Good Abstract, Bad Abstract

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Here are two examples of the same abstract; sample one is an example of a badly written abstract, while sample two is an example of a well-written abstract. The underlined words will be found below these examples in a list explaining what makes the abstract good or bad.

Sample 1: This experiment will determine what will make enzymes affective 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.

Explanations of the Example Links

Sample 1:

Affective: Watch out for mix-ups of 'affect' and 'effect'. This one should have been "effective". The word affect is usually a verb – something influences something else, as in "The music affected the study participants' moods." An effect is a noun, the thing that happened: "The music had a negative effect on mood," or, "The effect of studying is that you get a better grade than you would without studying."

Ineffective: This sentence is in the present tense and needs to be switched to the past tense. In addition to tense problems, the sentence does not tell the reader much about what is meant by the term effective. What exactly is an effective enzyme? The author needs to be specific and try to avoid generic terms such

as effective. Also, the author never states why the experiment is being conducted. Why is enzyme effectiveness so important? What makes it important enough to be studied?

Rates: This sentence is addressing what was done, yet it barely conveys any information. The author states that different samples of enzymes were tested, but mentions nothing about the contents of the samples. Was the same enzyme used in every sample? What was in each sample, and what varied in each sample? Also, what does absorption have to do with enzyme activity? This correlation needs to be explained to the reader. One last detail that should be included is the wavelength of light that was used in the spectrophotometer. Did it remain constant or was it a variable as well?

Eight: This is too long and detailed to be in an abstract; it sounds as though it was pulled from the methods and materials section of the paper. The amounts of enzyme do not need to be stated, nor do the pH levels. The number of samples tested do not need to be included either; it is just extraneous information that is not crucial to understanding the experiment as a whole. The information contained in this sentence can be pulled out and rearranged to say that some samples had a constant pH and varying enzyme concentrations and other samples had constant enzyme concentrations and varying pH levels. With the controls and the variables stated you can move on to your results.

High: This is just too general, although it conveys the right information. When stating results it is okay to use actual numbers. Instead of saying that the absorption rate was high, specify how high in comparison to samples with low absorption rates.

Amounts: An experiment is never final, nor is it ever positive. Always avoid saying that the results you obtained are correct or definite. Instead just say that the data supported or did not support your hypothesis. Avoid saying your hypothesis was ‘proved’ or ‘disproved’!

Sample 2:

Others: This sentence is clear and concise, telling the reader why the experiment was carried out. It poses the question of why some enzymes are more effective than others and it explains that the experiment was set up to determine what causes these differences.

540 nm: This sentence introduces the specific enzyme being studied and how it was studied. The light wavelength used in the spectrophotometer was also specified telling the reader that wavelength was not one of the variables manipulated or changed in the experiment.

Levels: It is okay to use personal pronouns in the abstract and this sentence uses "we" effectively. It also defines what was done without going into great detail. The controls and the variables are stated clearly and succinctly so the reader knows what factors are being tested to determine enzyme productivity.

Per cent, rate, eight: These two sentences combine the results with the conclusion. This helps to make the conclusions drawn from the results very clear to the reader. The author also stated concrete numbers in the results so the reader is aware of just how much the absorption rates changed in each sample.