How does salt affect the boiling time of water?

**Hypothesis:** Adding salt to water will cause the water to take longer to boil.

**Aim:** To find out how salt affects the boiling time of water.

**Independent Variable:** The amount of salt that we put in the water.

**Dependent Variable:** The time it takes for the water to boil.

**Controlled Variable:**
- The amount of water
- The temperature of the stove
- The same equipment each time
- The amount of salt needs to be accurate

**Equipment:**
- Timer
- Salt
- Measuring equipment
- Stove
- Saucepan
- Gloves
- Safety Glasses
- Water

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<table>
<thead>
<tr>
<th>Salt (tablespoons)</th>
<th>Time – test 1 (min:sec)</th>
<th>Time – test 2 (min:sec)</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>2:35</td>
<td>2:30</td>
<td>2:32.5</td>
</tr>
<tr>
<td>0.5</td>
<td>2:43</td>
<td>2:45</td>
<td>2:44</td>
</tr>
<tr>
<td>1</td>
<td>2:52</td>
<td>2:51</td>
<td>2:51.5</td>
</tr>
<tr>
<td>1.5</td>
<td>2:59</td>
<td>3:03</td>
<td>3:01</td>
</tr>
<tr>
<td>2</td>
<td>3:10</td>
<td>3:12</td>
<td>3:11</td>
</tr>
</tbody>
</table>

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**Were my results valid?**

Yes, our results were valid because we controlled the variables. We used the same amount of water each time. We put the stove on the same heat each time. The same saucepan was used. There was only one independent variable, the amount of salt. These factors make our results valid.

**Conclusion:**

It was found that adding salt to water increases the boiling time of water. The more salt you add, the higher the boiling temperature becomes; therefore, the solution takes a longer period of time to boil.

**Was our hypothesis supported by this experiment?**

Our hypothesis was supported by the experiment. We predicted that adding salt to the water will increase the boil time. Completing the experiment proved that our hypothesis was correct. You can easily figure this out by reading our results table and graph.