**Chemistry 12 - Practical Test#3: Empirical Formula (3%)**

**Information Sheet**

Your Semester 2 practical test will focus on identification of organic substances. Your identification will rely on chemical tests, data from empirical formula calculations and other observations.

The compounds could include:

* Alcohol (1°, 2° or 3°)
* Ketone
* Aldehyde
* Carboxylic acid
* Ester

You will need to be aware of the chemical reactions that can be used to distinguish between different classes of organic compounds, including:

* Substitution reactions
* Addition reactions
* Redox reactions
* Esterification reactions
* Reactions of carboxylic acids
  + Acid-carbonate / acid-hydrogencarbonate
  + Acid-metal
  + Acid-hydroxide

**THURSDAY 26th JULY 2018:**

You will complete the first part of the assessment. In this section you will be provided data that can be used to calculate the empirical formula and/or molecular formula of some of the compounds that will be encountered in the practical test.

You will need to revise empirical formula calculations, including questions where you need to calculate the molecular weight of a compound.

**FRIDAY 27th JULY 2018:**

You will complete the second part of the assessment which will require you to identify unknown organic compounds.

As part of the experiment you should be able to:

* Write observations and inferences for chemical tests
* Use chemical tests to identify which functional groups are present in molecules
* Write balanced chemical equations for reactions which have been observed
* Name and draw structural formulae of isomers which match observations in chemical tests and empirical formula data.

Some questions may provide observations in the form of written descriptions or photographs, however you **will** need to perform experiments yourself.

Procedures for each chemical test will **not** be supplied and you will **not** be allowed to refer to your notes. You will be supplied with chemicals and equipment similar to those encountered in experiments we have done throughout this term. You are expected to **learn and remember** the procedures for each chemical test.