Name

Date

Period

**The Gum Lab**

**Introduction**

The purpose of this lab is to determine how the mass of a sample of gum changes as it is chewed. This will be accomplished by recording the mass of a sample of gum, using a balance, as it is chewed in thirty second intervals. By analyzing the data we will determine change in mass of the gum.

**Hypothesis**

If the gum is chewed, then the mass of the gum will stay the same.

**Procedure**

Two pieces of gum were obtained, unwrapped and placed into the cup. The mass was found and recorded in data table 1 at time zero. The gum was then chewed for thirty seconds. The gum was then put back into the cup. The mass of the gum was again obtained and recorded next to time =30 seconds. This process was repeated for a total chewing time of 240 seconds. The gum and cup were thrown away.

**Results**

**Table 1**

**Mass of Gum in Grams at 30 Second Intervals**

|  |  |
| --- | --- |
| **Time in Seconds** | **Mass of Gum in Grams** |
| 0 sec | 11.4 g |
| 30 sec | 10.3 g |
| 60 sec | 9.7 g |
| 90 sec | 8.2 g |
| 120 sec | 6.9 g |

Table 1 shows the mass of gum at each time interval.

**Conclusion**

Data table 1 shows the mass of the gum sample at each thirty second interval. Before the gum was chewed it had a mass of 11.4 g. At time = 30 seconds the mass was 10.3 g. At time = 60 seconds the mass was 9.7 g. At time = 90 seconds the mass was 8.2 g. At time= 120 seconds the mass was 6.9 g. This data shows that the mass of the gum decreased as it was chewed. The total change in mass was 4.5 grams. The hypothesis predicted the mass would not change when the gum was chewed, so the results disproved the hypothesis. One explanation for the decrease in mass of the gum could be the sugar in the gum is dissolved and swallowed by the chewer. Errors in this lab might include mistakes while weighing or timing. To ensure accurate results, all measurements should be made carefully. A possible improvement to this experiment would be to complete the same experiment using sugarless gum. This could prove or disprove my theory as to why the mass of the gum decreased.