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ASSESSMENT OF WEAR OF PHOTOPOLYMER TEMPORARY CROWNS IN A CHEWING SIMULATOR

Keywords: Photopolymer, Dental Prosthetics, 3D Printing, Artificial Aging, Chewing Simulator, Temporary Crown

The aim of the study was to assess the wear of photopolymer temporary crowns in a chewing simulator and after the thermal aging process. As part of the literature review, the types of dental crown prostheses and the course of their installation procedure were discussed, the CAD / CAM technology in dentistry was reviewed, and the photopolymerization process in various additive manufacturing methods was presented. In the project part, models of samples were prepared, which were then printed using the DLP (Digital Light Processing) method from photopolymer resin. Subsequently, the methodology of thermal aging simulation and chewing simulation was developed, and the contact angle, roughness, hardness and flexural strength of the resulting variants were tested. In addition, the research was documented using optical microscope images. On the basis of all the information collected, the impact of the simulations on the functional properties of a temporary tooth crown made with the use of 3D printing technology was assessed.