

Evaluation of two models of a slipmeter  
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### Abstract

The aim of the study was to compare the performances of the Brungraber Mark II (BM II) and Mark III (BM III) slipmeters. Friction measurements with the two slipmeters were conducted in a laboratory using four footwear materials, four floor types, and three surface conditions. Both the coefficient of friction (COF) values obtained with the slipmeters and the force platform-based COF values were measured. The COF measured with the BM II was slightly higher than that measured with the BM III with a  $R^2$  of 0.83. A comparison of the averaged normal force between the two slipmeters showed that the BM II generated a significantly higher normal force than the BM III at a low COF and the difference of the normal force between the two slipmeters decreased when the COF value was increased. The regression analysis results in this study showed that the force platform-based COF values were closer to the COF values obtained with the BM III than with the BM II. The  $R^2$  values for the regression model between the COF values obtained from the slipmeter and the force platform were 0.90 and 0.79 for the BM II and BM III, respectively.

Keyword : Slips and falls, Friction measurement, Slipmeter, Coefficient of friction