Journal of Clinical Pediatric Dentistry
Volume ٣٤, Issue ٢, ١ December ٢٠٠٩, Pages ١٨٩-١٩٢

Effect of sodium fluoride mouth rinse on elastic properties of elastomeric chains

Ramazanzadeh, B.A., Jahanbin, A., Hasanzadeh, N., Eslami, N.
Department of Orthodontics, Faculty of Dentistry and Dental School Research Center, **Mashhad University** of **Medical Sciences**, **Mashhad**, Iran

View references (٢١)

Abstract

Objective: This study evaluated Sodium Fluoride mouth rinse effects on elastic properties of different elastomeric chains. Study design: In this in vitro experiment, two orthodontic chains were tested. In the first group, they were stored in artificial saliva for the entire duration, and in the second group they were immersed daily in ٠,٠٥٪ NaF mouth rinse for ١ minute, artificial saliva-NaF mixture for ٣٠ minutes, and then in artificial saliva for the rest of the day. Specimens were tested at baseline, ١ hour, ٢٤ hours, ١, ٢ and ٣ weeks and then the displacement of specimens to obtain ١٥٠g and ٣٠٠g, also the applied force after stretching them to ١٠٠٪ of their original length were evaluated. Results: In contrast to force degradation, chains of both companies required more displacement to achieve both forces in the saliva- NaF mixture than saliva itself; however, the difference was only significant for the ٣٠٠g force (P = ٠,٠٢٠). American Orthodontics chains required more displacement than Dentaurum chains to obtain both forces, also they had more load relaxation (P<٠,٠٠١). Conclusions: Daily use of NaF mouth rinse does not affect force degradation and the displacement of both chains to achieve conventional orthodontic forces, but for higher force levels the displacement increase is statistically significant.

Reaxys Database Information

|

Author keywords

Elastomeric chains; Force degradation; Sodium Fluoride mouth rinse

Indexed Keywords

EMTREE drug terms: anticaries agent; elastomer; fluoride sodium; mouthwash; saliva substitute

EMTREE medical terms: article; dental care; elasticity; orthodontic device; saliva; tensile strength

MeSH: Cariostatic Agents; Dental Stress Analysis; Elasticity; Elastomers; Mouthwashes; Orthodontic Appliances; Saliva; Saliva, Artificial; Sodium Fluoride; Tensile Strength
Medline is the source for the MeSH terms of this document.

Chemicals and CAS Registry Numbers: fluoride sodium, ٥١٦٦٨-٥٤-٣, ٧٦٨١-٤٩-٤, ٧٩٩٣٣-٢٧-٠;Cariostatic Agents; Elastomers; Mouthwashes; Saliva, Artificial; Sodium Fluoride, ٧٦٨١-٤٩-٤

ISSN: ١٠٥٣٤٦٢٨ **CODEN:** JCPDE **Source Type:** Journal **Original language:** English
PubMed ID: ٢٠٢٩٧٧١٥ **Document Type:** Article