

L i t e r a t u r e 3

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Title: Clinical evaluation of a light energy conversion toothbrush

Abstract: A blind, two-way crossover clinical trial was carried out to compare the effectiveness of plaque removal between a new, light energy conversion toothbrush incorporated with a semiconductor of TiO_2 (test) and a similar toothbrush without the semiconductor(control). The study was completed by 73 school children aged 13-15 years. Each toothbrush was used for a period of 3 weeks. The mean difference between baseline plaque scores and after subjects used the test and control brushes were analyzed by the pair t-test. The SOLADEY-2 toothbrush showed significantly more reduction of plaque on the buccal surfaces of all teeth than the control brush. There was no significant difference in the plaque removal ability of the two brush on the lingual aspects of mandible and the lingual surfaces of the maxillary posterior sextant. As the buccal surfaces are more likely to allow light to reach the semiconductor during brushing than the lingual areas, it is possible that the reported photocatalytic property of the semiconductor may be involved in some way in the observed reduction of plaque.

(F i g. 3, 4)