

## **Dactyloscopy and Finger Mark Detection on Latex Glove**

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With criminals becoming more aware of possible incriminating evidence at crime scenes, they are also becoming more conscious about "covering their marks" by using latex gloves. However, finger marks may be recovered from the inside of the gloves, thus providing strong evidence against the perpetrators. In this study, we are therefore focusing on the comparison of the three primary methods for the development of finger marks such as Cyanoacrylate, small particle reagent with gel lifters, and Ninhydrin (dissolved in three different solutions). Experimental results showed that the most successful method for the examination of finger marks from latex gloves contained Cyanoacrylate fumes, while the most inefficient was the method using Ninhydrin, which is in contradiction with some published studies. Additionally, the efficacy of three different Ninhydrin solutions were tested, where the heptane-based, HFE- based and purchased Ninhydrin solutions were used. The outcome showed that there is no significant difference in performance between diverse Ninhydrin solutions, regarding the recovery of finger marks from latex gloves.

**Keywords:** dactyloscopy, finger marks, fingerprint, latex gloves, cyanoacrylate, small particle reagent, Ninhydrin

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