

FUZZY MEASURE-CHOQUET MODEL IN HEAT TRANSFER PHENOMENON IN HUMAN TEETH

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ABSTRACT

Warmness generated inside tooth all through medical dentistry can motive thermally triggered damage to tough and soft additives of the enamel (tooth, dentin and pulp). Geometrical characteristics of immature teeth are one-of-a-kind from those of mature tooth. The purpose of this experimental and theoretical look at was to research thermal adjustments in immature everlasting enamel during the usage of mild-curing units. This research investigates fuzzy Measure-Choquet Model investigation about heat transfer phenomenon in human teeth. Common polymerization light sources are used as the main heat source; Overall, thermal stimulation for 30 seconds with a low-intensity increased the temperature from 28°C to 38°C in IIT (intact immature tooth) and PIT (cavity-prepared immature tooth). When an excessive-intensity LED LCU became used, tooth temperature extended from 28°C to 48°C. The outcomes of the experimental tests and mathematical modeling illustrated that using LED LCU on immature teeth did not have any unfavorable impact on the pulp temperature. Sensitivity evaluation showed that versions of heat conductivity may have an effect on warmness switch in immature teeth; therefore, similarly researches are required to decide thermal conductivity of immature tooth.

KEYWORDS: Fuzzy Measure-Choquet, Heat Transfer, Dental Pulp, Human Tooth, Light Polymerization