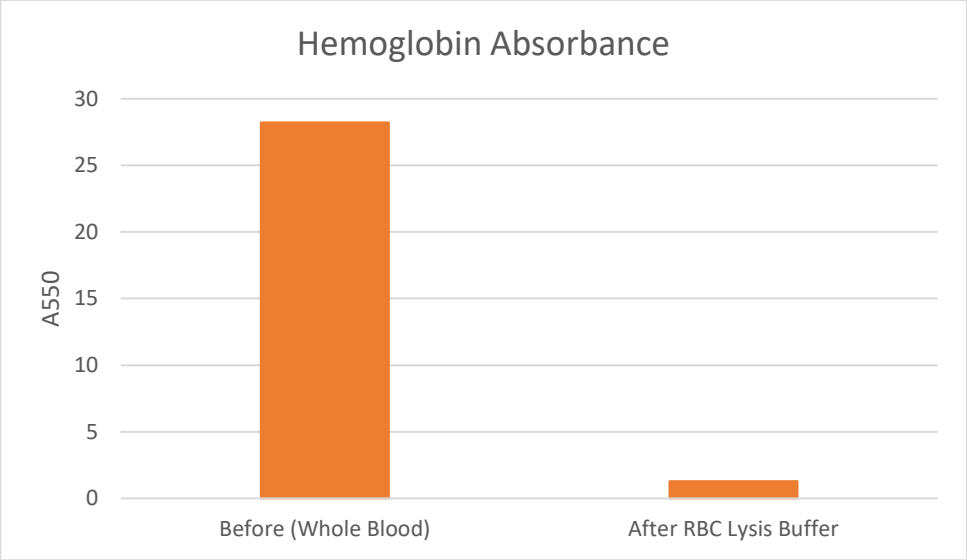

Figure 1: Absorbance of cell suspension after removal of red blood cells.

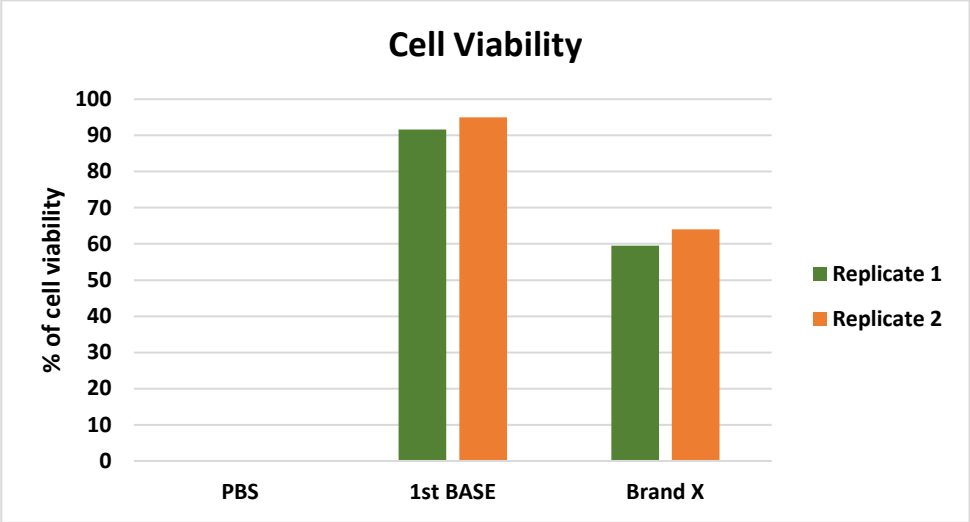

Figure 2: Percentage of cell viability after removal of red blood cells.

1 mL human whole blood was added to 20 mL Red Blood Cell (RBC) Lysis buffer and incubated for 10 minutes at room temperature. After incubation, cells were centrifuged and resuspended in 5 mL of PBS for analysis. Absorbance (550 nm) was measured by Spectrophotometer (**Figure 1**). Removal of red blood cells results in reduced absorbance in RBC Lysis Buffer compared to whole blood sample. 1 mL of cell suspension was mixed with 0.1 mL of 0.4% Trypan Blue. The cell viability was counted under (10 x 10 magnification) microscope (**Figure 2**).

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