

***Independent Scientific Clinical Study of Safety and Efficacy:
28-Day Use of White Birch™ Charcoal Toothpaste***

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DATES OF STUDY: July 10, 2018 – August 12, 2018

CLAIMS TESTED:

2-Week Use Claims:

- Use of White Birch™ Charcoal Toothpaste achieves an average of 2 shades or better in 14 days. White Birch™ Charcoal Toothpaste whitens better than market leading whitening toothpaste

4-Week Use Claims

- Use of White Birch™ Charcoal Toothpaste achieves an average of 4 shades or better in 28 days. White Birch™ Charcoal Toothpaste whitens better than market leading whitening toothpaste

Safety Claims:

1. Use of White Birch™ Charcoal Toothpaste causes no significant tooth sensitivity
2. Use of White Birch™ Charcoal Toothpaste causes no significant gum irritation
3. Use of White Birch™ Charcoal Toothpaste causes no adverse reactions or tissue damage / pathology

Consumer Perceptions:

1. White Birch™ Charcoal Toothpaste is convenient and easy to use
2. White Birch™ Charcoal Toothpaste makes teeth noticeably whiter
3. White Birch™ Charcoal Toothpaste was able to remove unwanted tooth stains
4. White Birch™ Charcoal Toothpaste causes no sensitivity
5. Use of White Birch™ Charcoal Toothpaste left teeth feeling very clean and smooth
6. Use of White Birch™ Toothpaste exceeds expectations

MAJOR OBJECTIVES:

The major objective of the study was to test the safety and effectiveness of White Birch™ Charcoal Toothpaste, which contains a patent pending form of white charcoal that was conceived to give consumers all of the advantages of brushing with charcoal, but with none of the mess. The objective was to test the product's safety and efficacy in a 4-week clinical study. We also surveyed subject opinions about the product. The study was conducted in accordance with the Guidelines for Good Clinical Practice and ADA Guidelines for Testing of Toothpaste and Home Whitening Products.

STUDY METHODS:

Twenty-five subjects were assigned to the experimental study group, and 25 subjects were assigned to the control group (market leading whitening toothpaste, Colgate Optic White Toothpaste). The same toothbrushes (Oral-B Pro-Health Soft Full Head Toothbrush) were given to all subjects to brush their teeth. Before starting the study, oral hygiene instruction

was given to subjects, including tooth brushing times and technique. Subjects were instructed to brush and rinse their teeth twice a day with the White Birch™ Charcoal Toothpaste, in the morning after breakfast and in the evening before sleeping. Subjects were not given any instructions about drinking and eating, and were allowed to follow their previous patterns for these activities.

As per the protocol established by the American Dental Association, two experienced, trained examiners, who have achieved a 90% agreement during a pre-study calibration, performed the oral soft tissue examinations and shade assessments at baseline. Shade assessments were made by comparing the shade tabs from a Vita shade guide, with the facial aspects of the upper and lower central incisor teeth and selecting the closest matching shade.

Teeth shades of subjects were evaluated, near one window, between 10:00 am and 12:00 am in natural light, so as to simulate real life perceptions of teeth lightness. The examinations took place at the following time intervals: Baseline, Day 1, Day 7, Day 14 and Day 28. All subjects were asked to sign consent forms and were asked to complete a brief baseline consumer perception survey.

Subject Demographics:

Subjects were chosen from a pool of candidate living in the South Florida area (Palm Beach and Broward Counties). All subjects ranged between 18 – 85 years in age. The groups were balanced so that seven (7) of the subjects in each group identified themselves as smokers (at least ½ pack per day or use of electronic cigarettes).

Product Use Protocols:

Procedure for the study was as follows:

1. Baseline tooth shade was recorded using Vita-Shade Guide and Spectrophotometer
2. Participants were provided with a standard toothbrush (as per above) and either the experimental or control product
3. Participants applied the Toothpaste as per manufacturer's instructions and were timed as they brushed for 2 minutes, and then expectorated thoroughly.
4. Participants were instructed to follow this procedure and use product twice daily for 4 minutes total exposure time each day. The product was to be used for 2 weeks (14 days).

Statistical analysis:

Data from the study were entered into statistical software (SPSS for Mac, Version 15.0; SPSS Inc., Chicago, USA). The Student's T-test, Fisher's exact chi-square test, and ANOVA analysis was used to compare the quantitative data from the study. Results were tested for significance at the ($P < 0.05$) level.

Ethics:

An Expedited IRB Study Approval application was submitted due to the non-invasive nature of the proposed study. The study was conducted in accordance with the Guidelines for Good Clinical Practice and ADA Guidelines for Testing Home Use Whitening Products. All procedures were reviewed by PSC Research Institute Principal Investigator (Dr. Martin Giniger) and followed manufacturer's published or proposed directions for treatment application. Study subjects were required to sign an informed consent form and met all entrance requirements.

Inclusion Criteria:

1. Male and female Subjects in good general health and between the age 18 to 85 years at the time of enrollment with a tooth shade greater than or equal to A3 for all six non-restored maxillary anterior teeth prior to treatment.
2. Subjects have to be willing to not use any other dental whitening product, with the exception of toothpaste, during the course of the study
3. Preference will be given to persons who smoke at least ½ pack of cigarettes per day (at least 7 participants who smoke in each group)
4. Preference will be given to study participants over the age of 50 (at least 7 participants over age 50 in each group)
5. Participants will be asked to refrain from consuming dark foods / beverages that tend to stain teeth for ½ hour after the application of their assigned product during the course of the study.

Exclusion Criteria:

1. Subjects with fewer than 6 gradable anterior maxillary teeth or subjects whose anterior maxillary teeth have had restorations, dentures or dental implants.
2. Subjects who have had a dental cleaning procedure within the last 6 months.
3. Subjects who reported current sensitivity on maxillary anterior teeth.
4. Subjects with a history of sensitivity to peroxides or glycols and a documented history of untreated caries, dentin exposure, recession, abfractions, cracks or chips on the teeth to be treated or severely malposed anterior teeth.
5. Subjects with a history of diabetes or any other systemic disease, which in the Investigator's opinion could have interfered with the assessment of the oral soft/hard tissue
6. Subjects taking any photo-reactive medications
7. Subjects who had previously used teeth whitening gels or peroxide-based teeth bleaching products within the last 6 months.

Assessment of Tooth Color Change:

Two examiners were available to assess Vita Shade Score. The primary examiner was a well-experienced and scientifically qualified dentist. The second examiner is Dr. Martin Giniger, who also served as a project director and is a published and well known, experienced authority in the measurement of teeth color. For consistency's sake, and to ensure maximum impartiality, the primary examiner determined all Vita Shade Scores. The second examiner (Dr. Martin Giniger; project director) was used when the primary examiner felt that he had become un-blinded (with regard to which product is being used), or when he felt that he could not decide on a definitive shade match. When the second examiner was called into action, the decisions of the second examiner was used as the final determination of Vita Shade Score.

Shade change was calculated by determining the change in the number of shade guide units that occurred toward the lighter end of the value-oriented list of shade tabs. Although the scale is not in the truest sense linear, the changes were treated as representing a continuous and approximately linear ranking for the purpose of analysis as is standard practice in the dental literature.

As detailed below, the Vita Shade Score was used to determine the general efficacy of teeth whitening caused by the Experimental and Control products. In order to measure the efficacy of deep set stain removal, we utilized a specially calibrated spectrophotometer (Minolta CR-321Chromameter) in accordance with ADA guidelines for acceptance of teeth whitening products (reference: Tavares et al. Light augments tooth whitening with peroxide. J Am Dent Assoc 2003;134;167-175) with the meter set at a depth of 1.5mm. We intend to report here both measures of teeth whiteness (Superficial and 1.5 mm Deep).

Vita Shade Assessment for Measurement of Surface Tooth Color:

The principal investigator assessed tooth color change of each subject's teeth in a room with color corrected lighting (5500K light bulbs). A blue bib was placed over clothing and the dental light turned off. Subjects were instructed not to wear lipstick and to sit in a position where the teeth in the maxillary arch were parallel to the floor during the evaluation. Anterior maxillary teeth #6 through #11 will be used for assessment. Gradations within the value-oriented Vita® Shade Guide (Vita Zahnfabrick GmbH, Sackingen, Germany) were utilized. The shade guide was arranged in the chromatic rank order [1 = lightest shade; 16 = darkest shade] as recommended by the manufacturer and described in the literature. Shade change was calculated by determining the change in the number of shade guide units that occurred toward the lighter end of the value oriented list of shade tabs. Although the scale is not in the truest sense linear, the changes will be treated as representing a continuous and approximately linear ranking for the purpose of analysis as is standard practice in the dental literature.

Spectrophotometer Assessment of Tooth Lightness:

To measure the ability of the Experimental and Control Products to affect deep set stains, we used a Minolta CR-321 spectrophotometer to record triplicate L* measurements of the baseline and maxillary central incisor teeth at each examination interval. The meter was calibrated according to manufacturer's instructions and set at a depth of 1.5 mm for the measurement of deep set stains. For each measurement, the spectrophotometer tip was carefully placed in the center of each tooth, assuring that it was parallel and flush against enamel surface. After each reading obtained, the meter tip was repositioned carefully in a similar manner. The mean of the three-recorded L* values for each tooth was entered into a spreadsheet for each examination interval. The group means, standard deviation calculations and T-test statistical analyses were derived from these values. We used L* as the objective measurement of tooth lightness because it is derived from the CIE LAB perceptual color space, the most commonly used color space in studies of human tooth color. We also believe that using L* would yield most accurate and objective assessment of whitening efficacy because L* vector is the only one that is visually uniform. Furthermore, small movements in L* value are more clinically visible than a* or b*, and hence likely to be the most clinically relevant. Finally, we believe that L* to be a good choice since the overall objective of tooth bleaching is to visibly "lighten" the color of teeth.

RESULTS:

Twenty-five subjects were assigned to the experimental study group, and 25 subjects were assigned to the control group (Colgate Optic White Toothpaste). The same toothbrushes (Oral-B Pro-Health Soft Full Head Toothbrush) were given to all subjects to brush their teeth. Before starting the study, oral hygiene instruction was given to subjects, including tooth brushing times and technique. Subjects were instructed to brush and rinse their teeth twice a day with the White Birch™ Charcoal Toothpaste, in the morning after breakfast and in the evening before sleeping. Subjects were not given any instructions about drinking and eating, and were allowed to follow their previous patterns for these activities.

DEMOGRAPHICS:

All subjects were residents of South Florida and all major races were represented in the study groups. All subjects were healthy and had healthy, natural maxillary teeth that were judged to have a Vita shade of A3 or darker.

1. Mean age of experimental subjects was 42.3 ± 15.9 years. Age range was 18-79 years.
2. Mean age of control subjects was 42.5 ± 14.6 years. Age range was 18-79 years.
3. At least 7 persons in each group identified themselves as cigarette smokers (at least 1/2 pack per day).
4. The control group consisted of 12 females and 13 males.
5. The test group consisted of 13 females and 12 males.

WHITENING EFFICACY RESULTS:

We judged the whitening efficacy of the Control and Test products using Vita Shade Score analysis and confirming the results with a Minolta CR-321 Spectrophotometer according to ADA Guidelines and industry standards. Table 1 below shows the “Mean Vita Shade Score” for all the subjects groups at the 2-week and 4-week measurement intervals. That data shows that combined use of WHITE BIRCH™ Charcoal Toothpaste caused a HIGHLY significant improvement ($p < 0.05$) after just one use. The data also shows:

1. Use of White Birch™ Charcoal Toothpaste achieves an average of 2.2 shades or better in 14 days. This is far superior compared to the whitening of the market leader (0.85 shades). The white charcoal toothpaste performs nearly 300% better.
2. Use of White Birch™ Charcoal Toothpaste achieves an average of 4.1 shades or better in 28 days. This is far superior compared to the whitening of the market leader (2.6 shades). The white charcoal toothpaste performs nearly 60% better.

Table 1 shows the *Mean* Vita Shade Scores of all 50 participants after 1 day and 14 days of use along with standard deviations.

| TABLE 1 | | | | | |
|--|------|--------|--------|--------|--------|
| MEAN <u>VITA SHADE SCORES</u> AFTER 2-WEEKS AND 4-WEEKS OF USE | | | | | |
| STUDY GROUP | BASE | DAY 14 | CHANGE | DAY 28 | CHANGE |
| EXPERIMENTAL (n=25) | 9.85 | 7.65 | 2.20 | 5.75 | 4.10 |
| CONTROL (n=25) | 9.85 | 9.00 | 0.85 | 7.25 | 2.60 |

Table 2 (Brightening) below shows the “Mean Spectrophotometer L* Score” for all the subjects groups after the first measurement interval. It shows that WHITE BIRCH™ Charcoal Toothpaste caused a significant improvement ($p < 0.01$) in brightening after just one use.

After just 14 days, the brightness increased $71.7 - 65.5 = 6.1$ L* brightness units (equivalent to $\sim 3 \pm 1.0$ shades). This objectively confirms and agrees with the results from the Vita shade experiments.

After just 28 days, the brightness increased $74.7 - 65.5 = 9.2$ L* brightness units (equivalent to $\sim 4.5 \pm 1.0$ shades). This objectively confirms and agrees with the results from the Vita shade experiments.

| TABLE 2 | | | | | |
|---|------|--------|--------|--------|--------|
| MEAN <u>L* SPECTROPHOTOMETER MEASUREMENT</u> 2-WEEKS AND 4-WEEKS OF USE | | | | | |
| STUDY GROUP | BASE | DAY 14 | CHANGE | DAY 28 | CHANGE |
| EXPERIMENTAL (n=25) | 65.5 | 71.7 | 6.1 | 74.7 | 9.2 |
| CONTROL (n=25) | 65.8 | 68.2 | 2.4 | 70.8 | 5.0 |

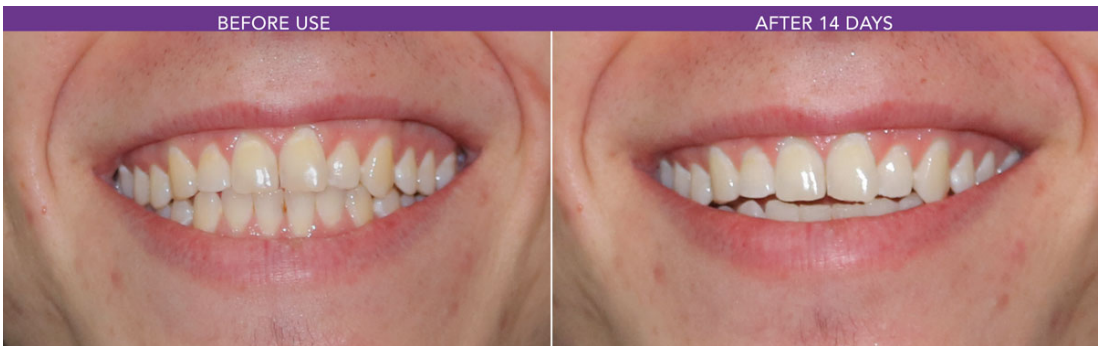
CLINICAL PHOTOGRAPHS:

Clinical Photographs of Subjects after 28 days of use of WHITE BIRCH™ Charcoal Toothpaste use. All photos show impressive natural-looking whitening and brightening of teeth using only WHITE BIRCH™ Charcoal Toothpaste and no other whitener. All skin tones match, as environmental brightness and lighting was carefully controlled. A Canon® EOS T6i camera was used for all clinical photographs. A Canon® EF-5 Zoom Lens was attached to camera and a ring flash was used.

Subject 1 = 24-Year Old Male Smoker Using White Birch™ Charcoal Toothpaste
6 Shades



Subject 2 = 18-Year Old Male Non-Smoker Using White Birch™ Charcoal Toothpaste
4 Shades



Subject 16 = 42-Year Old Female Non-Smoker Using White Birch™ Charcoal Toothpaste
6 Shades



CLINICAL PHOTOGRAPHS (CONTINUED):

Subject 20 = 60-Year Old Male Smoker Using White Birch™ Charcoal Toothpaste
6 Shades



Subject 22 = 37-Year Old Female Non-Smoker Using White Birch™ Charcoal Toothpaste
6 Shades



SAFETY STUDIES:

We judged safety of the Control and Test products based on the results of Loe and Silness Gingival Index scoring, VAS Sensitivity Index scoring and through thorough monitoring the hard tissue / soft tissue oral health of the 60 subjects entered in the study.

Overall Safety:

We found that there were no ill effects caused by the use of any of the products in all subjects tested. There were no adverse reactions found and there were no tissue changes found.

GUM RESPONSE:

We found that the White Birch™ Charcoal Toothpaste was very gentle to the gingival tissue and did not cause any significant gum irritation as shown in Table 3. Scoring was as follows: 0—normal gingiva; 1—mild inflammation (slight color changes and edema; no BOP); 2— moderate inflammation (redness, edema, and glazing; BOP); 3—severe inflammation (marked redness, edema, ulceration; tendency toward spontaneous bleeding); Thus, any mean reduction, can be interpreted as healthier gums. There was no significant change at day 1, however at day 14 there was a small but significant improvement to gingival health ($p < 0.05$). Additionally, there was no statistical difference between the performance of the experimental and control groups. Both groups were exceptionally safe to use and slightly, but significantly. improved gum health with regular use.

| TABLE 3 SAFETY STUDIES | | | | |
|--|------|--------|--------|------|
| MEAN CHANGE IN GINGIVAL INDEX SCORE | | | | |
| STUDY GROUP | BASE | DAY 14 | DAY 28 | SAFE |
| EXPERIMENTAL (n=25) | -- | -0.2 | -0.75* | YES |
| CONTROL (n=25) | -- | -0.2 | -0.80* | YES |
| * significantly improves gum health p < 0.05 | | | | |

TEETH SENSITIVITY:

We found that the White Birch™ Charcoal Toothpaste did not cause any tooth sensitivity, and in fact at Day 28 slightly reduced sensitivity, although this was not statistically significant. Subjects were asked to self-assess sensitivity (without exogenous stimuli) by recording their perceived sensitivity on each of the six maxillary teeth using a scale of 0-10 with the pain defined as:

- 0 No pain or barely noticeable tooth sensitivity
- 1-3 Mild pain
- 4-6 Moderate pain
- 7-9 Severe pain, not constant
- 10 The most excruciating pain, constant

Additionally, there was no statistical difference between the performance of the experimental and control groups. Both groups were exceptionally safe to use.

| TABLE 4 SAFETY STUDIES | | | | |
|---|------|--------|--------|------|
| MEAN CHANGE IN V.A.S. TEETH SENSITIVITY SCORE | | | | |
| STUDY GROUP | BASE | DAY 14 | DAY 28 | SAFE |
| EXPERIMENTAL (n=25) | -- | -0.0 | -0.5* | YES |
| CONTROL (n=25) | -- | -0.0 | +0.5* | YES |
| * no significant difference from baseline | | | | |

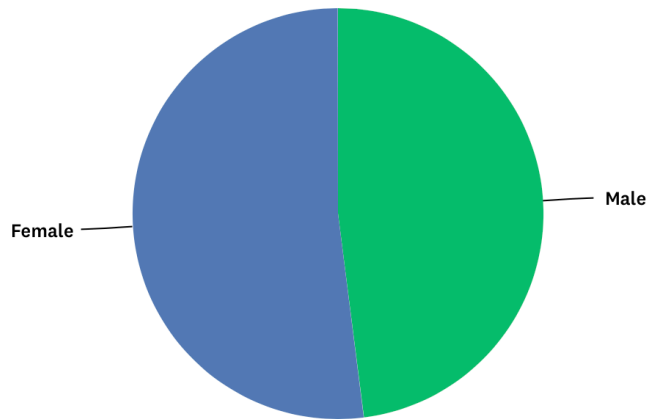
CONSUMER PERCEPTIONS:

We were asked to administer a post-use consumer surveys to all subjects. Below is a summary of the responses:

1. I believe the WHITE BIRCH™ charcoal whitening toothpaste is convenient to use: **100% Agreed**
2. I believe the WHITE BIRCH™ charcoal whitening toothpaste is easy to use: **100% Agreed**
3. Using the WHITE BIRCH™ charcoal toothpaste improves the look of my smile: **100% Agreed**
4. My teeth look significantly whiter after using the WHITE BIRCH™ charcoal toothpaste: **80% Agreed**
5. The WHITE BIRCH™ charcoal toothpaste reduced the yellowness of my teeth: **100% Agreed**
6. The WHITE BIRCH™ charcoal toothpaste removed stains on my teeth: **100% Agreed**
7. My teeth felt very clean and smooth after using WHITE BIRCH™: **100% Agreed**
8. I did not experience any pain or sensitivity when using the WHITE BIRCH™ charcoal products **100% Agreed**
9. The WHITE BIRCH™ toothpaste smelled and tasted pleasant: **100% Agreed**
10. I would recommend the WHITE BIRCH™ Charcoal Toothpaste to a friend: **100% Agreed**
11. I would use and buy WHITE BIRCH™ Charcoal Toothpaste again: **100% Agreed**

Gender:

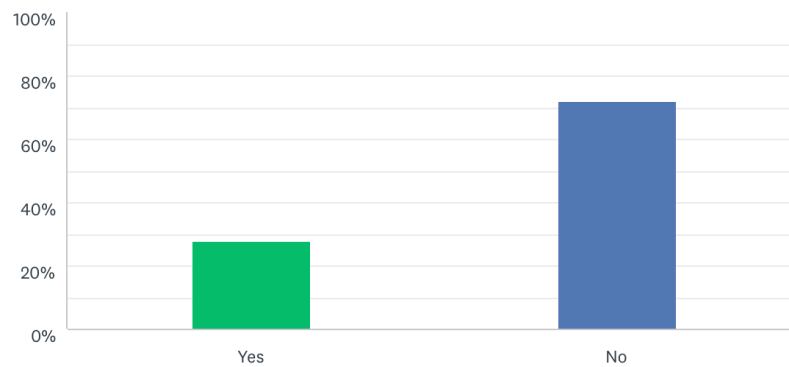
Answered: 25 Skipped: 0



| ANSWER CHOICES | RESPONSES |
|----------------|-----------|
| ▼ Male | 48.00% 12 |
| ▼ Female | 52.00% 13 |
| TOTAL | 25 |

Do you smoke?

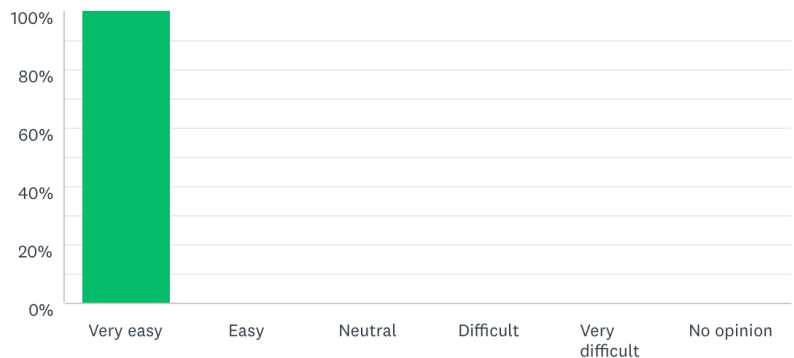
Answered: 25 Skipped: 0



| ANSWER CHOICES | RESPONSES |
|----------------|-----------|
| ▼ Yes | 28.00% 7 |
| ▼ No | 72.00% 18 |
| TOTAL | 25 |

How easy is it to use the test product (please select one)?

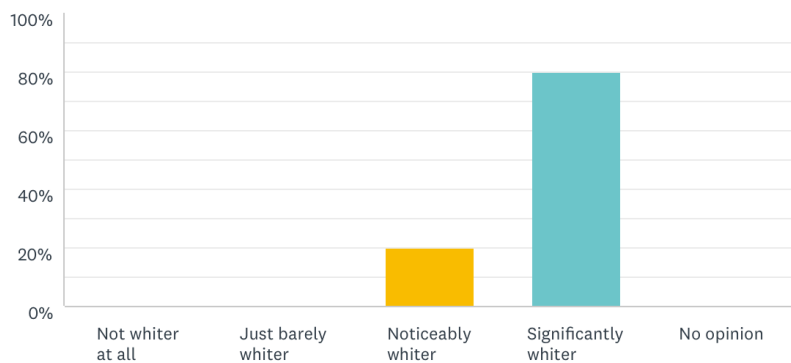
Answered: 25 Skipped: 0



| ANSWER CHOICES | RESPONSES |
|------------------|------------|
| ▼ Very easy | 100.00% 25 |
| ▼ Easy | 0.00% 0 |
| ▼ Neutral | 0.00% 0 |
| ▼ Difficult | 0.00% 0 |
| ▼ Very difficult | 0.00% 0 |
| ▼ No opinion | 0.00% 0 |
| TOTAL | 25 |

How much whiter do you think your teeth are after using the test product for 28 days (choose the best description)?

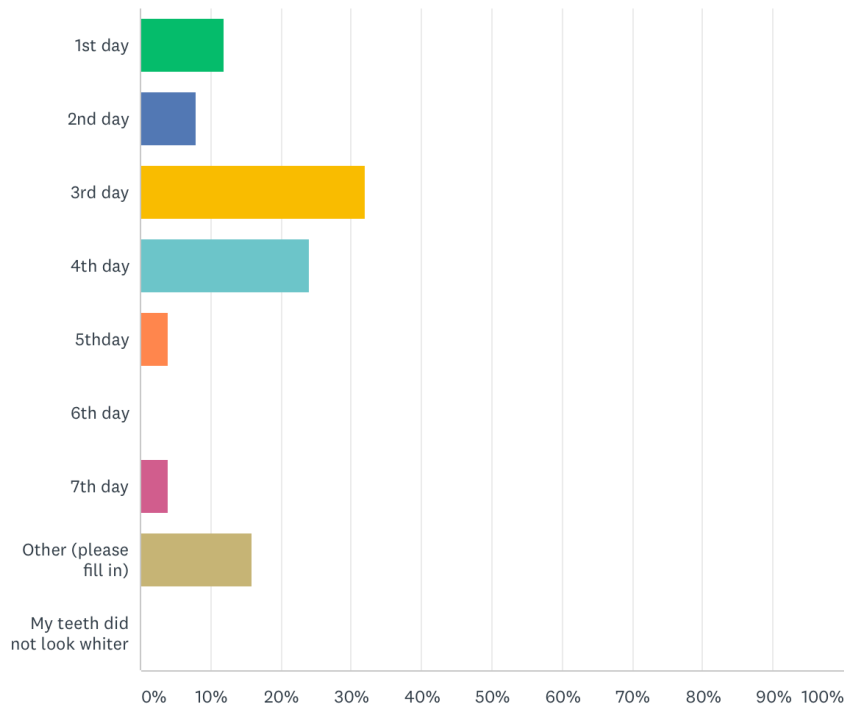
Answered: 25 Skipped: 0



| ANSWER CHOICES | RESPONSES |
|------------------------|-----------|
| ▼ Not whiter at all | 0.00% 0 |
| ▼ Just barely whiter | 0.00% 0 |
| ▼ Noticeably whiter | 20.00% 5 |
| ▼ Significantly whiter | 80.00% 20 |
| ▼ No opinion | 0.00% 0 |
| TOTAL | 25 |

On what day after you started using the product did you first notice results (your teeth looked whiter?)

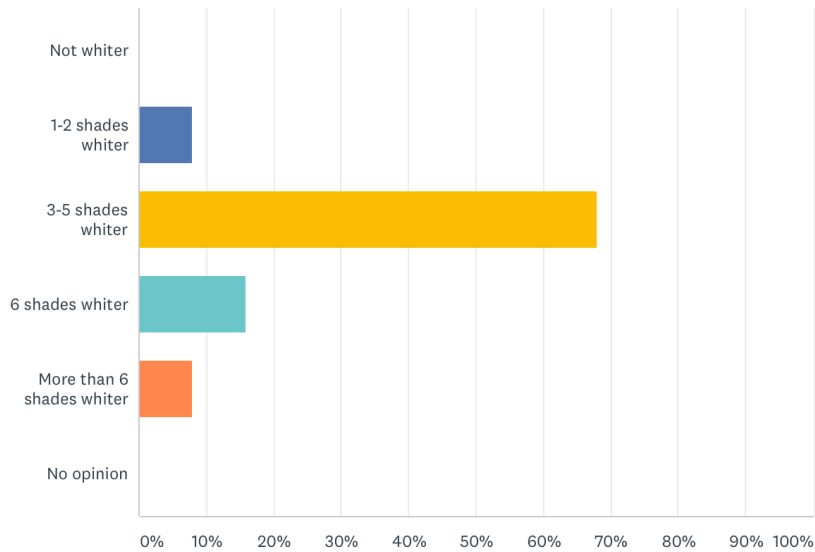
Answered: 25 Skipped: 0



| ANSWER CHOICES | RESPONSES |
|--------------------------------|-----------|
| ▼ 1st day | 12.00% 3 |
| ▼ 2nd day | 8.00% 2 |
| ▼ 3rd day | 32.00% 8 |
| ▼ 4th day | 24.00% 6 |
| ▼ 5thday | 4.00% 1 |
| ▼ 6th day | 0.00% 0 |
| ▼ 7th day | 4.00% 1 |
| ▼ Other (please fill in) | 16.00% 4 |
| ▼ My teeth did not look whiter | 0.00% 0 |
| TOTAL | 25 |

How many shades whiter do you think your teeth are after using the test product for 7 days?

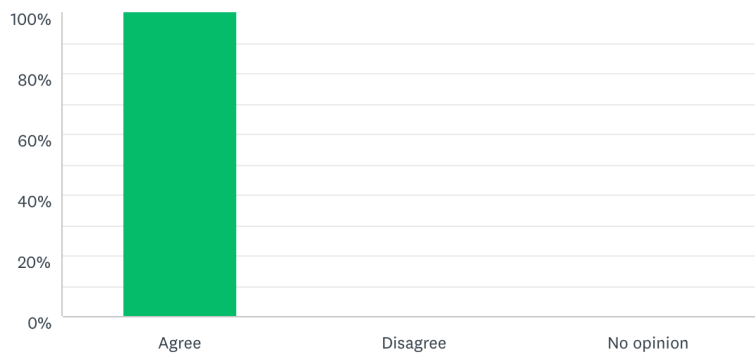
Answered: 25 Skipped: 0



| ANSWER CHOICES | RESPONSES |
|-----------------------------|-----------|
| ▼ Not whiter | 0.00% 0 |
| ▼ 1-2 shades whiter | 8.00% 2 |
| ▼ 3-5 shades whiter | 68.00% 17 |
| ▼ 6 shades whiter | 16.00% 4 |
| ▼ More than 6 shades whiter | 8.00% 2 |
| ▼ No opinion | 0.00% 0 |
| TOTAL | 25 |

I have not experienced any tooth pain in the last 7 days from using the test product?

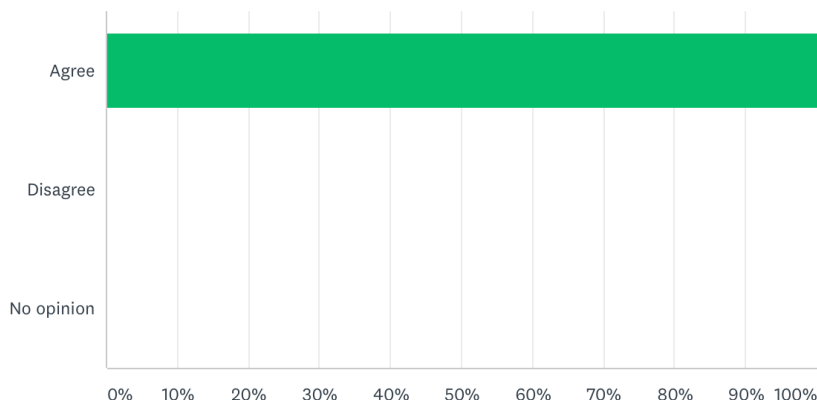
Answered: 25 Skipped: 0



| ANSWER CHOICES | RESPONSES |
|----------------|------------|
| ▼ Agree | 100.00% 25 |
| ▼ Disagree | 0.00% 0 |
| ▼ No opinion | 0.00% 0 |
| TOTAL | 25 |

I have not experienced any tooth sensitivity in the last 7 days from using the test product?

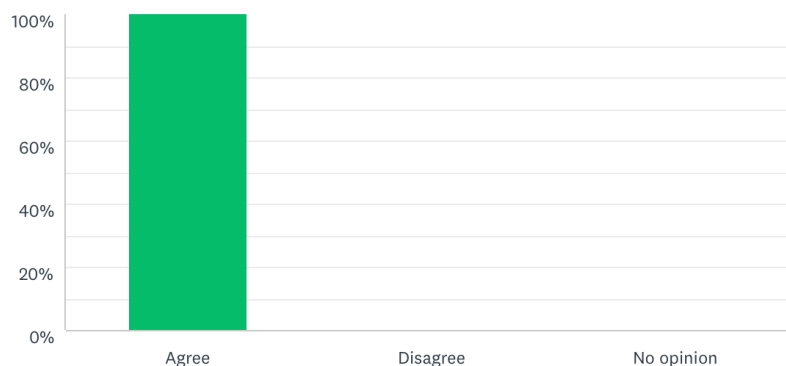
Answered: 25 Skipped: 0



| ANSWER CHOICES | RESPONSES |
|----------------|------------|
| ▼ Agree | 100.00% 25 |
| ▼ Disagree | 0.00% 0 |
| ▼ No opinion | 0.00% 0 |
| TOTAL | 25 |

I have not experienced any gum irritation in the last 7 days from using the test product?

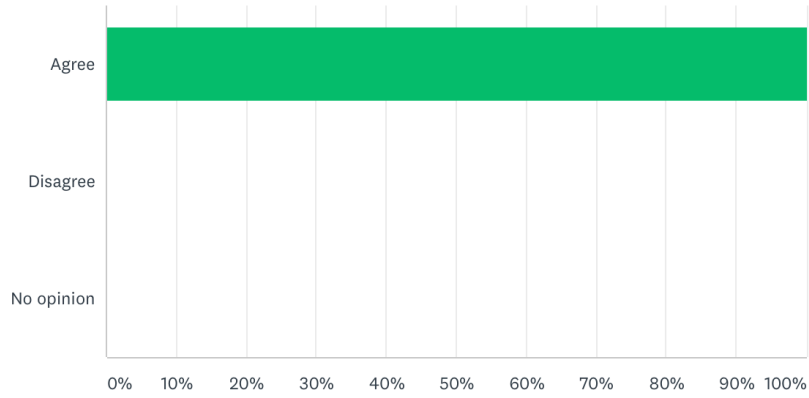
Answered: 25 Skipped: 0



| ANSWER CHOICES | RESPONSES |
|----------------|------------|
| ▼ Agree | 100.00% 25 |
| ▼ Disagree | 0.00% 0 |
| ▼ No opinion | 0.00% 0 |
| TOTAL | 25 |

I would recommend the test product to a friend?

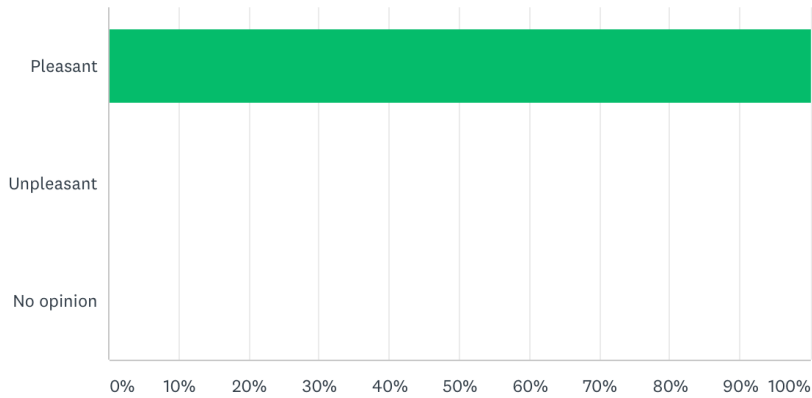
Answered: 25 Skipped: 0



| ANSWER CHOICES | RESPONSES |
|----------------|------------|
| ▼ Agree | 100.00% 25 |
| ▼ Disagree | 0.00% 0 |
| ▼ No opinion | 0.00% 0 |
| TOTAL | 25 |

The flavor of the test product is?

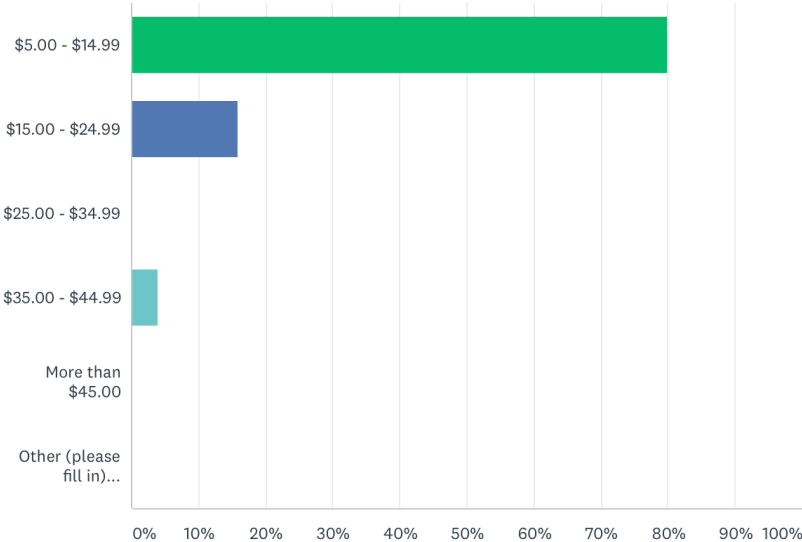
Answered: 25 Skipped: 0



| ANSWER CHOICES | RESPONSES |
|----------------|------------|
| ▼ Pleasant | 100.00% 25 |
| ▼ Unpleasant | 0.00% 0 |
| ▼ No opinion | 0.00% 0 |
| TOTAL | 25 |

How much would you be willing to pay for the test product?

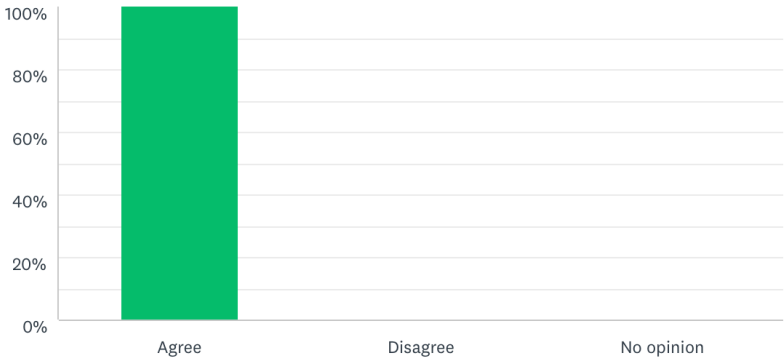
Answered: 25 Skipped: 0



| ANSWER CHOICES | RESPONSES | |
|--------------------------------|-----------|-----------|
| ▼ \$5.00 - \$14.99 | 80.00% | 20 |
| ▼ \$15.00 - \$24.99 | 16.00% | 4 |
| ▼ \$25.00 - \$34.99 | 0.00% | 0 |
| ▼ \$35.00 - \$44.99 | 4.00% | 1 |
| ▼ More than \$45.00 | 0.00% | 0 |
| ▼ Other (please fill in) | 0.00% | 0 |
| TOTAL | | 25 |

Using the test product is a pleasant experience?

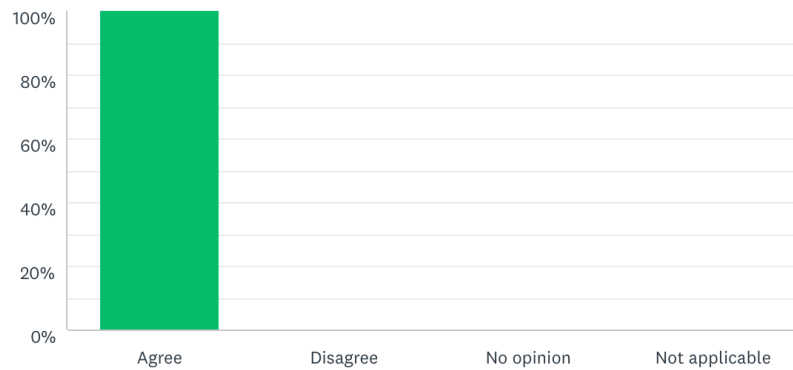
Answered: 25 Skipped: 0



| ANSWER CHOICES | RESPONSES | |
|----------------|-----------|-----------|
| ▼ Agree | 100.00% | 25 |
| ▼ Disagree | 0.00% | 0 |
| ▼ No opinion | 0.00% | 0 |
| TOTAL | | 25 |

The whitening results I achieved after using the test product were comparable to those I have previously achieved using whitening strips, trays or gels?

Answered: 25 Skipped: 0



| ANSWER CHOICES | RESPONSES |
|------------------|------------|
| ▼ Agree | 100.00% 25 |
| ▼ Disagree | 0.00% 0 |
| ▼ No opinion | 0.00% 0 |
| ▼ Not applicable | 0.00% 0 |
| TOTAL | 25 |

The whitening results I achieved from using the test product :

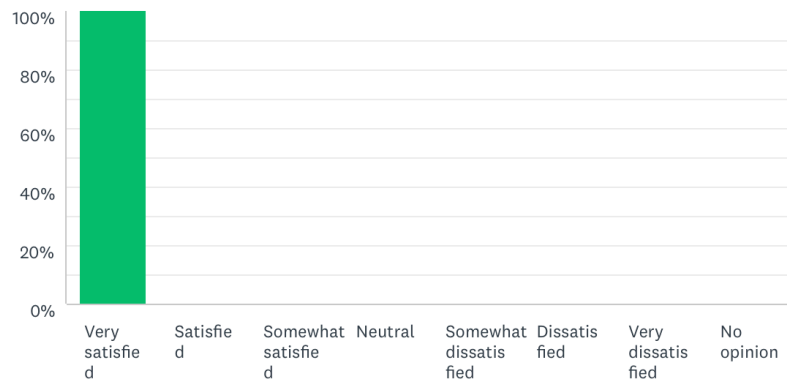
Answered: 25 Skipped: 0



| ANSWER CHOICES | RESPONSES |
|--------------------------------|------------|
| ▼ Exceeded my expectations | 100.00% 25 |
| ▼ Met my expectations | 0.00% 0 |
| ▼ Somewhat met my expectations | 0.00% 0 |
| ▼ Did not meet my expectations | 0.00% 0 |
| ▼ No opinion | 0.00% 0 |
| TOTAL | 25 |

How satisfied are you with the whitening results you have achieved after using the test product for 7 days?

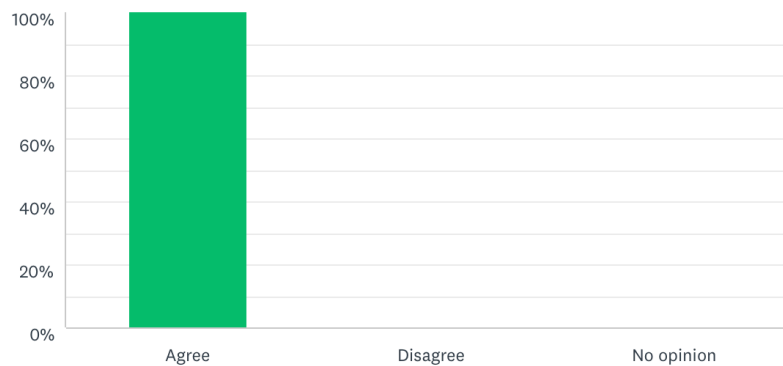
Answered: 25 Skipped: 0



| ANSWER CHOICES | RESPONSES |
|-------------------------|------------|
| ▼ Very satisfied | 100.00% 25 |
| ▼ Satisfied | 0.00% 0 |
| ▼ Somewhat satisfied | 0.00% 0 |
| ▼ Neutral | 0.00% 0 |
| ▼ Somewhat dissatisfied | 0.00% 0 |
| ▼ Dissatisfied | 0.00% 0 |
| ▼ Very dissatisfied | 0.00% 0 |
| ▼ No opinion | 0.00% 0 |
| TOTAL | 25 |

I would use the test product again?

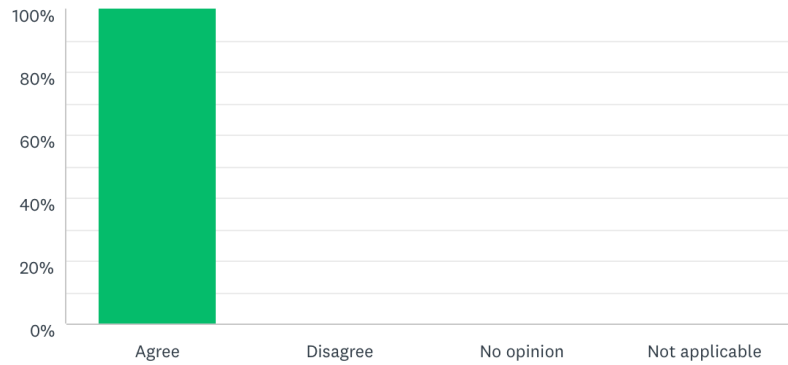
Answered: 25 Skipped: 0



| ANSWER CHOICES | RESPONSES |
|----------------|------------|
| ▼ Agree | 100.00% 25 |
| ▼ Disagree | 0.00% 0 |
| ▼ No opinion | 0.00% 0 |
| TOTAL | 25 |

I prefer the method of whitening my teeth using the test product instead of the method of whitening my teeth using strips, trays or gels?

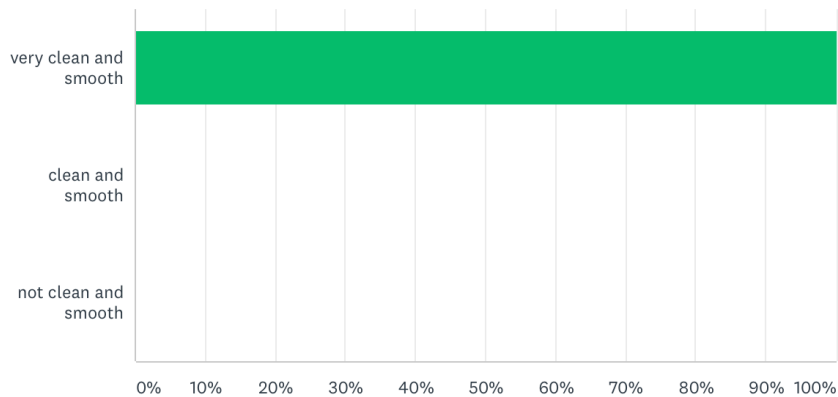
Answered: 25 Skipped: 0



| ANSWER CHOICES | RESPONSES |
|------------------|------------|
| ▼ Agree | 100.00% 25 |
| ▼ Disagree | 0.00% 0 |
| ▼ No opinion | 0.00% 0 |
| ▼ Not applicable | 0.00% 0 |
| TOTAL | 25 |

How was your feeling on your teeth after using the product?

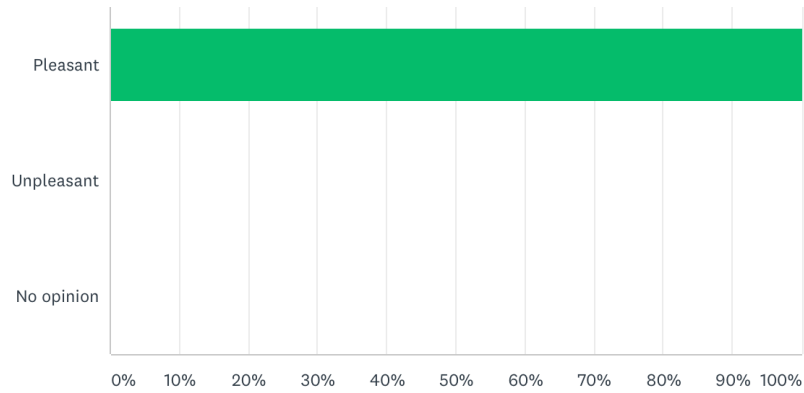
Answered: 25 Skipped: 0



| ANSWER CHOICES | RESPONSES |
|-------------------------|------------|
| ▼ very clean and smooth | 100.00% 25 |
| ▼ clean and smooth | 0.00% 0 |
| ▼ not clean and smooth | 0.00% 0 |
| TOTAL | 25 |

How do you like the colour of the product?

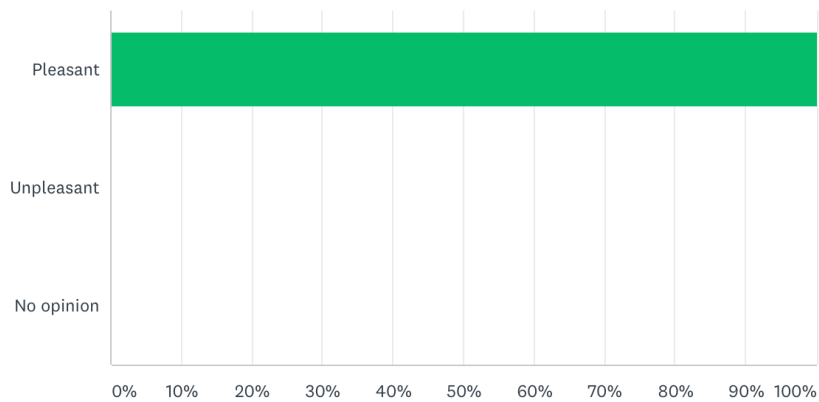
Answered: 25 Skipped: 0



| ANSWER CHOICES | RESPONSES |
|----------------|------------|
| ▼ Pleasant | 100.00% 25 |
| ▼ Unpleasant | 0.00% 0 |
| ▼ No opinion | 0.00% 0 |
| TOTAL | 25 |

How do you like the smell of the product?

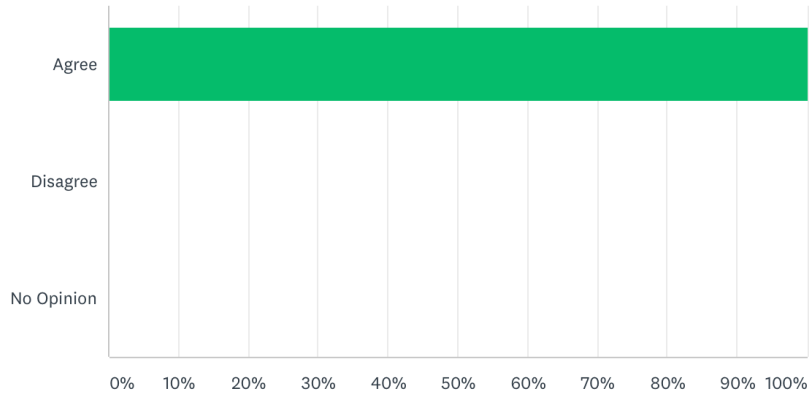
Answered: 25 Skipped: 0



| ANSWER CHOICES | RESPONSES |
|----------------|------------|
| ▼ Pleasant | 100.00% 25 |
| ▼ Unpleasant | 0.00% 0 |
| ▼ No opinion | 0.00% 0 |
| TOTAL | 25 |

Do you think the toothpaste removed your stains?

Answered: 25 Skipped: 0



| ANSWER CHOICES | RESPONSES | |
|----------------|-----------|-----------|
| ▼ Agree | 100.00% | 25 |
| ▼ Disagree | 0.00% | 0 |
| ▼ No Opinion | 0.00% | 0 |
| TOTAL | | 25 |

Q24 COMMENTS:

Answered: 13 Skipped: 12

| # | RESPONSES |
|----|---|
| 1 | No comments (12 subjects left no response or skipped) |
| 2 | I went to my dentist and he said my teeth and gums look great |
| 3 | I hope the toothpaste is affordable. Other than that I really love it. |
| 4 | Loved the toothpaste and I will buy for my entire family. |
| 5 | My favorite toothpaste! |
| 6 | The toothpaste whitened my crowns as well as my teeth. I love it. I am very impressed! |
| 7 | thank you for making a great product. I wish I could buy now. |
| 8 | Can you please make a different flavor. I don't like peppermint and I prefer something stronger |
| 9 | I like the flavor and my teeth feel clean and bright |
| 10 | Please tell me when the toothpaste goes on sale. |
| 11 | Nice product. I loved the way it made my teeth feel. |
| 12 | Where can I buy this? I love the toothpaste more than my current Crest toothpaste |
| 13 | The toothpaste was very delicious and it worked great |
| 14 | Love the toothpaste. It made my teeth much nicer looking. |

CLAIMS VERIFIED:

FOR SUBJECTS OF ALL AGES – WHITE BIRCH™ TOOTHPASTE

1. Whitens teeth 2 shades in 14 days simply by brushing 2x/day
2. Whitens teeth 4 shades in 28 days simply by brushing 2x/day
3. Safe to use with no adverse events reported and no pathology found upon examination.
4. Doesn't cause irritation of gums or tooth pain/sensitivity
5. Whitens better than the leading whitening toothpaste that contains peroxide (Colgate Optic White)
6. 21 out of 25 Subjects saw results within 1 week
7. White Birch™ Charcoal Toothpaste whitens almost 300% better than the market leading “whitening” peroxide-containing toothpaste after just 14-days of use
8. White Birch™ Charcoal Toothpaste whitens almost 60% better than the market leading “whitening” peroxide-containing toothpaste after 28 days of use
9. Survey post-use data shows that users were very satisfied with results and would purchase and recommend to a friend.

TESTIMONIAL:

All of the claims that were requested to be tested by WHITE BIRCH™ were “verified to be true” by our clinical scientists and we stand behind these findings under the testing conditions described above.

VERIFIED:

X  _____

Date: September 05, 2018

Martin Giniger, DMD, MsD, PhD, FICD
Principal Investigator