PENGARUH PERBEDAAN WAKTU PERENDAMAN KOMPOSIT NANO
DALAM SALIVA BUATAN PH 5.5 TERHADAP KEKERASAN
PERMUKAAN

(THE INFLUENCE OF DIFFERENT IMMERSED TIMES ON SURFACE
HARDNESS OF NANO COMPOSITE STORAGE IN ARTIFICIAL SALIVA
PH 5.5)

ABSTRACT

Background. Restorative filling materials used in dentistry are required to have
long-term durability in the oral cavity. One of the most important physical
properties of restorative filling material is surface hardness. Wear of composite
resins is associated with a lower surface hardness. Purpose. The aim of this in vitro
study was to evaluate the influence of different immersed times on surface hardness
of nano composite stored in saliva pH 5.5. Method. A total of 28 specimens were
fabricated for each of nanofill composite 3M ESPE Filtek™ Z350 according to the
manufacturer’s instructions. The 28 specimens were randomly selected and stored in
artificial saliva for 10, 20, 30 days. After 10, 20, and 30 days conditioning period,
surface hardness testing was carried out with a Micro Vickers Hardness Tester.
Results. The influence of the materials tested was statistically significant. After 30
days storage in artificial saliva, the VHN value of nanofill composite lower than
storage in artificial saliva for 10 days. Conclusion. The surface hardness of
composite resin materials are strongly influenced by different immersed times in
artificial saliva pH 5.5.

Key words: Nano Composite, Surface Hardness, Artificial Saliva, Nanofiller