

himac APPLICATION

No. 64 April 1997

Subject Preparative Micro-Ultracentrifuge CS-GX series

Model Fixed-angle rotor S120AT3

Rapid separation of lipoprotein from human serum by fixed-angle rotor S120AT3

1) Models used

Centrifuge : Preparative Micro-Ultracentrifuge CS - GX series

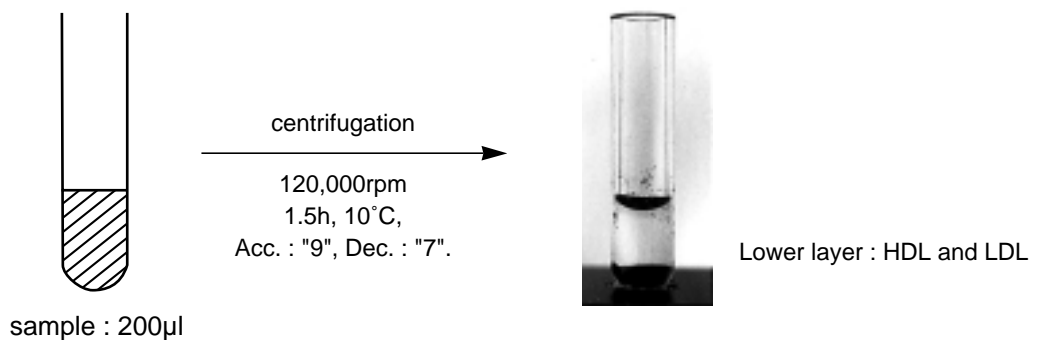
Rotor : S120AT3 (Fixed-angle rotor)

Tube : 0.5 PC thick-walled tube

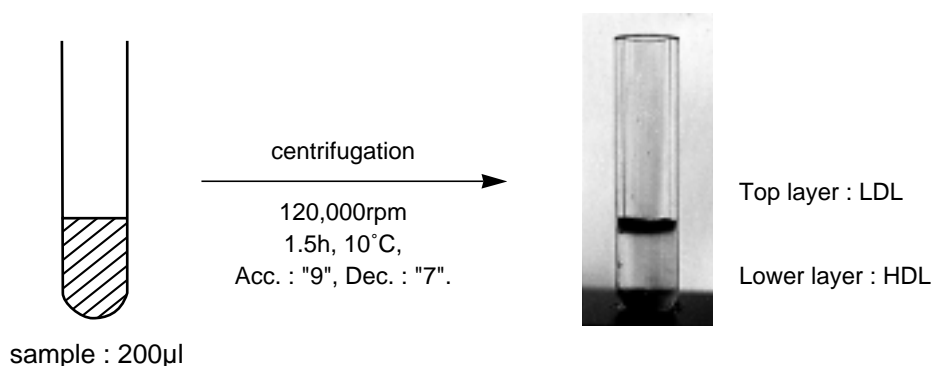
2) Methods and results

Fat Red 7B is added for recognition of results easily.

(1) Sample 1 (Sedimentation of LDL and HDL)



(2) Sample 2 (Flotation of LDL, including IDL)



3) Sample preparation ¹⁾

1) Sample 1 (Sedimentation of LDL, HDL)

Add 100 μ l of $\rho = 1.006$ (g/cm³) density solution (0.15M NaCl, 0.3mM EDTA-Na₂. pH7.4) to 100 μ l of serum. Mix well gently and transfer into a 0.5 PC thick-walled tube.

2) Sample 2 (Flotation of LDL, including IDL)

Add 100 μ l of $\rho = 1.12$ (g/cm³) density solution (15% (w/w) KBr solution) to 100 μ l serum so that the average density is 1.063 (g/cm³). Mix well gently and transfer into a 0.5 PC thick-walled tube.

4) Discussion

At the clinical laboratory tests of lipoprotein it is required for the sample volume is smaller and the number is more. We've shown in our himac APPLICATIONs for these cases using RP100AT3 and RP120AT2 fixed-angle rotor ^{2,3)}. Recently we developed new type fixed-angle rotor named S120AT3. Using this rotor lipoprotein is separated for 1.5 hours faster than before (2 hours by RP120AT2). And sample is applied for maximum 500 μ l/tube. (But this case centrifugation time is limited for 3.5 hours.)

Reference

- 1) Bronzert T.J. and Brewer H.B., Clin. Chem., 23, 2089 (1977).
- 2) himac APPLICATION No.28 (1993).
- 3) himac APPLICATION No.29 (1993).

HITACHI

(Export office)

Nissei Sangyo Co., Ltd.

Head Office :

1 - 24 - 14, Nishishinbashi, Minato-ku, Tokyo, 105 Japan

Tel : 81 - 3 - 3504 - 7281

Fax : 81 - 3 - 3504 - 7302

(Manufacturer)

Hitachi Koki Co., Ltd.

Scientific Instruments Div.

1060, Takeda, Hitachinaka - city, Ibaraki - pref., 312 Japan

Tel : 81 - 29 - 276 - 7384

Fax : 81 - 29 - 276 - 7475

