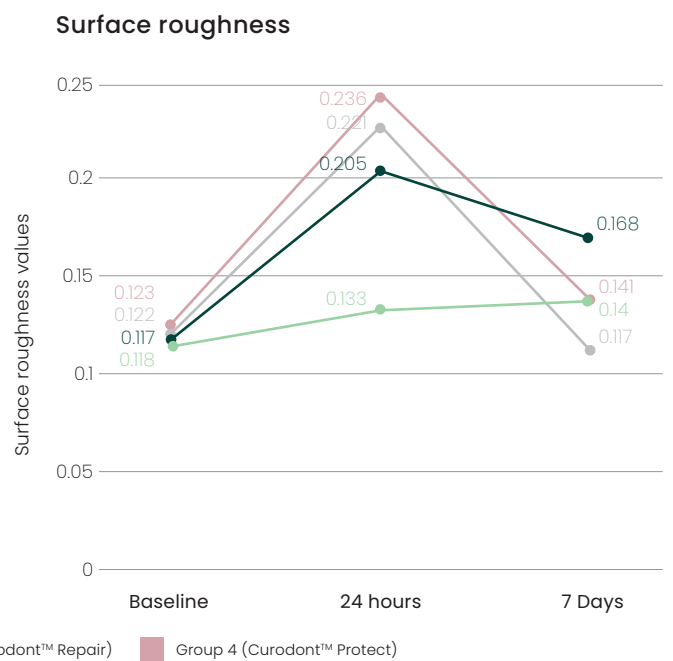
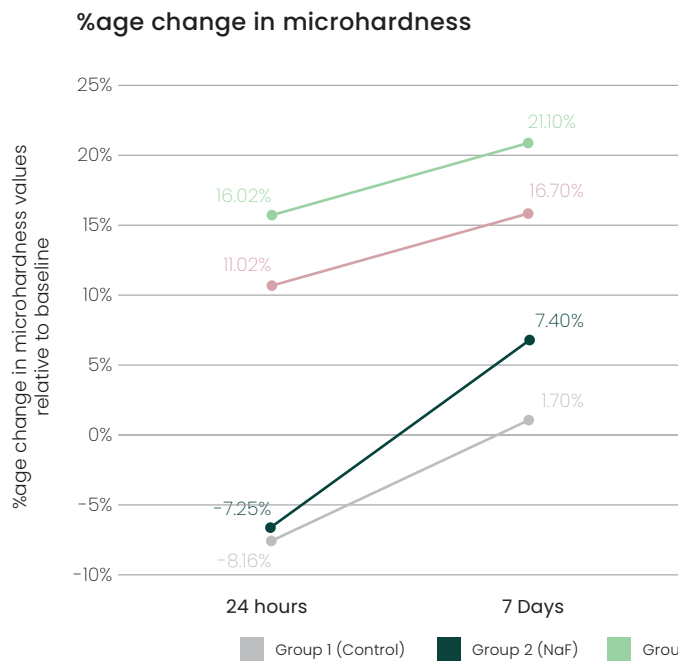




Greater increase in surface hardness and faster recovery of surface smoothness of bleached enamel with Curodont™ Repair and Curodont™ Protect than with fluoride (NaF)

RESULTS

At 24 hours and 7 days, Curodont™ Repair and Curodont™ Protect led to significant increases in enamel microhardness compared to baseline values (sound enamel). After 24 hours, bleached enamel samples treated with Curodont™ Repair showed surface roughness values lower than all other groups and closest to the baseline value of sound enamel.



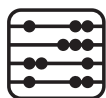
Higher and constant increases in surface microhardness relative to baseline with Curodont™ Repair and Curodont™ Protect.

Recovery of surface smoothness towards baseline values with all groups with Curodont Repair showing the fastest recovery.

STUDY ESSENTIALS



28 bovine teeth
(n=7/group)



Randomized
in-vitro study



7 Days



Brazil

How can you use these results in your practice?

- Peroxide-based bleaching can lead to a degree of mineral loss from the enamel, manifesting as increased surface roughness and decreased surface microhardness.
- Self-assembling peptide (P11-4) based products, used immediately after bleaching, restore surface smoothness quicker than fluoride and increase surface microhardness significantly more than fluoride. Additionally, early carious lesions detected before or after bleaching can also be treated with Curodont™ Repair, followed by Curodont™ Protect for home-based use for surface remineralization.

STUDY INFORMATION

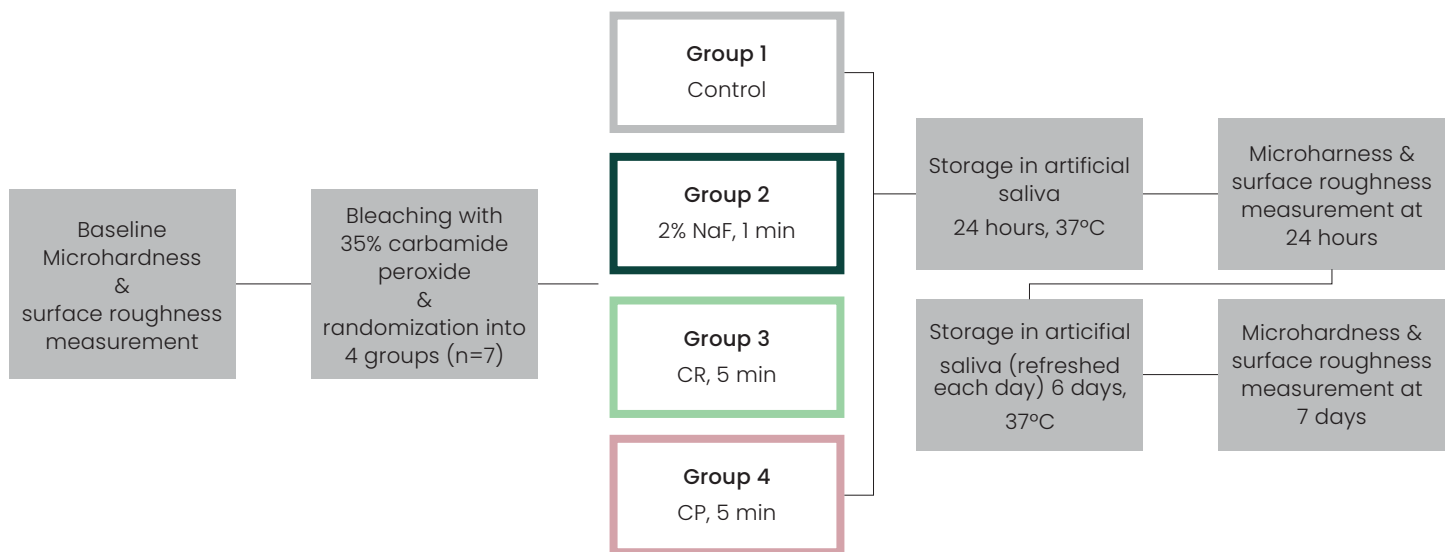
Title: Effect of Self-Assembly Peptide on surface roughness and hardness of bleached enamel*



Treatments Tested: **Group 1:** Control (No remineralization agent following bleaching)
Group 2: 2% sodium fluoride (NaF) following bleaching
Group 3: Curodont™ Repair (CR) following bleaching
Group 4: Curodont™ Protect (CP) following bleaching



Scope & Methodology: 28 bovine enamel samples were selected for the following experimental procedure:



After each treatment (NaF, CR, and CP), the samples were exposed to a supersaturated solution of calcium and phosphate ions for 1 min.

The assessments performed were:

- Measurement of microhardness: Knoop Microhardness analysis to determine the Knoop Hardness Number (KHN)
- Surface Roughness: Using SurfCorder SE 1700, a surface roughness measurement instrument



Conclusion: The reduction in enamel surface microhardness and increase in surface roughness, resulting from demineralization consequent to peroxide-based bleaching, can be managed with self-assembling peptide-based products.

References

- *Magalhães GAP, Fraga MAA, de Souza Araújo IJ, Pacheco RR, Correr AB, Puppim-Rontani RM. Effect of a Self-Assembly Peptide on Surface Roughness and Hardness of Bleached Enamel. *J Funct Biomater.* 2022;13:79
1. Bilge K, Kılıç V. Effects of different remineralizing agents on color stability and surface characteristics of the teeth following vital bleaching. *Microsc Res Tech.* 2021;84:2206-2218.
2. Soares, R. et al (2017) "Assessment of Enamel Remineralisation After Treatment with Four Different Remineralising Agents: A Scanning Electron Microscopy (SEM) Study" *J Clin Diagn Res Vol-11(4): ZC136-ZC141*