

## Multi-Sample Sub Fractionation Of Lipoproteins Using FIBERLite<sup>®</sup> Rotor F55L-48x1.0

Owen Mitch Griffith, Ph.D

The Beckman Table Top ultra centrifuge with the TLA 80 (8 x 8 ml) rotor was previously used to separate and quantify LDL sub fractions of lipoproteins in 2.5hr. At 80,000 rpm this 8-tube rotor generated 444,000 x g, with a K-factor of 29.

Studies now show that the Fiberlite Micro Ultra rotor F55L 48 x 1.0 ml rotor generates 345,000 x g at 55,000 rpm with a K-Factor of 19 and will separate the same sample in 1.5 hr. This reduction in run time is about 40% less than the TLA 80 rotor and it will allow a greater sample throughput with the FIBERLite rotor carrying 48 tubes for LDL quantification. Other multi-sample biological particle pelleting or DNA – plasmid separation can also be accomplished with this Micro Ultra rotor.

LDL-cholesterol quantitation was performed on EDTA plasma using the method of (David et al., 1986). In the 1.0 ml tubes of the FIBERLite rotor, 0.30 mL of EDTA plasma was sandwiched between two layers each containing 0.30 mL of 0.5 mol/L sodium chloride ( $d=1.006$  g/mL). After centrifugation for 1.5 hours at 55,000 rpm in the Beckman Coulter L8M ultracentrifuge, the top half of the tube which contained VLDL and any chylomicrons were removed. The lower half of the tube contents was washed in a volumetric flask which is then adjusted to 1.0 mL total volume. The LDL-cholesterol was calculated as the difference between the measured cholesterol in the volume-adjusted infranate times two minus the HDL-cholesterol measured in the original plasma.

### REFERENCES

David J.A, and Naito N.K. Separation of lipoprotein (Lp) fraction). *Clin Chem* ; 32:1094, 1986



**FIBERLite<sup>®</sup> Rotor Model:  
F55L-48x1.0**

### **For Further Information:**

Contact us at:

FIBERLite Centrifuge  
422 Aldo Ave.  
Santa Clara, CA 95054  
408-988-1103 Tel  
408-988-1196 Fax  
[www.piramoon.com](http://www.piramoon.com)