

ABSTRAK

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Judul : Perbedaan Efek Minuman Berkarbonasi Dengan Minuman Probiotik Terhadap Perubahan Gaya Z-Spring

Efek minuman ringan dapat menyebabkan perubahan daya lenting kawat yang biasanya diakibatkan minuman berkarbonasi maupun probiotik. Hal tersebut akibat asam karbonat yang ada pada minuman berkarbonasi dan bakteri asam laktat pada minuman probiotik mampu melepaskan ion nikel (Ni) dan kromium (Cr). Tujuan penelitian ini adalah untuk menganalisa perbedaan daya lenting dari kawat ortodonti *z-spring* setelah dilakukan perendaman selama 8 hari. Dibuat secara eksperimental dengan *metode pre and post test with control group design*, sampel yang digunakan sebanyak 27 kawat ortodonti *z-spring* dan dibagi menjadi 3 kelompok. Pengukuran daya lenting sebelum dan sesudah perendaman diukur dengan alat UTM. **Hasil penelitian:** Pada minuman ringan karbornasi, terdapat perbedaan daya lenting pada hari ke - 0 dengan hari ke - 4 ($p=0,047$). Kawat ortodontik stainless steel *z-spring* yang direndam probiotik didapatkan nilai $p=0,038$. **Kesimpulan:** Terjadi perubahan daya lenting yang signifikan antara hari ke - 4 dengan hari ke - 8 pada perendaman minuman berkarbonasi ($p=0,001$).

Kata kunci :

Probiotik, minuman berkarbonasi, peranti *z-spring*, daya lenting

ABSTRACT

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Title : Differences in The Effect of Carbonated Drinks With Probiotic Drinks Against Z-Spring Style Changes

*The effects of soft drinks can result in changes in the resiliency of orthodontic wires usually caused by carbonated or probiotic drinks. This type of drink with a low pH in this case carbonated drinks and probiotic drinks. This is a result of carbonic acid in carbonated beverages and lactic acid bacteria in probiotic drinks that are able to release nickel (Ni) and chromium (Cr) ions. The purpose of this study was to analyze the difference in resilience of orthodontic wire z -spring after soaking for 8 days. Experimental research by pre and post test with control group design method, samples were used as many as 27 z-spring orthodontic wires and divided into 3 groups. Resilience measurement is performed before and after immersion is measured with UTM tool. **Research result:** In carbonation soft drinks, there is a difference in resilience on the 0th day with the 4th day ($p=0.047$). Orthodontic wire stainless steel z- spring soaked probiotics obtained a value of $p=0.038$. **Conclusion:** There was a significant change in resilience between day 4 and day 8 of carbonated beverage immersion ($p=0.001$).*

Keyword:

Probiotic, carbonation drink, orthodontic z- spring, resilience