

## **To Study the Effect of Indirect Latex Glove Contamination and Various Traditional Cleaning Protocols on the Inhibition of polymerization of polyvinyl Siloxane Impression Materials – An SEM based in vitro study**

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### **ABSTRACT**


**BACKGROUND AND OBJECTIVES:** The study aims to examine the surface of a commonly used dental impression material polyvinyl siloxane (PVS) that has been contaminated indirectly by latex, to evaluate its inhibition of polymerization and to see the effect of a few selected cleansing procedures on the same.

**METHODS:** The PVS (putty consistency) was tested for indirect contamination by latex using contaminated nitrile gloves and sulfur based haemostatic agent (Aluminum sulfate) infused gingival retraction cords. The contaminated samples were subjected to 3 types of cleaning protocols, simulating a chair side clinical scenario, namely running water, mouthwash, water and pumice slurry and air dried. The Vicat needle penetrometer was used to determine the setting time and Scanning Electron Microscope to study surface characteristics. The experiment was done sequentially as per the groups.

**RESULTS:** The analysis was carried out on SPSS 16.0 version (Chicago, Inc., USA). There was a significant difference between the setting times of the three groups. Group I being higher than Group II and III. Chemical methods of decontamination using alcohol rub and mouthwash rinse proved less satisfactory than the mechanical methods.

**PRINCIPAL CONCLUSION:** In the various scenarios of indirect contamination of PVS through contaminated gloves, contaminated moulds and sulfate based medicaments; no cleaning protocol provided complete decontamination of the samples. Also, the sulfates present in the medicaments for gingival retraction were not potential retarders of the polymerization

**KEYWORDS:** Elastomeric impression material; Polyvinyl siloxane; Latex; Sulphur; Medicaments; Decontamination; Scanning Electron Microscopy.

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