

Finishing and polishing of the ceromer material Targis. Lab-side and chair-side methods.

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The aim of the study was to check four lab-side and four chair-side methods for finishing and polishing the ceromer material Targis. Eighty bar-shaped specimens (20 mm x 10 mm x 2 mm) of Vectris were produced; 72 were covered with a 2 mm (thickness) layer of the Ceromer Targis and eight samples with the composite Tetric. All specimens were ground plane parallel with 320 Silicium carbide grit sandpaper in order to start with the same level of roughness. Then the specimens were finished and polished using the following methods: (1) Artglass toolkit, (2) pumice-stone and brushes/linen brush and polishing paste P3, (3) Robinson brush/Ivoclar Universal paste and wool brush, (4) Silicone wheel and rag wheel, (5) Shofu Rainbow set, (6) Sof-Lex discs, (7) Vivadent Politip set and (8) Nupro-pastes and brushes. The surface roughness was determined with a profilometer. The arithmetical roughness value Ra was calculated. From each group one specimen was randomly chosen and sputtered with gold in order to observe the surface with a scanning electron microscope to evaluate its smoothness. The methods were ranked as followed: 2, 3 and 5 with the lowest roughness, then 8, 6, 7, 4, 1. The best ranked chair-side method (5) and the best ranked lab-side methods (2, 3) did not differ significantly between the Ra values. No difference was observed between the composite Tetric and the ceromer Targis when these materials were polished using the same method. CONCLUSION: the lab-side-methods 2 and 3 and the chair-side-method 5 can be recommended for finishing and polishing the new ceromer material Targis.

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