

Abstract

A blood separation device (4) for separating blood (16) into a plurality of blood components (16a; 16b; 16c) under the influence of a centrifugal force (F_z) generated during a centrifugation process in a centrifuge, comprising: a first chamber (4a) for receiving a blood bag (12) filled with the blood (16) to be separated, in which the individual blood components (16a; 16b; 16c) are separated under the influence of the centrifugal force (F_z) in such a way that each blood component (16a; 16b; 16c), after completion of a first phase of the centrifugation process - as seen in the direction of the centrifugal force (F_z , "separation direction") - is located in a separate portion of the blood bag (12) according to its specific weight, a second chamber (4b) for receiving at least one component bag (13; 14) which, in each case, is provided for filling with a associated blood component (16a; 16b; 16c), an inlet opening of each component bag (13; 14) connected via a line (12a; 13a; 14a), in which a controllable valve is arranged connected to an outlet opening of the blood bag (12), a displacement body (8), which is arranged in the first chamber (4a) and exerts a pressing force (F_p) onto the blood bag (12) directed substantially perpendicular to the direction of separation, and a control unit (5), which during a second phase of the centrifugation process opens each valve until the blood component (16a; 16b; 16c) associated with this valve has passed into the associated component bag (13; 14) as a result of the pressing force (F_p) of the displacement body (8) and wherein the displacement body (8) is shaped in such a way that it generates the pressing force (F_p) with the aid of the centrifugal force (F_z) and/or with the aid of a spring force (F_f).