Figure 1A. Control group versus After wire removal Normality Assumption plot. The assumption that the errors are distributed normally is evident by normal probability plot where the shows a straight line. For Shapiro-Wilk test, $W = 0.982729$ and $Pr = 0.5541$, we conclude that the data is a good fit with the normal distribution. Figure 2B. Test of homogeneity of variance; Figure 1B Test of homogeneity of variance- Residual plot does not suggest any obvious pattern. Levene’s test with $F = 2.64$ and $Pr = 0.0331$, suggest that at alpha $= 0.05$, the null hypothesis of constancy of variance is rejected. However, Bartlett’s test with $D = 10.2450$ and $Pr = 0.0686$, at alpha $= 0.05$, fails to reject the null hypothesis, concluding that the assumption of constancy of variance is met.
Figure 2A. Control group versus catheters at 37±1°C Normality Assumption plot- The assumption that the errors are distributed normally is evident by normal probability plot where the shows a straight line. For Shapiro-Wilk test, W =0.975633 and Pr = 0.2723, we conclude that the data is a good fit with the normal distribution. Figure 2B. Test of homogeneity of variance; Both the residual plot and formal tests suggest that the constancy of variance assumption is not satisfied.
Figure 3A. Control group versus catheters after normal saline injection Normality Assumption plot- The assumption that the errors are distributed normally is evident by normal probability plot where the shows a straight line. For Shapiro-Wilk test, $W = 0.985923$ and $Pr = 0.7180$, we conclude that the data is a good fit with the normal distribution.

Figure 3B. Test of homogeneity of variance- Residual plot does not show any obvious pattern of increasing or decreasing in magnitude with the fitted values. Based on the Levene’s ($F = 1.27$, $Pr = 0.2910$) and Brown and Forsythe’s ($F = 1.00$, $Pr = 0.4260$) test we conclude the assumption of constant variance is met.