Sample density separation liquid

Article number: KF-H0055/KF-H0056

specification: 200ML

【Intended use】Through density separation, it is used to separate different components in a sample to facilitate further analysis of the sample.

【Testing principle】Peripheral blood mononuclear cells, including lymphocytes and monocytes, have a density of 1.075g/ml~1.090g/; granulocytes and erythrocytes have a higher density of 1.090g/ml; and platelets have a density of 1.030g/ml~1.035g/ml. Density gradient centrifugation causes cells of a certain density to distribute according to their corresponding density gradient, thereby separating various blood cells.

【Main components】This product is composed of pancreatin, sodium hydroxide, hydroxyethyl starch, potassium dihydrogen phosphate, disodium hydrogen phosphate, and water for injection.

【Storage conditions and shelf life】Store at room temperature (10° C－30° C) away from light, shelf life 2 years.

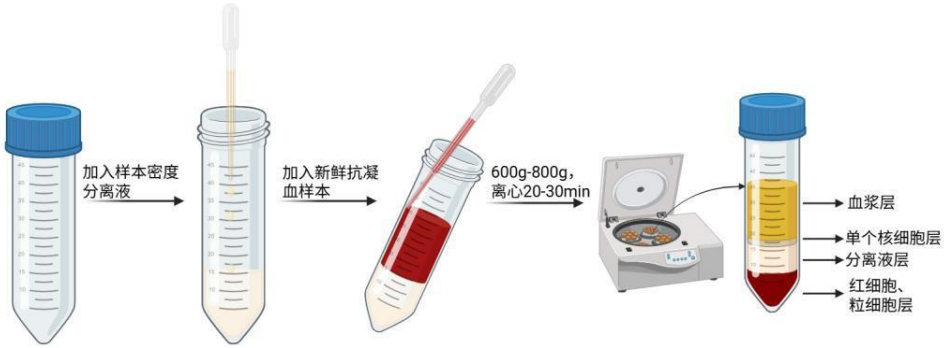
【Applicable instrument】Horizontal rotor centrifuge

【Sample requirements】This separation liquid requires fresh anticoagulated blood, and sterile operation must be ensured during blood collection, while avoiding freezing and refrigeration during storage, processing, and transportation.

【Inspection method】The entire process of samples, reagents, and the testing environment must be conducted under the condition of 20±2℃.

✧General detection method:

Take 2 ml of fresh anticoagulated blood, mix it with saline at a 2:1 ratio, and carefully add it to the surface of3 ml of cell separation solution. Centrifuge at 600g-800g for 20-30 minutes. At this time, the centrifuge tube separate into four layers from top to bottom: the first layer is the plasma layer (containing platelets); the second layer is the ring-shaped milky white mononuclear cell layer (containing lymphocytes and); the third layer is the transparent separation solution layer; and the fourth layer is the red blood cell and granulocyte layer. Place the collected mononuclear cells into a test tube containing 4- ml of saline, mix thoroughly, centrifuge at 400g for 20 minutes, and repeat the cell washing once to obtain the required cells.



分离图例

Based on the different usage needs of customers, Kefan Biotech has confirmed and recommended the following conditions for reference:

Case 1: Blood sample volume 5ml, the experimental method is as follows:

1. Take a 15ml centrifuge tube and add 5ml of sample density separation medium.

2. Carefully draw up the blood sample with a pipette and slowly add it to the surface of the separation liquid.

3. Centrifuge at 600g for 20 minutes using a high-speed refrigerated centrifuge (Manufacturer: Thermo, Model: Sorvall ST 4R), with acceleration 1, deceleration 0, and centrifugation temperature 20° C.

4. Carefully aspirate the single cell layer into a new 15ml centrifuge tube, add 2 volumes of wash buffer and mix, centrifuge at 40g for 20 min with a ramp-up of 5 and ramp-down of 5, then discard the supernatant.

5. Add 5ml~10ml of cleaning solution and mix well, centrifuge at 400g for 20min,

acceleration 5, 5, discard the supernatant, then resuspend the target cells in 0.5ml of the corresponding liquid required for subsequent experiments.

Case 2: Blood sample volume 20ml, the experimental method is as follows:

1.Take a 50ml centrifuge tube and add 20ml of sample density separation liquid.

2.Carefully draw up the blood sample with a pipette and slowly add it to the surface of the separation liquid.

3.Centrifuge at 600g for 30 minutes using a high-speed refrigerated centrifuge (Manufacturer: Thermo, Model: Sorvall ST 4R), with a ramp-up speed of 1, a ramp-down speed of 0, and a centrifugation temperature of 20° C.

4.Carefully aspirate the single cell layer into a new 50ml centrifuge tube, add 2 volumes of wash buffer and mix, centrifuge at 40g for 20 min, ramp up at 5, ramp down at 5, and discard the supernatant.

5.Add 20ml~30ml of washing buffer and mix well, 400g, centrifuge for 20min, acceleration 5 deceleration 5, discard the supernatant, then resuspend the cells in the corresponding volume of liquid required for subsequent experiments using 0.5ml.

Note: If the red blood cell proportion is too high or the blood is generally viscous, blood dilution (anticoagulant:diluent = 2:) can be performed first, followed by blood separation.

【Interpretation of test results】The cell separation performance of this product may vary depending on the sample source, storage conditions, sample quality, operator

experience, and centrifuge parameters.

【Limitations of the testing method】The test requires that at normal atmospheric pressure, the sample, separation liquid, and separation environment temperature be 20℃±2℃.

【Product performance indicators】

Properties	
pale yellow clear liquid	
pH value	
6.5~7.5	
osmolar concentration	
280mOsmol/kg~340mOsmol/kg	
Density	
1.076g/ml~1.078g/ml	
Bacterial endotoxin	
should be less than 0.25 EU/ml	
Sterile	
shall conform to regulations	
Mycoplasma	
shall conform to regulations	

【Precautions】

1.Please read the instructions carefully before using this product.

2.Please use within the validity period.

3.Store this product at room temperature (10° C~30° C) and away from light, with a shelf life of 2 years. Once opened sterile conditions, the shelf life is 2 years.

4.The test requires that at normal atmospheric pressure, the sample, separation liquid, and separation environment temperature be 20℃±2℃, otherwise it will affect product quality.

5.This product must not be sterilized with ultraviolet light; do not use if turbidity, precipitation, flocculent matter, damaged packaging, or leakage occurs.

6.Waste generated during the use of this product should be uniformly destroyed and disposed of along with cell samples in accordance with relevant laboratory regulations.

7.This product contains no harmful substances to the human body. If it comes into contact with the skin, simply rinse with clean water. If it gets into the eyes, thoroughly with plenty of clean water. If discomfort persists, seek medical attention promptly.