

G629: Synthesising Organic Chemicals – Sample Assignment B1

Unit Name: Synthesising Organic Chemicals	Unit Number: G629
Assignment Title: Organic Chemical Manufacturing	Assignment Number: G629 Sample Assignment B1
Date Set:	Due Date:
Assessment Objective(s): AO2(a) & (b)	

Assignment Brief:

Organic chemistry is that branch of chemistry that deals with the structure, properties, and reactions of compounds that contain carbon. It is a highly creative science.

There is tremendous excitement and challenge in synthesizing a molecule never before made synthetically or found in nature. Tailoring the properties of that molecule via chemical synthesis to produce beneficial effects to meet the needs of the present and future human existence is both challenging and rewarding.

Task 1:

Your task is to carry out research on behalf of an organic chemical compound company and produce a report on a process used to manufacture an organic compound.

In your report:

- clearly indicate the chosen organic compound giving name, formula and structure, and possible uses
- describe the process used in the manufacture of the drug and include all the factors that need to be considered
- include information on scaling up a small-scale preparation of a manufacturing process
- include all the health and safety considerations
- discuss possible economic factors: automation; whether process is batch or continuous
- reference and record all the sources used.

For the higher mark bands, check that:

- a range of sources has been used and referenced
- information selected has been evaluated and justified
- the report is presented clearly, logically and concisely.

[Maximum marks possible for this task: 5]

Task 2:

In addition to the process of manufacturing your chosen organic compound, include a 'Financial and Social Aspects' section in your report.

For financial aspects, include:

- costs of manufacture, review direct and indirect costs and the effect of the product on individuals, companies and societies.

For social aspects, include:

- benefits and the impact of the product to society.

For the higher mark bands, check you have:

- explained and evaluated the research completed.

[Maximum marks possible for this task: 5]