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)

![Diagram of sample and centrifugation](image)

Centrifugation
120,000rpm
1.5h, 10°C,
Acc. : "9", Dec. : "7".

Lower layer : HDL and LDL
sample : 200µl

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

![Diagram of sample and centrifugation](image)

Centrifugation
120,000rpm
1.5h, 10°C,
Acc. : "9", Dec. : "7".

Top layer : LDL
Lower layer : HDL
sample : 200µl
3) Sample preparation

1) Sample 1 (Sedimentation of LDL, HDL)
   Add 100µl of ρ =1.006 (g/cm³) density solution (0.15M NaCl, 0.3mM EDTA-Na2. pH7.4) to 100µl of serum. Mix well gently and transfer into a 0.5 PC thick-walled tube.

2) Sample 2 (Flotation of LDL, including IDL)
   Add 100µl of ρ =1.12 (g/cm³) density solution (15% (w/w) KBr solution) to 100µl 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. 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 500µl/tube. (But this case centrifugation time is limited for 3.5 hours.)

Reference
2) himac APPLICATION No.28 (1993).
3) himac APPLICATION No.29 (1993).