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[54] **METHOD FOR CREATING A LEUKOCYTE RICH SAMPLE FROM A MIXED POPULATION OF BLOOD CELLS**

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[*] Notice: The term of this patent shall not extend beyond the expiration date of Pat. No. 5,686,238.

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Related U.S. Application Data

[60] Continuation of Ser. No. 434,623, May 4, 1995, abandoned, which is a division of Ser. No. 164,517, Dec. 9, 1993, Pat. No. 5,686,238, which is a continuation-in-part of Ser. No. 37,525, Mar. 24, 1993, Pat. No. 5,498,520, which is a continuation of Ser. No. 833,285, Feb. 10, 1992, abandoned.

[51] **Int. Cl.**[6] **B01D 21/26**

[52] **U.S. Cl.** **210/782**; 210/787; 210/806; 435/2; 436/177

[58] **Field of Search** 210/782, 787, 210/789, 806; 604/4, 5, 6; 435/2; 422/72; 494/37; 436/177, 178; 530/412

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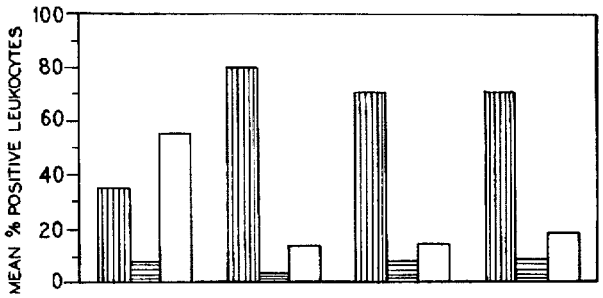
[57] **ABSTRACT**

A method and apparatus for creating a leukocyte rich sample from a mixed population of blood cells. The method comprises the steps of: separating an amount of blood into layers that include a buffy coat layer having a mixed population of blood cells including plasma and red blood cells; providing a chamber having an opening for receiving a fluid; causing the buffy coat layer to enter the chamber; centrifuging the chamber to separate the buffy coat layer into at least a plasma containing layer, a leukocyte containing layer, and a red blood cell containing layer; and separating the leukocyte containing layer from the other layers in the chamber.

14 Claims, 11 Drawing Sheets



	PRE CHAMBER	5 MINUTES	7 MINUTES	10 MINUTES
LYMPHOCYTES	34.36	79.59	71.28	70.60
MONOCYTES	7.04	3.18	7.26	6.53
GRANULOCYTES	54.47	12.42	13.66	17.62