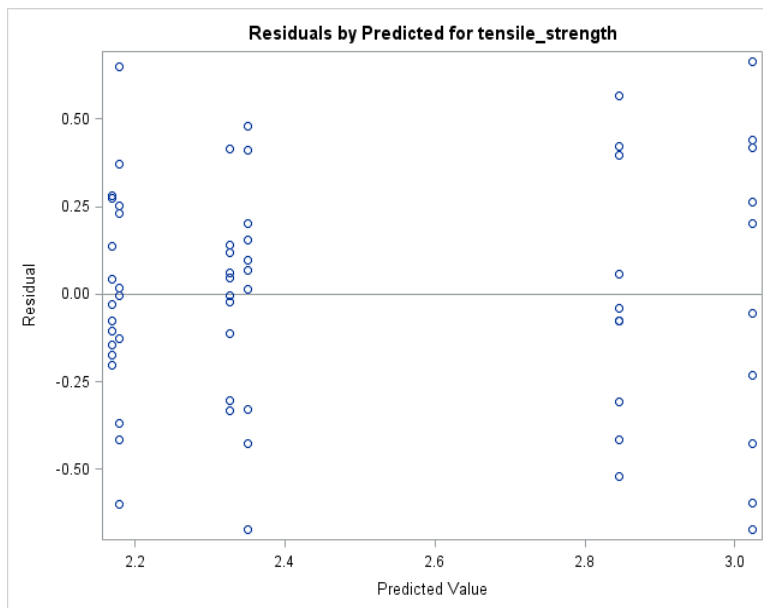Figure 1A

Figure 1B

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.

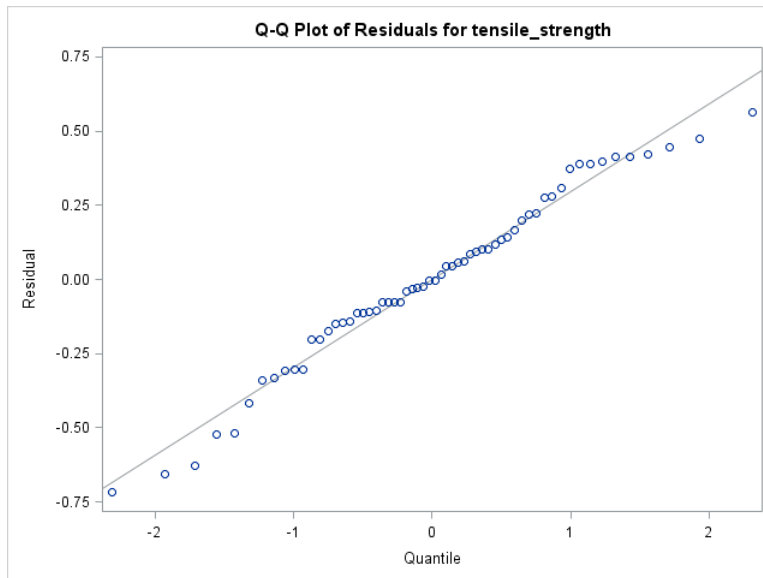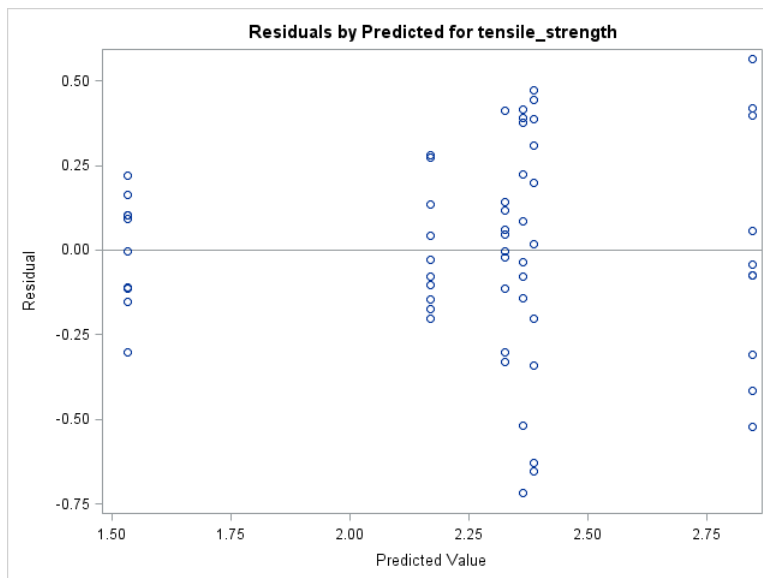*Figure 2A*

Figure 2B

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.
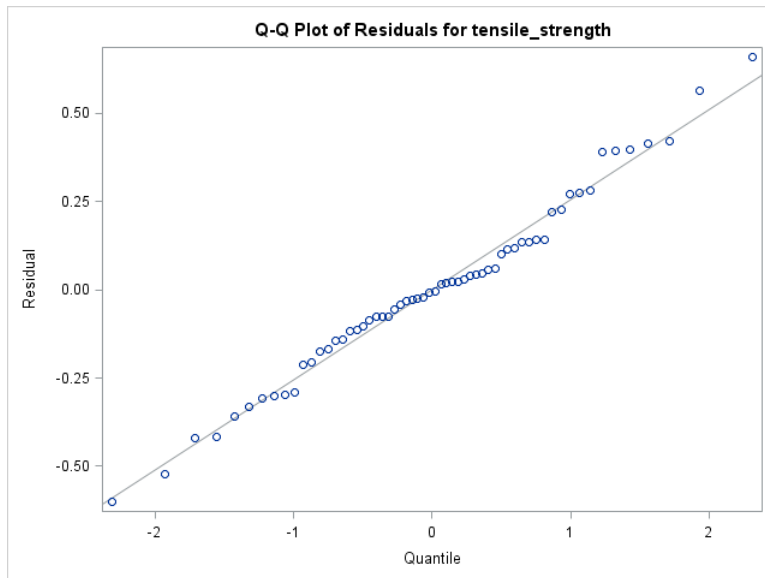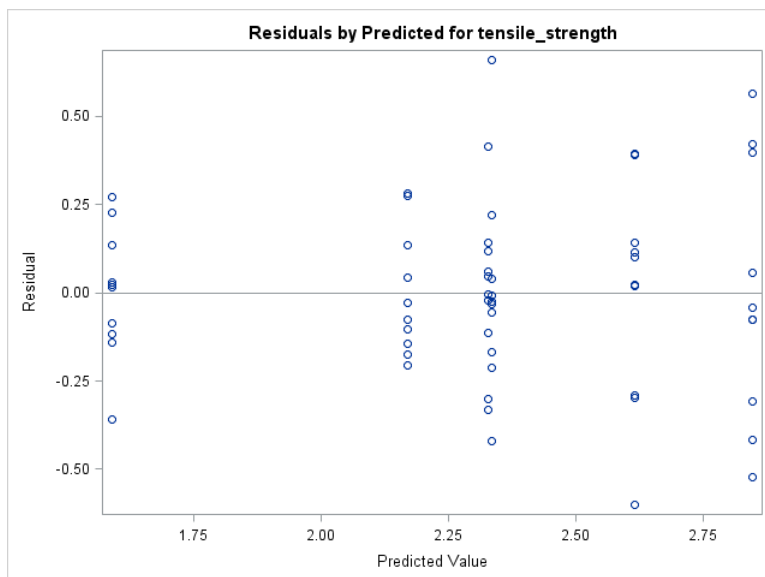
Figure 3A

Figure 3B

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.