**Hypothesis Testing- LabTAT**

**> ## Normality Test ##**

> ad.test(Laboratory.1)

Anderson-Darling normality test

data: Laboratory.1

A = 0.31823, **p-value = 0.5322**

> ad.test(Laboratory.2)

Anderson-Darling normality test

data: Laboratory.2

A = 0.2519, **p-value = 0.7331**

> ad.test(Laboratory.3)

Anderson-Darling normality test

data: Laboratory.3

A = 0.30013, **p-value = 0.5768**

> ad.test(Laboratory.4)

Anderson-Darling normality test

data: Laboratory.4

A = 0.37038, **p-value = 0.4194**

**All four data set are normally distributed as P-value of all is > 0.05**

**Test for equal Variance**

> leveneTest(Stacked\_Data$values,Stacked\_Data$ind,data = Stacked\_Data)

Levene's Test for Homogeneity of Variance (center = median: Stacked\_Data)

Df F value Pr(>F)

group 3 2.5996 0.05161 .476

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Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

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| **#### One-way ANOVA ####**  > Anova\_results <- aov(values~ind,data = Stacked\_Data)  > summary(Anova\_results)  Df Sum Sq Mean Sq F value Pr(>F)  ind 3 79979 26660 118.7 **<2e-16 \*\*\***  Residuals 476 106905 225  ---  Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1 |
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| |  | | --- | | **P-value is 2e-16 < 0.05 so rejecting Ho and accepting Ha. There is significant difference between the mean**  **TAT values of 4 different laboratories.** | |