### 용 | Separation Tubes

### BioSci™ Lymphocyte Separation Tube for Human Peripheral Blood

NMPA NO.20160168

### [Intended Use]

It is used for separating lymphocytes from human peripheral anticoagulant blood. Each 50 mL tube can be used for separating 15-20 mL of whole blood, and each 15 mL tube can be used for separating 3-6 mL of whole blood.

### [ Product Features ]

### 1. Convenient

- The separation tube is with a pre-filled separation medium, ready to use.
- Anticoagulated blood may be directly poured into the tube without dilution.

- The separation medium is of medical grade, with low endotoxin.
- The tube body is made of polypropylene, the sieve plate in the tube is of medical grade, and both are non-toxic.

### 3. Excellent separation Performance

- Lavers are obvious and strips are clear.
- It has high purity and high yield.

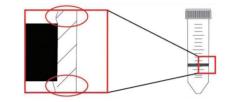
### [ Device Technique ]

A polyethylene sieve plate with a large sieve size is fixed in the centrifugal tube, and the whole blood may be directly poured into the separation tube without being mixed with the separation medium below the sieve plate in advance, thus effectively reducing the recontamination rate of erythrocytes and granulocytes. The separated cells may be poured out directly.

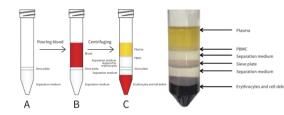


BioSci™ Lymphocyte Separation Tube for Human Peripheral Blood

(50 mL/vial × 25 vials)



Partially Enlarged Diagram of Lymphocyte Separation Tube for Human Peripheral Blood



Operation Flow Chart of Lymphocyte Separation Tube for Human Peripheral

Separation Performance from Human peripheral blood with Lymphocyte Separation Tube for Human Peripheral Blood

### **BioSci™ Human Lymphocyte Separation Kit**

### [Intended Use]

The kit consists of 4 bottles of BioSci™ Density Reagent Separation Medium (Type A) (Cat# 7825121) or BioSci™ Human Lymphocyte Separation Medium (Cat# 7125121) and 60 BioSci™ Cell Separation Tubes (50 mL). It is used to separate lymphocytes from anticoagulated human peripheral whole blood by density gradient sedimentation method according to the difference in density between cells, with the help of density reagent and centrifugation.

### [ Product Features ]

### 1. Convenient

• It is quick and convenient.

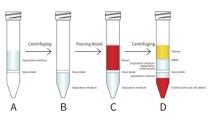
- The sample density separation medium is sterile and low toxic.
- The separation tube is made of a medical-grade material, and free of cytotoxicity and tissue toxicity.

### 3. Execllent Separation Performance

- It sustains high cell viability, high purity and high yield.
- Has been found to meet the requirements of ISO 13485:2016.
- The clarity, visible foreign matters and insoluble particles are better than the national standard.



BioSci™ Human Lymphocyte Separation Kit (60 tests/kit)



Operation Flow Chart of Human Lymphocyte Separation Kit

### [Packing Specification]

| 7000001 Lymphopide Concretio |                                   |                       |
|------------------------------|-----------------------------------|-----------------------|
| 7922021 Lymphocyte Separatio | n Tube for Human Peripheral Blood | 50 mL/vial × 25 vials |
| 7922112 Lymphocyte Separatio | n Tube for Human Peripheral Blood | 15 mL/vial × 20 vials |
| 7825121 7125121 Human Lym    | phocyte Separation Kit            | 60 tests/Kit          |

## **Separation Media**

### BioSci™ Human Lymphocyte Separation Medium

### [Intended use]

It is suitable for separating human peripheral blood lymphocytes as well as separating mononuclear cells of most mammals.

### [ Product Features ]

### 1. Convenient

• The operation is simple.

### 2. Safe

• It is sterile and has low toxicity.

### 3. Excellent Separation Performance

- It sustains high cell viability, high purity and high yield.
- · Layers are obvious, strips are clear, and particles are better than the national standard.

### **BioSci™ Density Reagent Separation Medium (Type A)**

NMPA NO.20170144

### [Intended Use]

It is used for separating different components of the sample by density separation to further analyze the sample.

### [ Product Features ]

### 1. Convenient

• The operation is simple.

national standard.

### 2. Safe

• It is sterile and has low toxicity.

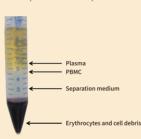
### 3. Excellent Separation Performance

- It sustains high cell viability, high yield and high purity.
- The clarity, visible foreign matters and insoluble particles are better than the

# • Has been found to meet the requirements of ISO 13485:2016.



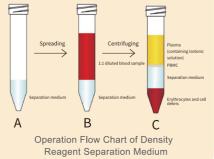
BioSci™ Human Lymphocyte Separation Medium (100 mL/bottle)



Separation Performance from Human Peripheral Blood with Lymphocyte Separation Medium

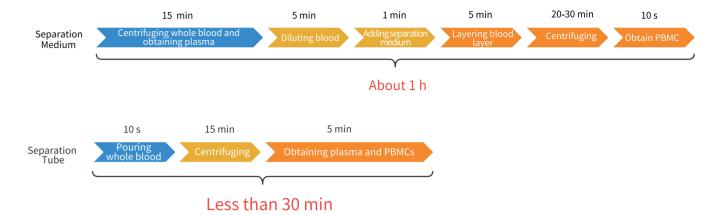


BioSci™ Density Reagent Separation Medium (Type A) (250 mL/bottle)

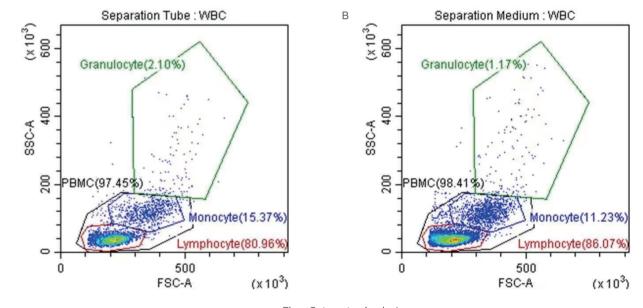


## Comparison between Separation Tube and Separation Medium

### [ Procedures 1



### [ Separation Performance ]



Flow Cytometry Analysis

### [Comparison of Characteristics between Separation Medium and Separation Tube]



### **BioSci™ Mouse Lymphocyte Separation Medium**

### [Intended Use ]

It is used for separating lymphocytes from mouse or rat spleens, separating lymphocytes from mouse, rat or rabbit blood, and separating mouse bone marrow.



BioSci™ Mouse Lymphocyte Separation Medium (100 mL/bottle)

### [ Product Features ]

- 1. Convenient
- It has simple operation.

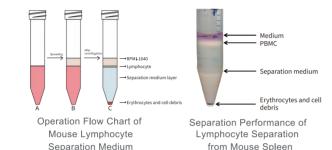
• It has complete chemical inertness and no biotoxicity.

### 3. Excellent Separation Performance

• It sustains high cell viability, high purity and high yield.

### 4 Relevant patent

•Patent No.: ZL 2006 1 0063555.6.



### BioSci™ Universal Cell Separation Medium

### [Intended Use ]

It is used for separating cells with specific density from single-cell suspension.

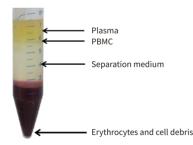
### [ Product Features ]

- It is convenient, and ready to use after being mixed.
- •It can be adjusted to have any density so as to separate animal cells.

• Its composition has complete chemical inertness and no biotoxicity.



BioSci™ Universal Cell Separation Medium (1 Kit)



Performance of mononuclear cell separation from HumanPeripheral Blood with Universal cell separation medium

### [ Packing Specification ]

| Cat.No.         | Product Name                                      | Specification               |
|-----------------|---|-----------------------------|
| 7912011 7912021 | Density Reagent Separation Medium (Type A,Type B) | 250 mL/bottle               |
| 7111011 7111012 | Human Lymphocyte Separation Medium                | 100 mL/bottle,250 mL/bottle |
| 7211011 7111012 | Mouse Lymphocyte Separation Medium                | 100 mL/bottle,250 mL/bottle |
| 7001011         | Universal Cell Separation Medium                  | 1Kit                        |
|                 |   |                             |

## **DAKEWE**

## **⚠** Instructions

### [Packing Specification]

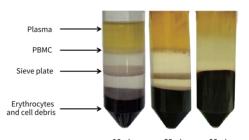
| Cat.No.         | Product Name  | Specification                |
|-----------------|---|------------------------------|
| 7922021         | Lymphocyte Separation Tube for Human Peripheral Blood | 50 mL/vial×25 vials          |
| 7922112         | Lymphocyte Separation Tube for Human Peripheral Blood | 15 mL/vial×20 vials          |
| 7825121 7125121 | Human Lymphocyte Separation Kit                       | 60 tests/Kit                 |
| 7912011 7912021 | Density Reagent Separation Medium (Type A, Type B)    | 250 mL/bottle                |
| 7111011 7111012 | Human Lymphocyte Separation Medium                    | 100 mL/bottle, 250 mL/bottle |
| 7211011 7211012 | Mouse Lymphocyte Separation Medium                    | 100 mL/bottle, 250 mL/bottle |
| 7511011         | Monkey Lymphocyte Separation Medium                   | 100 mL/bottle                |
| 7411011         | Pig Lymphocyte Separation Medium                      | 100 mL/bottle                |
| 7001011         | Universal Cell Separation Medium                      | 1Kit                         |
| 7131011         | Erythrocyte Sedimentation Solution                    | 100 mL/bottle                |
| 7061011         | Nylon Net 9x9cm                                       | 25 page/case                 |
|                 |   |                              |

### [Experiment Materials]

- 1. Anticoagulated fresh blood should be stored at room temperature after collection for no more than 2 h. It is not recommended to store it at a low temperature for a long time. Otherwise, the separation performance may be affected and more erythrocytes may be retained in the separated cells. 2. If the collected peripheral blood is left for too long, the centrifugation time should be appropriately extended to enhance the separation effect.
- 3. If refrigerated peripheral blood is used, it needs to be equilibrated to room temperature, and the centrifugation time may be appropriately extended (e.g. centrifugation for 30 min).
- 4. With a spleen of a 4-8 weeks old BalB/C mouse as the test material, 2\*10<sup>7</sup> -2\*10<sup>8</sup> cells may be separated from the spleen with the Mouse 1×Lymphocyte Separation

### [Experiment Procedures 1

- 1. If a 15 mL separation tube is used, ≥ 3 mL anticoagulated peripheral whole blood should be added into the tube, but ≤ 6 mL is recommended. If a 50 mL separation tube is used, ≥ 15 mL anticoagulated peripheral whole blood should be added into the tube. but ≤ 25 mL is recommended. If the whole blood is insufficient, it is not recommended to use separation tubes. In addition, If too much whole blood is added, the separation performance may be affected. According to practical experience, an obvious PBMC layer is obtained by adding 15 mL and 25 mL of peripheral blood into a 50 mL separation tube; however, excessive erythrocytes and a non-obvious PBMC layer are obtained by adding 35 mL of peripheral blood which is too much to exceed the sieve plate, and this is not conducive to subsequent separation.
- 2. Dakewe's method of grinding mouse spleen:
- (1) Recommended consumables
- A nylon net is recommended because it is more flexible than stainless steel net.
- It is recommended to use the syringe piston to grind the spleen. It is not recommended to grind the spleen by clamping it with tweezers, because in this way the strength of clamping may not be well controlled, easily resulting in cell death. (2) Precautions
- The key is to use the upward counterforce of the nylon net to control the grinding force. The mechanical damage that cells may be subjected to is minimized.
- The grinding force shall be controlled, and the nylon net shall be kept hung in the air to avoid death of lots of cells as a result of direct grinding on the bottom.
- The caliber of the plate shall not be too large; otherwise the nylon net of culture dish will be less elastic.
- Tweezers shall be used to clamp one end of the nylon net to prevent the nylon net from sliding during grinding.



Separation Performance of Different Volumes of Human Peripheral Blood by using Lymphocyte Separation Tube from Human Peripheral Blood(50mL)

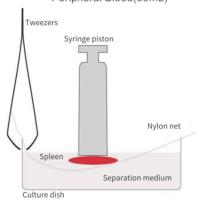


Diagram of Mouse Spleen Grinding

## Shenzhen Dakewe Bio-engineering Co.,Ltd.



## **DAKEWE**



# »» »» BioSci Separation Products



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