

$$LCL = \bar{x} - t_{.90} \left( \frac{s}{\sqrt{n}} \right)$$

And  $\bar{x}$  is the sample mean;  $s$  is the sample standard deviation;  $n$  is the number of samples; and  $t_{0.90}$  is the  $t$  statistic for a 90% one-tailed confidence interval with  $n-1$  degrees of freedom (from Appendix D).