








ORIGINAL RESEARCH

# Influence of kinematics and incidence angles on the cutting efficiency of two single-file nickel-titanium rotary instruments

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## Keywords

continuous rotation, cutting efficiency, file design, incidence angles, reciprocation.

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doi: 10.1111/aej.12543

## Abstract

To compare the cutting efficiency of F6 Sky Taper (F6ST) and One Curve (OC) with different kinematics and cutting inclinations. Cutting efficiency of 80 new F6ST and OC was tested at 90° and 70° inclination in relation to the sample, in continuous rotation and reciprocation, against standardised gypsum samples for 120 seconds using a customised device. Data expressed as weight loss and length of the sample cut were analysed using two-way analysis of variance and Tukey t-test ( $P < .05$ ). F6ST showed significantly higher cutting efficiency in reciprocation, while OC in continuous rotation. Regardless of inclination, F6ST showed statistically higher values than OC in reciprocation,