HITACHI

himac APPLICATION

No. 59 April 1997

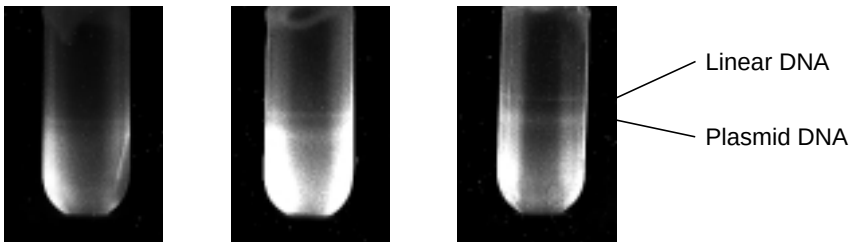
Subject Separation of plasmid DNA by neo-angle rotor

Model Preparative Micro-Ultracentrifuge CS-GX series
Neo-angle rotor S120NT

Rapid separation of plasmid DNA by S120NT neo-angle rotor (holding 2ml tube)

We've shown in our himac APPLICATION it takes 3h to separate plasmid DNA by S120NT neo-angle rotor (holding 2ml tube)[1]. Here we tried this separation even shorter. Then we can prove this separation for 2 hours.

Results



120, 000rpm
1.5h

120, 000rpm
1.75h

120, 000rpm
2.0h

Conditions

(1) Condition of ultracentrifugation

Rotor	Speed (rpm)	Time (h)	Temp. (˚C)	Acc. mode	Dec. mode
S120NT neo-angle rotor	120,000	1.5 1.75 2.0	20	"9"	"7"

(2) Used tube : 2PA Cone-Top tube*

*Registered trade mark of Seton Scientific Company.

(3) Sample preparation

We used E.coli., JM109 holding plasmid pUC19 DNA. The E.coli., JM109 was cultured over night and crude DNA was isolated by alkaline-SDS method and other processes and dissolved with TE buffer. We used this solution as a sample.

For each 2PA Cone-Top tube*, we provided
Sample: 1.48ml
CsCl : 1.52g
Ethydium Bromide (10mg/ml) : 50 µl
Polyethylen (10) octylphenylether (Triton X - 100) : 1 - 2 µl

We mixed these and poured the resulting mix into a tube. If this is not enough to fill the tube, the tube should be filled with an additional filler solution prepared in advance (that dissolve 0.93g of CsCl to 1ml of TE buffer).

Reference

1) himac APPLICATION No.46 (1995).

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