

PEER REVIEW GUIDE - for Lab Report 2

Here are some guiding questions to help you review each other's work. Respond in ways that will help improve the quality and presentation of the section you are reading. The figures and tables should be understandable on their own, without the rest of the report. Thus, they must be clear and complete. The legends must have enough information to identify what is in the figure and how the experiment was done. Staple this sheet to the final review.

Researcher: _____ Reviewer: _____ Peer rev pts _____

Write review team names on draft

Review of Results:

1. Does the Results section

- begin with an introductory sentence or two that explains the purpose of the laboratory?
 - If there is such a sentence, does it accurately reflect your understanding of the purpose of the laboratory experiments? If not, explain.
 - An example of such a sentence form is: "In order to determine ..., we did"
- briefly mention data from a provided table or gel? Are the results from the gel complete? Are they too extensive? Explain.

2. Is the preparation of the DNA prior to the transformation of bacteria briefly described?

- Is it complete and clear?

If not, mention how it could be made more complete or clear.

3. Is the efficiency of transformation calculated from the positive control and presented in colonies/ μg of DNA?

Quickly recalculate this number below using the data given to see if you get the same result presented. Show your work below. If you didn't get the same value as presented in the results section, explain how you think your calculation may or may not be more accurate.

Review of Discussion

1. Is the transformation efficiency compared to the standard for this technique?

- That number is generally 10^5 - 10^6 colonies/ μg DNA.
- Does the researcher give some explanation if their number is not in the same range?

List below any other reasons you think might explain a lower transformation efficiency.

2. Does the researcher explain any anomalous results in the production of black and white colonies for the transformation experiment?

- For instance, "We expected only white colonies on the plate containing bacteria transformed with non-ligated DNA, but we obtained a number of black colonies as well. This could be explained as ..."
- Can you list any other reasons to explain their strange results?

3. Does the researcher explain any anomalous results from the agarose gel?

4. Are there other unexplained results that don't fit the expected pattern? If so, list them.

5. Does the discussion section end with a concluding sentence addressing whether the data fit the hypothesis being tested? If yes, does the data presented in the report justify or support that conclusion or not? Explain your answer.

Editorial Review of Results and Discussion sections

1. Circle on the page any spelling errors, even if you are unsure of the correct spelling.
2. Underline any sentences that seem incomplete to you.
 - A complete sentence: *The gel showed the DNA was completely digested by EcoRI.*
 - An incomplete sentence: *The DNA in the gel completely digested by EcoRI.*
3. Check for subject-verb agreement, errors occur when subject and verb are separated.
 - Example 1: The results of the DNA gel is not conclusive.
 - Example 2: The DNA digested with different restriction enzymes are not visible on the gel.
 - Place a check mark over any verb you think does not agree with the subject.
4. Underline imprecise language.
 - “The pBluescript plate...” or “The 50ul plate...” should not be present, but be replaced by “The plate with bacteria transformed with pBluescript DNA...”
5. Look for transition phrases: sentences that make the reading easier and allow the reader to follow the train of thought. These usually occur at the beginning and end of paragraphs to improve the flow.
 - Example: “*To determine the copy number of our gene, we isolated genomic DNA and performed a Southern blot with our probe.*”Circle any transition phrases in the text and comment on them. If you find a place where a transition sentence would be useful, make a mark there in the text.
6. Do you see some places where you can help make the writing more concise, clear, less wordy?

How would you evaluate this writing? Give an overall rating on a scale of 1-5. 1 2 3 4 5
(Excellent)

Researcher: Please respond to comments received.

What was most helpful? Why?

What was least helpful? Why?