

The Aspirin screen experiment

An online resource published by the Royal Society of Chemistry

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The synthesis of one of the world's most common pharmaceuticals, aspirin, or acetylsalicylic acid, is found in many advanced chemistry courses. The typical student carrying out the experiment may view the lab script as a set of cookery instructions to be followed without thinking about the underlying science. This free web-based resource should put an end to that^{w1}.

The aspirin screen experiment comprises a series of exercises designed to help the student through commonly asked questions, such as 'Why is the experiment conducted that way?', 'Why is that reagent used?', 'Why is it heated for that long?', and 'Why was that particular catalyst used?'. The resource comprises four sections – two pre-lab and two post-lab exercises – which take around 40 minutes each to work through and so make ideal homework. The use of pre-lab support resources has been shown to aid students' confidence in the laboratory setting.

Students are taken through each stage in the synthetic preparation and must make decisions based on the information presented. Exercises aid the students' practical skills and understanding of the particular chemistry involved. Their answers

are automatically stored in an online laboratory note book, which can be printed or accessed with login details. Individuals can obtain their own ten-digit user number for the website, or a teacher can register the whole class at one time.

The website provides additional notes and resources to aid teachers in making the best of their students' time. The original 'aspirin' booklet, which is the basis of this online resource, is also available and can be used independently in its own right.

This is the first of a proposed series of exercises aimed at supporting students around the world who are studying the UK's A-level and international baccalaureate chemistry courses (for ages 16–18). However, the resources should find a much wider audience with all those wishing to understand their practical sessions.

Web references

w1 – The online resource is published by the UK's Royal Society of Chemistry: www.rsc.org/learn-chemistry/resource/res00001644/aspirin-screen-experiment

Resource

Download the related booklet on which this resource is based:

Osborne C, Pack M (eds) (2003) *Aspirin* 2nd edition. London, UK: Royal Society of Chemistry. ISBN: 0854043888. Available for download at:
www.rsc.org/learn-chemistry/content/filerepository/CMP/00/000/045/Aspirin.pdf

