

Department of Chemistry - Macquarie University

Student Learning Experiences in the Laboratory

This survey will be used by the Department of Chemistry for the purpose of maintaining or improving the quality of this experiment for teaching purposes. Your cooperation in completing this anonymous form is greatly appreciated. It is not connected in any way to your assessment for this unit. Completion of this survey is voluntary.

Occasionally we would like to release this information into the public domain, for instance through presentations at conferences and publication in articles for journals. Such publication encourages discussion on good teaching practice. We would appreciate receiving your permission to publish your anonymous comment. If you **do not** wish to release your comments, please tick the box below.

I do not give permission for my comments to be used beyond the Department of Chemistry, Macquarie University.

The ethical aspects of this study have been approved by the Macquarie University Ethics Review Committee (Human Research). If you have any complaints or reservations about any ethical aspect of your participation in this research, you may contact the Committee through the Research Ethics Officer (telephone [02] 9850 7854, fax [02] 9850 8799, email: kdesilva@vc.mq.edu.au). Any complaint you make will be treated in confidence and investigated, and you will be informed of the outcome.

Unit: CHEM101

EXPERIMENT 6 – CONDUCTIVITY OF AQUEOUS SOLUTIONS AND SIMPLE ACID-BASE REACTIONS

1 Did this experiment help you to understand the concepts of electrolytes and the conductivity of solutions? If so, how, or if not, why not?

Yes, the more H ions more conductivity.

Yes, and the tutor (Amy) was very helpful in explaining concepts.

Yes, the way it was designed.

Yes, it shows practically how/why something is so.

Yes, as different solutions were tested.

Yes.

Yes.

Yes.

Yes it did!! It showed the ranges that weak and strong electrolytes have.

Yes, especially using the electrodes ourselves helped us see first hand the conductivity.

Yes, it gave me better understanding as it showed me what happens.

Yes. It helped me to understand how H^+ ions can bond with H_2O molecules and travel through the solution as well as on their own.

Yes.

Yes.

[Redacted]

[Redacted]

2 Did this experiment help you to understand acid-base reactions, including the reactions of carbonates and oxides? Is so, how, if not, why not?

Yes.

Yes, we saw what happens.

Yes, again practically shows you. However is monotonous.

Somewhat.

Yes.

Yes.

Yes.

No, as I did all that last year, so I knew all about it.

Yes.

Yes, by what reactions occurred.

Yes.

Yes.

[Redacted]

3 Did you find this experiment interesting? If so, what aspects of this experiment did you find of interesting? If not, why not?

Yes the different conductivity of different strengths of acids and bases.

Yes.

Whilst long, it was interesting.

Somewhat, it just drags on a bit and the answers are similar in each section. One question on each topic would make it more interesting.

Yes parts were interesting, however it was very long, and could be easier to understand if split into 2 pracs.

Yes.

No. There weren't many exciting reactions to keep me occupied.

Yes and no. Some experiments were interesting yet some had no reaction.

Yes, I love actually doing the pracs, measuring out and seeing results etc.

Yes, I enjoyed discovering the conductivity of solutions.

No, it wasn't exciting, too long.

No.

Yes.

Yes.

[Redacted]

[Redacted]

4 Can the experiment be completed comfortably in the allocated time? Is there time to reflect on the tasks while performing them?

Yes the time is adequate.

Adequate.

It was hard, but there was enough time.

Yes and yes.

Only just completed in time, there isn't enough time to reflect.

Close call.

Yes. Not really.

Yes.

Yes and yes.

Yes, plenty of time in which to work (?).

No, it needs to be split up.

Yes.

Yes.

Yes.

[Redacted]

[Redacted]

5 Does this experiment require teamwork and if so, in what way? Was this aspect of the experiment beneficial?

You helped and compared the results and discussed tests with people around you. And you work as a team in section 1 to get electrical measurements.

Yes.

Not essential, but helps to finish task on time.

Yes easier to work with partners to discuss.

Yes, it's easier to understand working in groups.

Yes – two heads are better than one.

Yes, by sharing devices. Yes, you can share opinions.

Yes, helping each other through the tasks. Yes.

It does to try to get a better idea of concepts as well as check the range of answers.

Yes, in order to complete the experiment in the allocated time, teamwork is necessary.

Yes, it makes it faster.

Yes.

Yes.

Yes.

[Redacted]

[Redacted]

6 Did you have the opportunity to take responsibility for your own learning, and to be active as learners?

Yes.

Definitely.

Yes.

Yes.

Yes.

Yes.

Yes, if something didn't make sense I would ask.

Yes.

Yes.

Yes.

Yes.

Yes.

Yes.

Yes.

Yes.

Yes.

7 Does this experiment provide for the possibility of a range of student abilities and interests? If so, how?

Yes. Abilities – balancing equations. Interests – electricity conductivity.

? Good for me.

Yes, by the number of things involved.

?

?

No.

Yes. It deals with different equations, reactions and observations which we can help each other with.

Yes.

Yes because students can help each other and the demonstrators are also helpful.

Yes, it targets many interests.

Yes.

Yes.

Yes.

Yes.

Yes.

8 Did the laboratory notes, demonstrators' guidance and any other resources help you in learning from this experiment? If so, how?

Yes the diagram on the board and Amy's (demonstrator) explanation of it helped me understand the meaning behind the experiment.

No.

Amy was a big help (demonstrator).

Yes, good when you need help. She explains things well.

The laboratory notes helped, looking in the textbook helped, demonstrators guidance helped.

Definitely.

Yes Azadeh (?) is so helpful and she never sounds like she thinks you're stupid even if the work is so below her.

Yes. Whenever we were stuck they would go through the experiment and show examples on the board.

Yes, she showed us how it works on a molecular level.

Yes, especially the demonstrator. Lab notes are helpful because they are so detailed and straightforward.

Yes, they provide helpful guidance.

Yes.

Yes.

Yes.

[REDACTED]

[REDACTED]

9 Are there any other features of this experiment that made it a particularly good or bad learning experience for you?

Teamwork.

No.

Length was bad, and the conductivity test was good.

The conductivity experiment was interesting and easy to understand.

I broke a test tube. Sorry. ☹

No.

I liked the colours.

No.

No.

No.

[REDACTED]

10 What improvements could be made to this experiment?

More explanation of relevance of some of the tests. More teamwork exercise.

Needs to be shorter.

It needs to be shorter.

Explosions.

More explosions.

N/A.

More exciting, not as long.

A little bit more interesting or creative experiment (?) would be cool.

None.

Nothing.

11 Any Other Comments

Very beneficial to my understanding of lectures and the processes needed for tests.

I've enjoyed these sessions but I've been here all day, it's 6 pm and I've thought enough for one day.

Chemistry is a good subject.

No.

No.