DENSITY GRADIENT MEDIA

Lymphoprep™ Tube
Isolation of human mononuclear cells

A simple and effective method for the isolation of mononuclear cells from human blood was reported by Dr. Arne Bøyum in 1968. For more than 35 years a commercial medium known as Lymphoprep™ has been widely used for isolating these cells.

Mononuclear cells (monocytes and lymphocytes) have a lower buoyant density than the erythrocytes and the polymorphonuclear (PMN) leukocytes (granulocytes). The vast majority of mononuclear cells have densities below 1.077 g/ml. These cells can therefore be isolated by centrifugation on an isoosmotic medium with a density of 1.077 g/ml, which allows the erythrocytes and the PMNs to sediment through the medium while retaining the mononuclear cells at the sample/medium interface.

The described method is rapid, simple and reliable and gives excellent results with blood samples from normal individuals and patients.

The success of the standard method for isolation mononuclear cells using Lymphoprep™ depends to a large extent on the careful layering of the diluted blood sample on top of the centrifugation medium to maintain a sharp interface between the two layers. This procedure requires some practise and can be time-consuming with large numbers of samples.

Lymphoprep™ Tube is a sterile tube in which the Lymphoprep™ is contained below a plastic filter disc. This allows blood to be poured simply and directly into the tube, the disc preventing any mixing with the separation medium.

Lymphoprep™ is a ready-made, sterile and endotoxin tested solution with the following specifications:

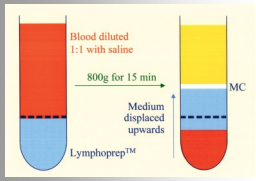
Sodium diatrizoate: 9.1% (w/v)

Polysaccharide: 5.7% (w/v)

Density: 1.077 ± 0.001 g/ml

Osmolality: 290 ± 15 mOsm

Endotoxins: < 1.0 EU/ml



Web:

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AXIS-SHIELD

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Each batch of Lymphoprep™ is checked on the level of endotoxins using a specific LAL test. Our goal is to produce batches with an endotoxin level lower or equal to 0.13 EU/ml.

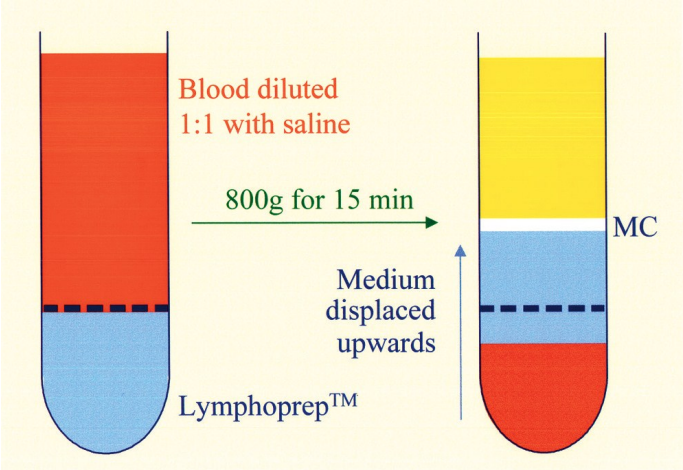
For every batch produced a Certificate of Analysis showing the actual values of density, osmolality and endotoxins is made available at www.axis-shield-density-gradient-media.com. We also claim sterility according to Ph.Eur.

Lymphoprep™ is manufactured, packed and released in compliance with:

1. Current EU guide to Good Manufacturing Practice
2. Fresenius Kabi AS Quality System
3. Fresenius Kabi AS Manufacturing Licence

Lymphoprep™ has the same specifications as the expensive PLUS or PREMIUM media from other manufacturers.

Lymphoprep™ Tube can be used for the preparation of pure lymphocyte suspensions for tissue typing, anti-lymphocyte sera and immunological research. Thorsby and Brattelie used this technique with only slight modifications in the preparation of pure lymphocyte suspensions for cytotoxicity tests and lymphocyte cultures.



Lymphoprep™ Tube is supplied as a sterile solution in the following package sizes:

Prod. no. 1019817	30 tubes (each filled with 2ml)
Prod. no. 1019818	18 tubes (each filled with 10ml)

References

Bøyum, A. (1968)
Separation of leucocytes from blood and bone marrow
Scand. J. Clin. Lab. Invest., ***21***, *suppl.97*

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Innovation for Life