

# [Most longer wick for more fuel to vaporise](https://assignbuster.com/most-longer-wick-for-more-fuel-to-vaporise/)

Most of the heat from the spirit burner didnot reach the base of the tripod stand itself. This was the main reason for theerror. The heat was lost very easily.

A lot of heat was lost in this manner andcontributed to a lower than expected temperature change in thewater. This was the main source of experimental error. This can be improved by covering the top of the tin can during thereaction, which will reduce a large amount of heat energylost in the air, thus lowering the temperature of thewater.

There were some errors in thermometerreadings. The readings on some thermometers varied before started theinvestigation (they weren’t precise). This can be reduced by using more precisemeasuring tools next time, such as a digital thermometer.

It’s better to usedigital for more accuracy and to avoid incorrect readings that caused by aparallax. Wick, not exactly the same size so the volumeof fuel would be different as there is a longerwick for more fuel to vaporise along as it reaches theflash point. The wick was dirty and not easyto light because it was covered in soot from previousexperiments. A new one will allow the wick to absorb fuelevenly and burn evenly and be easierto light.  The amount of wick on burnershould be controlled, the amount of wickon the burner must be measured using a standard rulerand kept constant next time as it affects the amount ofalcohol burnt. The direction of the calorimeter had to bealtered for each fuel positioning for maximum benefit because the direction ofthe flame was different once it was lit but this took time and could haveaffected the results as fuel burned away.

Thegeneral movement of air meant that theflame not constantly on the calorimeter due toair flow which caused heat energy from the flame get losteasily. DiscussionThere were some anomalies when reading thegraph (Figure 2) as two values were almost identical. It could have been due tothe amount of wick on the burner as it would not have been exactly the same oneach burner as this was difficult to measure. This would have causeddifferences in the amount of alcohol burnt.

Conclusion The experiments carried out were quitesuccessful and yielded valid results. It has helped determine the relationshipbetween the number of carbon atoms in an alcohol chain and its respectivestandard enthalpy change of combustion. Thus, the hypothesis has been provedcorrect. As the number of carbon atoms in an alcohol chain increases, itsrespective standard change of combustion also increases.

As it can be seen thatthe values increase as the number of carbon atoms increase.