



ABSTRACT

The protection of pulp is of utmost concern to the dentist. The traditional teaching has advocated the placement of insulating materials under restorations to protect pulp against thermal shock. Often this involves the placement of lining cements. Although the coefficients of thermal diffusivity through certain of metallic restorations and lining materials been measured but the exact influence of lining materials in insulating the pulp against such thermal insult has not been adequately investigated. Of special interest is the effect of the thickness of the lining cement in inhibiting thermal diffusion. For this purpose, in-vitro study was conducted for to comprehend the thermal characteristics of six lining materials involved Master-Dent® Zinc phosphate, three Glass Ionomer cements Fuji 9, GC Gold Label GIC(luting/lining) and Riva (luting/lining), Master-Dent® Zinc Oxide Eugenol and Densply Dycal. 8 cylindrical form disks of various thickness range from 0.25mm to 2mm for each material were prepared and their conductivity as well as diffusivity power was analyzed through Ehtesham's Machine at six different temperatures. Obtained findings were then relate to temperature exposures by applying statistics, that may be experienced in the oral environment. Comparison between six materials on base of insulating efficiency was done through using One-way ANOVA.