| **Obs** | **trt** | **dose** | **heat** | **hardness** | **loghard** |
| --- | --- | --- | --- | --- | --- |
| **1** | a | 0 | usual | 12.15 | 2.5 |
| **2** | a | 0 | usual | 13.88 | 2.63 |
| **3** | a | 0 | usual | 7.25 | 1.98 |
| **4** | a | 0 | usual | 15.26 | 2.73 |
| **5** | a | 0 | usual | 18.56 | 2.92 |
| **6** | a | 0 | usual | 15.08 | 2.71 |

| **Obs** | **trt** | **n** | **mean** | **sd** |
| --- | --- | --- | --- | --- |
| **1** | a | 8 | 14.06375 | 3.8892413417 |
| **2** | b | 8 | 12.50875 | 4.8576726864 |
| **3** | c | 8 | 18.30875 | 7.1085751787 |
| **4** | d | 8 | 22.85375 | 12.721884337 |

| **Class Level Information** |
| --- |
| **Class** | **Levels** | **Values** |
| **trt** | 4 | a b c d |

|  |  |
| --- | --- |
| **Number of Observations Read** | 32 |
| **Number of Observations Used** | 32 |

| **Source** | **DF** | **Sum of Squares** | **Mean Square** | **F Value** | **Pr > F** |
| --- | --- | --- | --- | --- | --- |
| **Model** | 3 | 518.036400 | 172.678800 | 2.75 | 0.0614 |
| **Error** | 28 | 1757.709550 | 62.775341 |  |  |
| **Corrected Total** | 31 | 2275.745950 |  |  |  |

| **R-Square** | **Coeff Var** | **Root MSE** | **hardness Mean** |
| --- | --- | --- | --- |
| 0.227634 | 46.78875 | 7.923089 | 16.93375 |



| **trt** | **hardness LSMEAN** | **95% Confidence Limits** |
| --- | --- | --- |
| **a** | 14.063750 | 8.325680 | 19.801820 |
| **b** | 12.508750 | 6.770680 | 18.246820 |
| **c** | 18.308750 | 12.570680 | 24.046820 |
| **d** | 22.853750 | 17.115680 | 28.591820 |

| **Parameter** | **Estimate** | **StandardError** | **t Value** | **Pr > |t|** | **95% Confidence Limits** |
| --- | --- | --- | --- | --- | --- |
| **c1** | 1.55500000 | 3.96154456 | 0.39 | 0.6976 | -6.55985616 | 9.66985616 |
| **c2** | -8.79000000 | 3.96154456 | -2.22 | 0.0348 | -16.90485616 | -0.67514384 |
| **c3** | -4.54500000 | 3.96154456 | -1.15 | 0.2610 | -12.65985616 | 3.56985616 |

| **Class Level Information** |
| --- |
| **Class** | **Levels** | **Values** |
| **trt** | 4 | a b c d |

|  |  |
| --- | --- |
| **Number of Observations Read** | 32 |
| **Number of Observations Used** | 32 |

| **Source** | **DF** | **Sum of Squares** | **Mean Square** | **F Value** | **Pr > F** |
| --- | --- | --- | --- | --- | --- |
| **Model** | 3 | 1.42115937 | 0.47371979 | 2.85 | 0.0554 |
| **Error** | 28 | 4.65606250 | 0.16628795 |  |  |
| **Corrected Total** | 31 | 6.07722188 |  |  |  |

| **R-Square** | **Coeff Var** | **Root MSE** | **loghard Mean** |
| --- | --- | --- | --- |
| 0.233850 | 14.94570 | 0.407784 | 2.728438 |



| **trt** | **loghard LSMEAN** | **95% Confidence Limits** |
| --- | --- | --- |
| **a** | 2.605000 | 2.309674 | 2.900326 |
| **b** | 2.458750 | 2.163424 | 2.754076 |
| **c** | 2.846250 | 2.550924 | 3.141576 |
| **d** | 3.003750 | 2.708424 | 3.299076 |

| **Parameter** | **Estimate** | **StandardError** | **t Value** | **Pr > |t|** | **95% Confidence Limits** |
| --- | --- | --- | --- | --- | --- |
| **c1** | 0.14625000 | 0.20389210 | 0.72 | 0.4791 | -0.27140402 | 0.56390402 |
| **c2** | -0.39875000 | 0.20389210 | -1.96 | 0.0605 | -0.81640402 | 0.01890402 |
| **c3** | -0.15750000 | 0.20389210 | -0.77 | 0.4463 | -0.57515402 | 0.26015402 |