

Tooth Hypersensitivity Reduction by a Novel Bioglass[®] (NovaMin) Dentifrice

L.J. Litkowski, K.B. Quinlan and N.J. McDonald
Dental School, University of Maryland, Baltimore, MD USA



International Association of Dental Research

IADR Abstract

Originally Presented at
1998 AADR Session
Minneapolis, MN

INTRODUCTION: Tooth hypersensitivity is a condition that affects up to 20% of the adult population in the U.S. Success with treatment of this condition has been limited at best. A new dentifrice containing a modified Bioglass (NovaMin[®]) material replacing part of the abrasive silica has been developed that showed a significant amount of tubule occlusion during *in vitro* evaluations. The purpose of this study was to evaluate the clinical efficacy of the Bioglass dentifrice in reducing tooth hypersensitivity.

MATERIALS AND METHODS: Patients were screened for cervical dentin hypersensitivity by utilizing a standard cold air blast and a standard tactile stimulus using a Yeaple Probe with patients rating the pain on a Visual Analog Scale (VAS) from 0 to 100 mm. 66 patients were selected with VAS scores between 30 and 70 mm and divided into 3 groups, placebo (0%), 2.5% and 7.5% active ingredients. Each patient was told to brush twice per day and was evaluated at 2, 4 and 8 weeks. The scores were tabulated and analyzed using an ANOVA.

RESULTS: Reduction of sensitivity versus baseline are listed in the chart below:

	<u>Mean Changes from Baseline</u>					
	<u>2 week</u>		<u>4 week</u>		<u>8 week</u>	
	Air	Tactile	Air	Tactile	Air	Tactile
0%	-2.6	-5.1	-6.8	-13.7	-14.5	-16.5
2.5%	-5.1	-13.6*	-14.5*	-18.6*	-15.5	-17.6
7.5%	-13.1*	-21.1*	-21.5*	-27.5**	-27.4*	-36.0**

*significantly different from the placebo $p < .05$, **significantly different from the placebo $p < .01$

A significant reduction in tooth hypersensitivity was seen in patients using 2.5% and 7.5% concentrations of Bioglass dentifrice. The 7.5% showed a more rapid and greater magnitude of reduction in sensitivity.

This study was partially supported by USBiomaterials Corporation.