WRITING AN ABSTRACT

Sample 1:
This experiment will determine what will make enzymes effective and what will make them ineffective. We tested different samples of enzymes in a spectrophotometer and recorded their absorption rates. Six samples were placed in the spectrophotometer but two contained no enzyme; these acted as blanks for the other samples. The four remaining samples contained Catecholase ranging from 0.5 ml to 1.75 m. The second half of the experiment contained four test tubes with a constant amount of Catecholase, but the pH levels ranged from four to eight. It was found that if the enzyme was present in large amounts, then the absorption rate was high, and if the pH level ranged from 6 to eight then the absorption rate was high. Therefore it can be said that enzymes work well in neutral pH levels and in large amounts.

Sample 2:
This experiment was performed to determine the factors that positively influence enzyme reaction rates in cellular activities since some enzymes seem to be more effective than others. Catecholase enzyme activity was measured through its absorption rate in a spectrophotometer, using light with a wavelength of 540 nm. We compared the absorbance rates in samples with varying enzyme concentrations and a constant pH of 7, and with samples with constant enzyme concentration and varying pH levels. The samples with the highest enzyme concentration had the greatest absorption rate of 95 percent compared to the sample with the lowest concentration and an absorption rate of 24 percent. This suggests that a higher concentration of enzymes leads to a greater product production rate. The samples with a pH between six and eight had the greatest absorption rate of 70 percent compared to an absorption rate of 15 percent with a pH of 4; this suggests that Catecholase is most effective in a neutral pH ranging from six to eight.
retrieved from: http://writing2.richmond.edu/training/project/biology/abslit.html#sample1

1. Compare the samples and choose the better one. Find 5 arguments (at least) to support your choice.

2. Divide the good example into 4 main parts. In general, describe the contents of each part.

3. Answer the questions or choose the correct option.

a) Abstracts are intended for expert/general audience.

b) When abstracts are required?

c) What is the purpose of an abstract?

d) When do you write the abstract (i. e. at which stage of you work)?

e) An abstract should/should not contain citations.

f) An abstract should/should not contain diagrams, graphs and other graphic representations.

g) An abstract should/should not contain information not included in the paper itself (similar to a summary/conclusion).

h) The abstract may/may not contain recommendations (e.g. for further research) and limitations of the research.

i) Short/long, complex/simple sentences and active/passive statements should be used in order to convey the information as effectively as possible.

j) It is common/uncommon in abstracts to refer to the researchers using the first person plural pronoun 'we' or possessive pronoun 'our'.

k) _____ (the first part of an abstract) should be written in future/present/past simple tense.

l) _____ (the second part of an abstract) is usually written in future/present/past simple tense.

m) _____ (the third part of an abstract) can be written in future/present/past simple tense.

m) _____ (the fourth part of an abstract) is usually written in future/present/past simple tense.

4. Compare the following texts.

a) *Are they both abstracts?*
b) *What is the difference between them?*
c) *Is there anything to be improved?*

Sample 1:
This study investigated the effectiveness of Calibrated Peer Review (CPR) ™ in a senior-level biochemistry class for improving students' ability to write scientific abstracts. Some students revised scientific abstracts after getting feedback on drafts from CPR; others revised after feedback from a Teaching Assistant. The writing quality of the abstracts composed with feedback from CPR was compared with the writing quality of the abstracts composed with Teaching Assistant-generated feedback. Statistical analyses of three assignments by 50 students indicated significant differences between CPR and Teaching Assistant feedback on student writing quality. While scores of students who received Teaching Assistant feedback decreased, scores of students who used CPR improved. Students also progressed over the course of a semester in CPR-generated measures of their reviewing abilities.

Sample 2:
This study investigated the effectiveness of Calibrated Peer Review (CPR) ™ in a senior-level biochemistry class for improving students' ability to write scientific abstracts. The CPR process for feedback was compared with Teaching Assistant-generated feedback. Statistical analyses of three assignments by 50 students and a separate analysis of the abstracts written by 256 students were used to measure differences in writing quality for each type of feedback.

retrieved from: https://writingcenter.tamu.edu/Grads/Writing-Speaking-Guides/Alphabetical-List-of-Guides/Academic-Writing/Abstracts

5. Evaluate the following abstract using the information from ex. 2 and 3.

The development of wearable technology, which enables motion tracking analysis for human movement outside the laboratory, can improve awareness of personal health and performance. This study used a wearable smart sock prototype to track foot–ankle kinematics during gait movement. Multivariable linear regression and two deep learning models, including long short-term memory (LSTM) and convolutional neural networks, were trained to estimate the joint angles in sagittal and frontal planes measured by an optical motion capture system. Participant-specific models were established for ten healthy subjects walking on a treadmill. The prototype was tested at various walking speeds to assess its ability to track movements for multiple speeds and generalize models for estimating joint angles in sagittal and frontal planes. LSTM outperformed other models with lower mean absolute error (MAE), lower root mean squared error, and higher R-squared values. The average MAE score was less than 1.138° and 0.939° in sagittal and frontal planes, respectively, when training models for each speed and 2.15° and 1.14° when trained and evaluated for all speeds. These results indicate wearable smart socks to generalize foot–ankle kinematics over various walking speeds with relatively low error and could consequently be used to measure gait parameters without the need for a lab-constricted motion capture system.

Davarzani, S., Saucier, D., Talegaonkar, P., Parker, E., Turner, A., Middleton, C., . . . Freeman, C. (2023). Closing the Wearable Gap: Foot–ankle kinematic modeling via deep learning models based on a smart sock wearable. *Wearable Technologies, 4*, E4. doi:10.1017/wtc.2023.3

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