

Abstract

Show how the experiment fits into the process of interest. Discuss the results and conclusions. – One paragraph, only. Mention any recommended courses of action as a result of the experiment. The point of the abstract is to try to get the people to read the remainder of the report.

I. Background/Theory

A. Why you are doing the experiment?

B. How the experiment fits into the project?

II. Experiment Design

A. Which experiment Design was used?

B. Is this the first in a series? Where does it fit in a series?

C. Show the responses, factors & levels, and list the runs (in run order to show randomization)

III. Method

A. Describe the method of conducting the experiment

B. Were there any “bad” runs? Runs repeated due to error?

C. What did you do right? Wrong?

IV. Results/Data

A. What were the values of the responses?

B. Was anything unexpected?

V. Analysis

A. Which factors were significant? Which were not?

B. Show graphs. Discuss statistical significance

C. Show the experiment model with coefficients.

VI. Recommendations & Conclusions

A. What factors or interactions have practical importance?

B. Was anything learned from the experiment contrary to popular knowledge about the process?

C. What to do next?

1. More experiments
2. Verification runs
3. Observation of the process after a change

D. Is there evidence of a “better” operating point?

E. Should you change the process to the better point in the interim, even prior to other experiments?