**Quantitative Data Table Handout Example Answers**

**Instructions**

1. Turn on the LabQuest and light probe.
2. Set a timer for 2 minutes.
3. Place a testing sample in place in the testing apparatus.
4. Close the door (to shut out ambient light).
5. Turn on the UV flashlight.
6. After 2 minutes, turn off the UV light and quickly record the first 5 numbers from the light probe and LabQuest.
7. Average the 5 readings to get 1 quantitative measurement of the bioplastic’s phosphorescent glow.

**Using the team-created apparatus:**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Sample Name** | 5 | 10 | 20 | 40 |  |  |  |
| Data 1 | 3.4 lux | 3.1 | 3.1 | 2.5 |  |  |  |
| Data 2 | 3.3 | 3.2 | 3.0 | 2.3 |  |  |  |
| Data 3 | 3.2 | 2.6 | 2.9 | 1.8 |  |  |  |
| Data 4 | 3.1 | 2.3 | 2.8 | 1.4 |  |  |  |
| Data 5 | 2.8 | 2.1 | 2.2 | 1.2 |  |  |  |
| **Average** | 3.2 | 2.7 | 2.8 | 1.8 |  |  |  |

**Using the teacher-created apparatus:**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Sample Name** | 5 | 10 | 20 | 40 |  |  |  |
| Data 1 | 7.0 lux | 6.0 | 6.3 | 4.1 |  |  |  |
| Data 2 | 5.9 | 4.3 | 4.3 | 3.0 |  |  |  |
| Data 3 | 5.6 | 4.2 | 3.8 | 2.5 |  |  |  |
| Data 4 | 4.1 | 3.8 | 3.5 | 2.6 |  |  |  |
| Data 5 | 4.2 | 2.7 | 3.9 | 2.9 |  |  |  |
| **Average** | 5.3 | 4.2 | 4.4 | 3.0 |  |  |  |

\*\*Remember the measurement notation: The light sensor unit is **lux**, the SI unit of luminance, equal to 1 lumen per square meter.\*\*