



A Study of the Precision Achieved by A Set of 3D Printers Used in Dentistry

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Abstract

The present study involved some of the recently released 3D printers that have not yet been studied for their accuracy. In doing so, it becomes necessary to examine whether they are accurate in comparison to previously used 3D printers. To assess dimensional accuracy, the accepted measurement procedure is to make comparisons between a physical part and its digital model. The accuracy and resolution of 3D model samples depend on various factors, including the technology used, operating methods and parameters. The quality of a 3D printed part depends on the quality of the virtual model from which it was created. The level at which a model's geometry is controlled affects the dimensional accuracy of a part. A total of 12 3D printers created test blocks. The same settings were used for printing all test blocks, including a standard print time setting and a Z layer thickness of 100 microns.

Keywords: 3D printing; 3D printing; precision; accuracy

Indexing: Dentistry; 3D printing; precision; accuracy; 5

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