

Development of Latent Print using Incense Powder

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Abstract: *The powder method is the most convenient method used in latent fingerprint development in any crime scene investigation. Various methods have existed for the last decades. Like white powder, pink, black and many more. For this study a bunch of cycle agarbatii (incense sticks) used. Incense sticks were burnt completely, and its ash was collected on sheet of paper. It was crushed by smooth hands and put it into mixture and converted into very fine powder. The powder is then formed with the help of camel brush applied on the subject. The photograph was taken in proper contrast. The impression of fingerprint obtained was very precise and ridge pattern developed pattern was very comprehensive and identifiable pattern. Due to the contrast the black and grey powder are visible. However, it was very cheap, not time - consuming, the fastest result and readily available in any house. Moreover, it was also good for environmental waste management.*

Keyword: Crime scene, incense powder, Latent print

1. Introduction

A fingerprint has always been a very unique individual characteristic that cannot match with any two different human beings. The prouter or palmer surface of the hand and feet are covered by layer of folded skin. Which ensure multiple activity like, the raised surface is known as papillary which are called friction ridges. The duplication of pattern of the frictional ridges on the distal phalanges of the finger and thumb are called fingerprints. The ridges on fingertips begin to form on the palmer surface during the third month of pregnancy. And that remains unchanged in his/her entire life. Moreover, no two - fingerprint was found to be identical. With this permanence and unique characteristics of fingerprint. The fingerprint is considered the most vital physical evidence to aid the criminal justice system. Generally, the fingerprint is of three types 1) Visible print, 2) latent print, 3) plastic print of 3D print. Based on Local exchange principle has every contact live a trace. The Latent Print is the most found Print from the crime scene, which is unconsciously left by the criminal at any surface in the crime scene. Which is traced by the deposition of oil, sweat, etc they are not typically visible need developing powder and chemical and visible light source instrument? This study of fingerprint is mainly focused on the concept of developing of latent print using NON conventional powder. Here we are preparing a powder material of Incense. As it was radiantly available at any house and can be prepared in few minutes or nor it was harmful. The fine powder particle is used by human as their daily needs. The fine powder particle of these materials provides a good adhesion on both light and dark non - porous surface.

Incense sticks [Agarbatii]

The Incense sticks found at every Hindu household. If any forensic investigator forget some powder at bring at crime scene then this type of powder are commonly available at home and help to overcome the challenged faced at crime scene. Incense sticks contain ingredients of herbal and wood powder 21 %, 33 % bamboo sticks.

2. Material and Method

The Agarbatii powder method is used to visualized the latent

fingerprint from various non - porous surface. We will used unconventional powder that made from incense sticks and put in on glass material which is then applied on finger surface. This entire method is know as powder method and used to enhanced the fingerprint on any surface at crime scene. This method is mainly depends on the adhesions of fine powder that will react with the sweat and oil deposited on the surface which is released by the skin pores called poroscopy.

In order, to develop latent print powder one should buy Agarbatii sticks from any commercial store nearby and break it into tiny pieces. Second step would be to convert it into macroparticle for that put the pieces into mixture and crush it entirely. Because if any particle left behind then it will affect interfere with the ridges and make it spoil and unable to develop a latent print. So after mixture i had applied the powder to porous and non - porous surfaces. Wood, cardboard, plastic, metal, steel.

The above mentioned Incense powder is sprinkled all over the questioned surfaces and fine powder will interact with the chemical composition of finger print and react with it and developed the ridges. Moreover, to visualize it I had taken ALS [artificial light source] UV light. I had applied this powder with the help of chemical brush and it provides good adhesions on traces of perspiration with clear visibility of ridges. And at the end it was photograph for future analysis with the DSLR camera and transferred into laptop then the image are cropped.



Index finger its shows radial loop of right hand



On glasses loop of left hand



On marble ring finger of right hand showing whorl



Incense sticks brought from community store

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3. Result and Discussion

The research of this studies shows that how non - conventional powder like Argabatii will help forensic investigator to developed latent fingerprints. Basically, the merit of this powder is that it is ready viable and not harmful if it gets into the eyes or mouth. It was only worked on non - porous surfaces and right now I am working on making more nano particles so that I can experiment to develop on porous surfaces too.

This powder method of agarbatii show clear and Crystall ridges image and it was mostly worked in non - porous surfaces. It was known as the best conventional method to develop latent print on non - porous surfaces.

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