Research Plan (Sample)

A. Rational: The food industry has been adding additives to food such as vitamins and minerals to enhance the food nutritional value and to help individuals who have a low intake of them. The importance of this research is to see if what labels claim on the content of Vitamin C in orange juice is true and not less with the addition of a calcium additive since some literary research has shown that calcium reduces Vitamin C in the body. The impact of such a study would have on society is a greater awareness of the validity of nutritional labels.

B. Question: Does a calcium additive to orange juice change its concentration of Vitamin C?

   Problem: To determine if added calcium decreases the concentration of Vitamin C in orange juice.

C. Hypothesis: If calcium is added to orange juice, then the concentration of Vitamin C will decrease.

D. Method: (Use FUTURE TENSE to describe the details of the method or procedure.)


   • May be written stepwise, in sections, or in phases. Must be in the FUTURE TENSE.
   • Detail the procedure and experimental design that WILL BE used very clearly!
   • May use diagrams or flow charts, etc.
   • STAY AWAY from personal pronouns: “I will…We will…Next I will…etc.”
   • Use metric measurements. Include concentrations, quantities and major equipment.
   • Know the rules for studies dealing with Human Subjects, Vertebrate Animals, Potentially Hazardous Biological Agents and Hazardous Chemicals, Activities and Devices. Refer to the handout on the Research Plan.
   • Include a copy of a questionnaire, survey, or test if part of the study.
   • Data Analysis: State the procedures that WILL BE USED to analyze the data that WILL BE collected to answer the question or hypothesis. USE the FUTURE TENSE, DO NOT give results. DO NOT give a conclusion. The research plan states WHAT WILL BE DONE.
   • Discussion of Results and Conclusion: Discuss the data/results and conclusion that CAN BE drawn (future tense).

D. Bibliography: List at least 5 major RELIABLE references from literature review that are applicable to the experiment. The more resources, the better it is for your study.

   • Do not rely only on Internet resources. Internet resources should be reliable.
     Also use science journals, books, magazines, newspapers, etc.
   • Use a proper bibliography format (MLA or AP style or other format) for journals, books, magazines, newspapers and Internet resources.
   • Be consistent with the format chosen. Should be alphabetized by authors’ last name.

   Note: For Internet resources, DO NOT just give a website!!! Indicate the Author, Title of article, [Online] website, date the article was posted or date the article was retrieved (downloaded).

   (Date Posted Example):

   (Date Retrieved Example):

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