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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | [Note: Best if viewed at Full Screen]  Obseved Results (Table A)   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | pH | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Total | | Alive | 0 | 1 | 4 | 15 | 5 | 0 | 0 | 25 | | Dead | 15 | 0 | 11 | 0 | 10 | 15 | 15 | 80 | | Total | 15 | 14 | 15 | 15 | 15 | 15 | 15 | 105 |   Chi-Square = Sum (Observed Results - Expected Results)^2 / Expected Results  Degrees of Freedom = (#Rows-1)(#Columns -1)  Expected Results = (Row Total)(Column Total) / Table Total     Expected Results (Table B)   |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | pH | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | Alive | 3.57 | 3.57 | 3.57 | 3.57 | 3.57 | 3.57 | 3.57 | | Dead | 11.43 | 11.43 | 11.43 | 11.43 | 11.43 | 11.43 | 11.43 |     Chi-Square Results (Table C)   |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | pH | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | Alive | 3.57 | 1.85 | 0.051 | 36.51 | 0.574 | 3.57 | 3.57 | | Dead | 1.116 | 0.579 | 0.016 | 11.43 | .179 | 1.116 | 1.116 |    Chi-Square = sum of values in (Table C)  Chi-Square = 65.31  p-value = 3.729 x 10^-12 (very small)           This data largely shows that the there is non-significance due to the very high chi-square value in regards to the [chi-square chart](http://docs.google.com/chisquare1.jpg) and the significance level at which it is tested.  If you were to test at a low level of .15 or 15%, you would get a significance.  Actually, any level higher than the p-value given above would produce non-significant results.  This is what the p-value represents, the level at which the null hypothesis is rejected or not.  This however is hard to cause given the very large chi-square value.  Also the assumptions of a chi-square test were violated in which 1) all calls must be at least one and 2) No more than 20% of the cells can be less than five.  Both of these were not met, so the results are questionable as well.  Overall, the data proves to be non-significant, against our expectations. |

*This Web Site is Best viewed with 256 or more colors.*

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