

Assignment: Statistical Inference for One Mean

Name:

A researcher was helping a crab farm studying the mercury contamination issue. The objective is to see if the average contamination is less than 0.3 mg/l at the time of the study. A random sample of crabs was observed and mercury levels in the flesh of tested crabs are listed below (in mg/l).

0.19 0.31 0.29 0.23 0.26 0.29 0.21 0.27

Perform a t-test to see if there is significant evidence to support that the average mercury contamination is less than 0.3 ppm. Use p-value approach to conclude the analysis at 5% level of significance. You must report p-value of the test in your conclusion.

1) State the null and alternative hypothesis:

H_0 :

H_a :

2) Comment on normality assumption for this t-test:

3) Report the value of the t-test statistic:

4) Report the p-value of the test using software or t-table.

5) Conclude the analysis using p-value.

6) Find the 95% confidence interval for estimating the average mercury contamination in crabs raised in this farm at the time of study.

About mercury contamination: <http://www.nrdc.org/health/effects/mercury/guide.asp>