

<b>Exam Board:</b>	AQA
<b>Subject:</b>	Chemistry
<b>Paper:</b>	Chemistry Paper 2
<b>Marks available:</b>	100
<b>Length of paper:</b>	1 hour 45 minutes
<b>Topics:</b>	Rate and extent of chemical change, organic chemistry, chemical analysis, the atmosphere, using resources and skills

### Exam Information, guidance and hints

#### Command words:

- Complete - Fill in gaps/add labels
- Balance - Add large numbers only in front of chemical formula
- Give - Recall a simple fact
- Draw - Draw a symbol, diagram or graph
- Describe - Give details about an event, idea or a process
- Explain - Give reasons for an event, idea or process (use because/so)
- Define - write the meaning of a word or term
- Compare - Identify how things are similar/different
- Suggest - Use your own knowledge in an unfamiliar context
- Plan - Write a method for carrying out a practical
- Calculate - Use numbers in a formula
- Name - Recall the name of a piece of equipment or person
- Estimate - Use data and evidence to predict a value

#### Online Resources

- [Cognito past papers](#)

#### Hints/tips:

- Use a ruler for straight lines of best fit but not curved lines.
- For calculation questions, use the equations provided
- Ensure you give to answers to the stated number of significant figures or decimal places
- When asked about observations, refer to what you can see happening, not what you know is happening at a molecular level
- When comparing, use comparative language such as **whereas, larger, smaller etc**
- Ensure you refer to data in graphs and tables when asked to in order to support your explanations
- Uncertainty is calculated by dividing the range of the data by 2.
- **Higher only:** Volume = number of moles x 24

#### Foundation Example Papers and Markschemes

#### Higher Example Papers and Markschemes

<a href="#">2018 F Paper</a>	<a href="#">Annotated P2</a>	<a href="#">2018 MS</a>	<a href="#">2018 H paper</a>	<a href="#">Annotated P2</a>	<a href="#">2018 MS</a>
<a href="#">2019 F Paper</a>	<a href="#">Annotated P2</a>	<a href="#">2019 MS</a>	<a href="#">2019 H Paper</a>	<a href="#">Annotated P2</a>	<a href="#">2019 MS</a>
<a href="#">2020 F Paper</a>	<a href="#">Annotated P2</a>	<a href="#">2020 MS</a>	<a href="#">2020 H Paper</a>	<a href="#">Annotated P2</a>	<a href="#">2020 MS</a>

**PLC Chemistry Paper 1 - Mock 1**

Topic	Key information related to topic	Sparx Code	Resources/Information related to topic	How well do you understand this topic? RAG		
				Red	Amber	Green
Rates of Reaction	Describe how to investigate the effect of changing concentration on the rate of a reaction using the disappearing cross method	R280	<a href="https://www.youtube.com/watch?v=N5p06i9ilmo">https://www.youtube.com/watch?v=N5p06i9ilmo</a>			
Rates of Reaction	Explain the effect of increasing the concentration or temperature on the rate of a reaction	R895	<a href="https://www.youtube.com/watch?v=-4HXaUBbv04">https://www.youtube.com/watch?v=-4HXaUBbv04</a>			
Rates of Reaction	Explain the effect of adding a catalyst to a reaction	R601	<a href="https://www.youtube.com/watch?v=-4HXaUBbv04">https://www.youtube.com/watch?v=-4HXaUBbv04</a>			
Rates of Reaction	Draw an energy profile diagram to represent the effect of a catalyst on a chemical reaction	R601	<a href="https://www.youtube.com/watch?v=-4HXaUBbv04">https://www.youtube.com/watch?v=-4HXaUBbv04</a>			
Rates of Reaction	Describe what a reversible reaction and equilibrium are	R768	<a href="https://www.youtube.com/watch?v=ty9TczsW5ew">https://www.youtube.com/watch?v=ty9TczsW5ew</a>			
Rates of Reaction	<b>HT ONLY:</b> Use Le Chatelier's principles to explain changes in reaction yields	R115	<a href="https://www.youtube.com/watch?v=IYyoncESnmQ">https://www.youtube.com/watch?v=IYyoncESnmQ</a>			
Rates of Reaction	<b>HT ONLY:</b> Calculate the number of moles of a gas produced in a reaction	R985	<a href="https://www.youtube.com/watch?v=Qn5CgfokdWk">https://www.youtube.com/watch?v=Qn5CgfokdWk</a>			
Organic Chemistry	Draw the displayed structure of hydrocarbons	R837	<a href="https://www.youtube.com/watch?v=CX2IYWggEBc">https://www.youtube.com/watch?v=CX2IYWggEBc</a>			
Organic Chemistry	Describe the structure of hydrocarbons	R837	<a href="https://www.youtube.com/watch?v=CX2IYWggEBc">https://www.youtube.com/watch?v=CX2IYWggEBc</a>			
Organic Chemistry	Describe the structure of naturally occurring polymers like DNA	R692	<a href="https://www.youtube.com/watch?v=JYiUvB_GafM">https://www.youtube.com/watch?v=JYiUvB_GafM</a>			

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Organic Chemistry	Describe how to test for the presence of alkenes	R418	<a href="https://www.youtube.com/watch?v=qEm-CaghcOs">https://www.youtube.com/watch?v=qEm-CaghcOs</a>			
Organic Chemistry	Draw polymers and evaluate their uses	R723	<a href="https://www.youtube.com/watch?v=EP0zfm_FVqc">https://www.youtube.com/watch?v=EP0zfm_FVqc</a>			
Organic Chemistry	Describe how fractional distillation is used to produce different fractions	R205	<a href="https://www.youtube.com/watch?v=CjmriZq5xRo">https://www.youtube.com/watch?v=CjmriZq5xRo</a>			
Organic Chemistry	<b>HT ONLY:</b> Identify the functional groups of esters and explain how polymerisation works	R723	<a href="https://www.youtube.com/watch?v=U-eCXeFwTgY&amp;t=18s">https://www.youtube.com/watch?v=U-eCXeFwTgY&amp;t=18s</a>			
Chemical Analysis	Describe how to carry out paper chromatography	R638	<a href="https://www.youtube.com/watch?v=TdJ57SQ6GAQ">https://www.youtube.com/watch?v=TdJ57SQ6GAQ</a>			
Chemical Analysis	Analyse and calculate R <sub>f</sub> values from chromatograms	R720	<a href="https://www.youtube.com/watch?v=TdJ57SQ6GAQ">https://www.youtube.com/watch?v=TdJ57SQ6GAQ</a>			
Chemical Analysis	Describe how to test for different gases	R443	<a href="https://www.youtube.com/watch?v=bcRGfSIMIMw">https://www.youtube.com/watch?v=bcRGfSIMIMw</a>			
Chemical Analysis	Describe how to test for different ions in chemicals	R172	<a href="https://www.youtube.com/watch?v=4iZR4s4XIJOE">https://www.youtube.com/watch?v=4iZR4s4XIJOE</a>			
Chemical Analysis	<b>HT ONLY:</b> Explain why instrumental methods of chemical analysis are preferable	R487	<a href="https://www.youtube.com/watch?v=1BCc_RrrSSw&amp;t=181s">https://www.youtube.com/watch?v=1BCc_RrrSSw&amp;t=181s</a>			
Atmosphere	Identify the products of incomplete combustion	R221	<a href="https://www.youtube.com/watch?v=WI54p_xSs8Q">https://www.youtube.com/watch?v=WI54p_xSs8Q</a>			
Atmosphere	Describe the effects of atmospheric pollutants	R119	<a href="https://www.youtube.com/watch?v=2ri95j0cShg&amp;t=140s">https://www.youtube.com/watch?v=2ri95j0cShg&amp;t=140s</a>			
Atmosphere	Describe how the percentages of different	R225	<a href="https://www.youtube.com/watch?v=l0h_-3M0Pso">https://www.youtube.com/watch?v=l0h_-3M0Pso</a>			

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	gases in the atmosphere have changed over time					
Resources	Describe the structure and uses of composites and ceramics	R287	<a href="https://www.youtube.com/watch?v=q7VAq8t2gj0">https://www.youtube.com/watch?v=q7VAq8t2gj0</a>			
Resources	Describe how to calculate the mass of salt found in a salt solution	R759	<a href="https://www.youtube.com/watch?v=DikcEq2wg8g&amp;t=167s">https://www.youtube.com/watch?v=DikcEq2wg8g&amp;t=167s</a>			
Resources	Describe how the haber process is used to make ammonia	R511	<a href="https://www.youtube.com/watch?v=1_HoWz5Kxfk&amp;t=20s">https://www.youtube.com/watch?v=1_HoWz5Kxfk&amp;t=20s</a>			
Resources	Describe the processes involved in producing potable water from groundwater and sewage	R898	<a href="https://www.youtube.com/watch?v=PDeiRIQvWnM">https://www.youtube.com/watch?v=PDeiRIQvWnM</a>			
Resources	Explain what alloys are and evaluate why they are useful	R907	<a href="https://www.youtube.com/watch?v=QRDctnk7sF4">https://www.youtube.com/watch?v=QRDctnk7sF4</a>			
Skills	Draw a variety of different types of graph (bar, scatter)	R703 R148	<a href="https://www.youtube.com/watch?v=VM3i6-gvKSA">https://www.youtube.com/watch?v=VM3i6-gvKSA</a>			
Skills	Convert numbers into standard form	R778	<a href="https://www.youtube.com/watch?v=H3ewmorcYjU&amp;t=5s">https://www.youtube.com/watch?v=H3ewmorcYjU&amp;t=5s</a>			
Skills	Identify variables in an investigation	N/A	<a href="https://www.youtube.com/watch?v=nKbUbfadxRU">https://www.youtube.com/watch?v=nKbUbfadxRU</a>			
Skills	<b>HT ONLY:</b> Draw tangents to graphs to then calculate the gradient of a line	R771	<a href="https://www.youtube.com/watch?v=6LV63WtuvJg">https://www.youtube.com/watch?v=6LV63WtuvJg</a>			