

Université de Montréal

VALIDITY, RELIABILITY AND REPRODUCIBILITY OF DIGITAL MODELS OBTAINED WITH ITERO (ALIGNTECH) AND LAVA DIGITAL (3M) IN COMPARISON WITH PLASTER MODELS

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Objective: The primary objective of this study was to evaluate validity, reliability and reproducibility of dental measurements obtained on the digital models with iTero and Lava Digital in comparison with those obtained on the plaster models (gold standard). The secondary objective was to compare two different impression materials -alginate and polyvinylsiloxane (PVS)- and determine whether the impression material used affects accuracy of the measurements.

Methods: The first part of the study (laboratory) involved iTero and Lava digital models, which were all obtained from 25 pairs of plaster models randomly selected from one of the authors' private practice. Alginate and PVS impressions taken on plaster models have been scanned by Lava. The second part of the study (clinical) sought to compare iTero digital models (intraoral scans) with plaster models (alginate and PVS impressions) based on 25 patients from the Orthodontic clinic of the University of Montreal requiring orthodontic treatment. The operator time involved in scanning teeth with iTero and measuring digital models on a computer vs taking traditional impressions and measuring stone casts manually was noted to evaluate the clinical efficiency of iTero. In both parts of the study, Bolton 6 and 12 analyses, arch length, intermolar and intercanine distances, overbite and overjet were measured by two authors.

Results/Conclusions: All results and statistics will be available by next August and therefore be presented at the 66th Annual CAO Scientific Session.