– This in-vitro study was conducted to evaluate the effect of thermocycling in a coffee solution on surface roughness and color stability of two resin-based composite materials.– This proposal outlines a rigorous in-vitro investigation comparing the surface roughness and color change of a nanohybrid composite (Brilliant Everglow(TM)) versus a nanofilled composite (Filtek(TM) Supreme XT) following thermocycling in a coffee staining medium.– Thermocycling Procedure To simulate extrinsic dietary staining and oral aging conditions, specimens were immersed in a coffee solution and subjected to 5000 thermocycles between 5?C and 55?C, with a dwell time of 30 seconds at each temperature.A standardized three-step polishing protocol was applied to all specimens under controlled speed and pressure conditions to minimize operator-related variability and ensure consistency.The intervention group included Brilliant Everglow(TM) Nanohybrid Composite, while Filtek(TM) Supreme XT Nanofilled Composite served as the comparator.Standardized cylindrical composite disc specimens with dimensions of 10 mm in diameter and 2 mm in thickness were prepared for evaluation.– Finishing and Polishing Finishing and polishing procedures were performed using the Sof-Lex(TM) XT sequential disc system.Three readings were obtained from each specimen, and the mean value was calculated to reduce measurement bias and enhance reliability.Statistical significance was set at p

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