CALIFORNIA STATE SCIENCE FAIR
2015 PROJECT SUMMARY

Name(s)

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Project Number

35183

Project Title

Does Green Tea Affect Oral Health?

Abstract

Objectives/Goals

The objective of the project was to see if green tea inhibit the growth of oral bacteria and therefore have a positive impact of oral health. Does green tea inhibit the growth of oral bacteria? This topic is important because many cultures around the world drink teas. Green tea is one of the most popular teas consumed. If Green tea can inhibit the growth of oral bacteria it may be used to impact oral health on a global scale.

Methods/Materials

Three test subjects; Nine Petri dishes; Two -125ml bottle of sterile nutrient Agar; One Silicon glove (heat resistant); Nine thin clear flat Velcro fasteners; 11 -2/pack sterile cotton Swab applicators; Straight edge; 1/8in black Formaline Charting& Graphic Art Tape; One Foam core board cut to 31.5cm x 39.5cm; Three Green Tea bags; One plastic bottle; One .85oz (24g) tube of toothpaste; Three new Tooth brushes; Three 6oz Dixie cups; Water; Three pairs of latex gloves; One Microwave.

Starting with the subject A, take one sterile cotton swab applicator and rub the tip on the tongue and cheek apply saliva to petri dish labeled A1 and swipe the agar in a zig-zag motion. Next,take a clean tooth brush and toothpaste and have them brush, take a sterile cotton swab applicator and rub the tip on the tongue and cheek apply to the petri dish labeled A2 and swipe the agar in a zig-zag motion. Finally, pour green tea into a Dixie cup and have the subject rinse with the Green tea for 10 to 15 seconds, take a third sterile cotton swab applicator and rub the tip on the tongue and cheek apply to petri dish labeled A3 and swipe the agar in a zig-zag motion. The above procedure should be repeated on subjects B and C.

Results

The result of the experiment was that the green tea rinse petri dish appeared to have less bacteria growth than the control, the brushing petri dishes contained less signs of bacteria growth than the control and appeared less than the green tea. However, green tea does effect growth of bacteria.

Conclusions/Discussion

The conclusion of the experiment was green tea did effect the growth of bacteria. But the brushing petri dishes contained less bacteria than the control and green tea petri dishes. Brushing is better overall.

Summary Statement

The affects of Green Tea on oral health.

Help Received

Dr. Light, Family Dentist suggested types of materials to use in the experiment; Mr. Hofsteen helped with experiment/test set-up; Mother assisted in typing and board layout; Mr. Chipley, math teacher helped refine procedure.

Preliminary