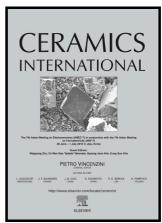
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ACCEPTED MANUSCRIPT

Fast setting tricalcium silicate/ magnesium phosphate premixed cement for root canal filling

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Abstract

MTA-based root-end filling is a promising therapeutic approach for root repair, however, difficult

handling characteristics, presence of toxic elements in the material composition and long setting time

are main drawbacks for clinical applications. The purpose of this study was to develop a novel fast

setting silicate based premixed cement for endodontic use. The premixed cement contained tricalcium

silicate (C3S) as the main constituent for hydration, magnesium phosphate cement (MPC) as setting

accelerators and glycerol as water-miscible liquid. The physicochemical properties and antibacterial

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