

# Combustion of Alkenes

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1.0.0

## Revision History

Revision	Date	Author(s)	Description
1.0.0	10.10.2016	Sam White	Initial Version

## 1 Sequential Method

1. Dip a combustion spoon into a sample of the alkene in a boiling tube.
2. Ignite the alkene in the spoon using a splint.

### 1.1 Diagram

N/A

### 1.2 Reasons for Method

- The combustion (deflagrating) spoon is used such that a constant small volume of the alkene is combusted each time and to allow easy access into the boiling tube containing the alkene.
- The long and slightly angled handle of the spoon helps to keep the burning mixture away from the hand holding the spoon.

### 1.3 Uncertainties in any Measurements

N/A

## 2 Results and Observations

The alkene burns with a very sooty dark yellow/orange flame.

### 2.1 Processed Results

N/A

### 2.2 Calculations

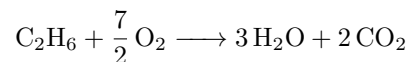
N/A

### 2.3 Uncertainty in Final Answer

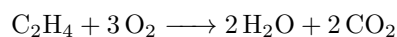
N/A

## 3 Conclusions Drawn

The greater the ratio of Carbon:Hydrogen atoms the less clean the flame which is produced due to the greater amount of oxygen which is required to react per atom of alkene in order for complete combustion to occur.



Compared to the alkene equivalent:



Also the shorter the carbon chain the greater the ease of ignition, however the ease of ignition of alkenes is lower than for alkanes of a similar carbon chain length.

## 4 Evaluation

### 4.1 Systematic Errors

N/A

## 4.2 Uncertainties

N/A