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Title: Evaluation of the Residue from Microset on Various Metal Surfaces

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Abstract Text:

Residual contamination from fast-curing impression materials have been characterized to identify the quantity and identity of problematic species. Fast-curing elastomers are used to cast negative-mold replications of physical defects on material surfaces. The negative-mold impressions can then be used for further out-of-the-field evaluation of the defect, and can be kept for record keeping purposes. The selected impression materials are designed to cure quickly and with very low adhesion, so that they can be easily removed from surfaces with little residual contamination. Some contaminant is inevitably retained by the substrate material. This investigation identified the composition and quantity of the remaining material upon removal of Microset Synthetic Rubber Replicating Compound from several metallic surfaces. Coe-Flex was used as a relative comparison to Microset. On fifteen different substrates the Microset left no visible trace of contaminant, however, X-ray photoelectron spectroscopy showed evidence of a thin silicone-based contaminant film of approximately 2 nm thickness.

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