

<b>Thesis Title</b>	Reproducibility of pocket depth measurement by a simple force controlled probe
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## ABSTRACT

The purpose of the present study was to develop a simple force controlled probe (SFCP) with the preset probing force of 25 gm by means of a coil spring. In addition, the reproducibility in measuring sulcus/pocket depth of this instrument was compared with the conventional probe (CP). Eight patients who had probing depth of  $\geq 5$  mm in at least 5 teeth after the initial therapy were selected for the study. Two successive visits in 1 week interval were made and the following parameters were examined and recorded: the gingival condition (redness and swelling), Gingival Bleeding Index and probing depth (excluding third molar). In each visit 1,284 sites were measured twice by one examiner. The sequence of measurement either by SFCP and CP or CP and SFCP was randomly assigned in each patient and was reversed in the following visit. The results showed no significant difference between redness, swelling and the Gingival Bleeding Index in the first and second visit. Approximately 97% and 95% of the probing depths recorded could be reproduced within 1.0 mm

difference by SFCP and CP, respectively. However, the value of difference in repeated probing depth measurements by the SFCP exhibited significantly less variance than the CP for all teeth and various groups of teeth (upper, lower, anterior, and posterior teeth). Results of this study suggested that a simple force controlled probe yields more reproducible probing depth measurements than a conventional periodontal probe.