# Analysis of a Burning Candle

Name - _____

Purpose –

_____

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Procedure –

1.) Weigh candle.

2.) Light the candle using a match and let burn for $5.00\ minutes$.

3.) Blow out the candle and let cool for $2\ minutes$.

4.) Weigh candle.

Materials –

1.) Candle 2.) Match 3.) Scale

Data and Calculations – use the factor label method where appropriate and respect significant digits.

*** For the sake of this lab we will assume candle wax is $C_{25}H_{52}$.

a.) The mass of the candle before burning _____ g

b.) The mass of the candle after burning _____ g

c.) Calculate the mass of wax burnt _____ g

Post Lab Questions –

1.) Write the word statement which describes the pattern for "combustion of a hydrocarbon" reaction (don't forget to include energy in the reaction so we know if it is exo or endothermic).

2.) Write a balanced reaction equation for the combustion of wax (including states).

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3.) What is the molar mass of wax?

4.) How many moles of wax were burnt in this experiment?

5.) How many moles of oxygen gas were consumed in this reaction?

6.) What mass of oxygen gas was consumed?

7.) How heavy would a candle made up of one mole of wax be?

8.) How long would it take to burn a candle made of one mole of wax (solve to the most reasonable measure of time)?

Conclusion -