



Electron Beam Irradiation Effect On Compressive Strength Of Resin Modified Glass Ionomer Luting Agent

**S.Shabin¹, Mithra N Hegde*¹, Nidarsh D Hegde², Suchetha Kumari³,
Ganesh Sanjeev⁴, Shilpa Shetty⁵**

1. Department of Conservative Dentistry and Endodontics, A.B.Shetty Memorial Institute of Dental Sciences, Nitte University, Mangalore, Karnataka, **INDIA**
2. Department of Oral and Maxillofacial Surgery, A.B.Shetty Memorial Institute of Dental Sciences, Nitte University, Mangalore, Karnataka, **INDIA**
3. Department of Biochemistry, KSHEMA, Nitte University, Mangalore, Karnataka, **INDIA**
4. Department of physics, Mangalore University, Karnataka, **INDIA**
5. Senior Research Fellow, Nitte University, Mangalore, Karnataka, **INDIA**

Email: drhedgedentist@gmail.com

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ABSTRACT

The purpose of the study is to analyse the changes in compressive strength of resin modified glass ionomer luting agents before and after electron beam irradiation. Methods: A total of two resin modified glass ionomer luting agents, rely x luting cement and rely x luting 2 cement were included in the study. Specimens were prepared on cylindrical specimen 6mm height and 4 mm diameter according to ISO standard 9917. After the standardisation of radiation dose of 200 Gy, a total of 24 specimens were irradiated and 24 specimens of non radiated were analysed for compressive strength using universal uniaxial servo mechanical testing machine after 24 hours. Results: Rely x luting cement of irradiated samples shows an increase in the compressive strength compared to non radiated samples whereas rely x luting 2 cement shows a slight increase for non radiated samples. Conclusion: Increase in the compressive strength of rely x luting agent radiated samples may be because of cross linking of unbound monomers and decreased properties of radiated rely x luting 2 agent may be due to chain scissioning.

Keywords: Electron beam irradiation, Resin modified glass ionomer luting agent, Unbound Monomers, Cross linking, Chain Scissioning.
