

## Question #65162, Math / Statistics and Probability

A student obtained the following results for the normality of a Nitric acid solution: 0.424; 0.528; 0.621; 0.433; 0.537. Should 0.621 as a result be rejected statistically?

**Answer.**

$$\text{Sample mean } \bar{x} = \frac{1}{5} \sum_{i=1}^5 x_i = 0.5086;$$

$$\text{Sample standard deviation } s = \sqrt{\frac{1}{4} \sum_{i=1}^5 (x_i - \bar{x})^2} = 0.0817.$$

$$\bar{x} + 2s = 0.6720 > 0.671.$$

Thus, 0.621 should not be rejected statistically.

**References.**

Standard deviation. (2004, May 23). Retrieved February 8, 2017, from [http://www.batesville.k12.in.us/physics/apphynt/Measurement/standard\\_deviation.htm](http://www.batesville.k12.in.us/physics/apphynt/Measurement/standard_deviation.htm)

Mean, mode, median, and standard deviation. Retrieved February 10, 2017, from <https://www.ltconline.net/green/courses/201/descstat/mean.htm>