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(57) Abstract :

In this invention, novel resin based dental composites were fabricated using constant wollastonite and varying nano alumina as filler materials. BisGMA and TEGDMA were used as resin material and Bis-GMA and TEGDMA is used as resin material. Camphorquinone (CQ) is used as photo-initiator and Ethyl 4-dimethylamino benzoate (4-EDMAB) is used as co-initiator. CQ and 4-EDMAB initiates polymerization process of dental material. Invented resin based dental composite materials can be a good replacement of commercially available materials for dental restoration. Physical, chemical and mechanical properties of constant wollastonite and varying nano alumina filled resin based dental composites have competitive values in comparison to commercially available dental materials. Cost of invented dental material is quite low.

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