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 1: [J Clin Dent.](#) 2005;16(4):123-7. Links**Clinical evaluation of a novel dental whitening lamp and light-catalyzed peroxide gel.**[Ziemba SL](#), [Felix H](#), [MacDonald J](#), [Ward M](#).[Discus Dental, Inc., Culver City, CA, USA.](#) stevencz@discusdental.com

OBJECTIVE: This study examined whether an ultraviolet light enhanced the whitening efficacy of a peroxide gel containing a photo-Fenton activator. METHODOLOGY: Fifty subjects were enrolled into the trial at two geographically separate sites. As directed by the randomization keys, teeth of half of the study subjects were concurrently exposed to the whitening lamp, while the gel was on their teeth, for a total light exposure of 45 minutes. The other half of the subjects received no light treatment. At each examination, clinical data were collected on the gingival index, shade score, and self-assessed dentinal hypersensitivity. RESULTS: Changes in tooth shade were significantly better (approximately 26% improvement; $p < 0.05$) for subjects exposed to the gel and dental whitening lamp (average = 7.7 shade changes) compared to subjects exposed to the gel only (average 6.1 shades) immediately after treatment. No reports of erythema, desquamation, ulceration of soft tissues, gross changes in teeth, gingiva, or restorations were documented. The relative changes in mean sensitivity scores were similar for both groups, with no significant differences between the Light and No-light groups at any interval. CONCLUSION: The whitening effect was improved by approximately 26% when the Zoom2 dental whitening lamp was used. It was demonstrated that the a photo-Fenton activator used with a bleaching light and 20% hydrogen peroxide gel is safe and effective for whitening teeth rapidly.

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