

RECORDING AND DEVELOPMENT OF SECRET FINGERPRINTS WITH FOOD PRODUCTS

ANNADI SRI SHREYA¹, MS. POOJA YADAV²

Student, Department of Forensic Science, Institute of Sciences, SAGE University, Indore (M.P), India¹.

Assistant Professor, Department of Forensic Science, Institute of Sciences, SAGE University, Indore, (M.P), India².

ABSTRACT

This is the continuation work of the development and recording of Secret Writing with food products. This method is used in the crime scene to identify the culprit, victim and also the suspect. Same as the way Secret Writing was recorded and developed, the fingerprints are also developed. This is also a fingerprint recording method in which This process has been done by using various fruit juices and other substances which includes grapes, watermelon, Naseberry (chiku), orange, Frooti, cucumber, pineapple, kiwi, sugar cane, coconut, guava, Dettol, apple. Where the fingerprints are recorded on a paper and developed by applying flame on the other side of the recoding. Take small amount of fruit content and dip the finger slightly and place the finger print on the paper. This method will help the officers to reduce the suspect list and identify the individual. This method will also help in crime scene management.

Key Words: Secret Fingerprints, Culprit, Grapes, Watermelon, Naseberry (chiku), Orange, Frooti, Cucumber, Pineapple, Kiwi, Sugar cane, Coconut, Guava, Dettol, Apple.

INTRODUCTION

Secret writing: Secret writing is otherwise called as Invisible writing.

Significance of secret writing:

To hide personal and private data.

To cause difficulty for unintended user to extract the information from the message.

To protect sensitive data.

To avoid misuse of data.

To avoid unintended damage to human data.

For monetary and black mailing purpose.

Fingerprint: it is an impression made by ridges and furrows.

This is unique from person to person.

The scientific study of fingerprint is called as dermatoglyphics. The fingerprinting system was first developed by Francis Galton. Fingerprint is analysed on the basis of different fingerprint patterns like

Loop, arch, whorl and composite patterns.

Loop: This is the pattern where the ridges start from one side of the finger, makes u turn at middle of the finger and ends to the same side. There are 2 types of loop pattern.

Radial Loop and Ulnar Loop.

Arch: This pattern starts from one side of the finger, mounts up and ends to the other side of the finger.

Tented Arch and Plain Arch.

Whorl: This pattern appears as circle.

Composite: These are the pattern which consists of two patterns. These are accidental patterns.

Lateral pocket loop, Central pocket loop and Twinned loop.

The analysis and identification can be done by different ridge characters.

REQUIREMENTS

For recording and development of fingerprint:

White sheets or Blank paper, match stick, candle, Grapes, watermelon, kiwi, orange, Naseberry (Chiku), frooti, cucumber, coconut, pineapple, sugar cane, guava, Dettol, apple are required.

METHODOLOGY

GRAPES:

- a. Take some amount of grape juice in to container.
- b. Dip the fingers into it.
- c. Allow it to dry until you find it moist to avoid smudging.
- d. Take the prints on a blank paper and allow it to dry.
- e. Apply heat to it from the other side.

WATERMELON:

- a. Take some amount of watermelon juice into a container.
- b. Dip the finger and allow it to become moist.
- c. Then take the impressions on to the sheet.
- d. Apply the heat from the other side.

NASE BERRY(CHIKU):

- a. Extract the juice from the fruit.
- b. Apply the fruit extract to record the fingerprint.
- c. Take the impressions on the white sheet.
- d. Develop the fingerprint by applying heat.

ORANGE:

- a. Peel out the orange and take out the juice from it.
- b. Dip the finger in it and allow it to become moisture.
- c. Now take a blank sheet and place the fingerprint on the sheet.
- d. Place It on the flame for development.

FROOTI:

- a. Take some amount of frooti in a container.
- b. Carefully dip the finger and remove excess to avoid smudging.
- c. place the fingerprint on a blank sheet and allow it to dry.
- d. Apply the flame on the other side.

CUCUMBER:

- a. Peel out the cucumber.
- b. Dip the finger on the watery content of the cucumber and slightly dry it.
- c. Then take a white sheet and record the fingerprint.
- d. Apply the flame on the other side for developing the print.

PINEAPPLE:

- a. Take a small slice of pineapple and extract the juice of it in a container.
- b. Dip the finger in it and slightly dry it.
- c. Now place the finger on the sheet.
- d. Apply heat on the other side.

KIWI:

- a. Take out the juice from the fruit in to a container.
- b. Dip the fingerprint into it and allow it to dry.
- c. Take a blank sheet and place the impression on it.
- d. Apply heat to it from the other side.

SUGARCANE:

- a. Take small slice of sugar cane and extract juice from it.
- b. Dip the finger in it and allow it to become moist.
- c. Place the fingerprint on the blank sheet.
- d. Apply flame on the other side to develop the print.

COCONUT:

- a. Collect the coconut water in to the container.
- b. Add on to the finger for recording the print.
- c. Place the finger on the sheet.
- d. Apply the flame on the other side.

OBSERVATION

a. Development of fingerprints by Grapes.



Fig-1

b. Development of fingerprints by watermelon.



Fig-2

c. Development of Fingerprints by Nase Berry.



Fig-3

d. Development of Fingerprints by Orange.



Fig-4

e. Development of Fingerprints by Frooti.



Fig-5

f. Development of Fingerprint by Cucumber.



Fig-6

g. Development of Fingerprint By Pineapple.



Fig-7

h. Development of Fingerprints by Kiwi.



Fig-8

i. Development of Fingerprints by Sugarcane.



Fig-9

j. Development of Fingerprints by Coconut.



Fig-10

RESULT AND DISCUSSION

- In this paper for developing and preservation of fingerprints for long time the samples used are 10.
- Different fruit juices and other substances were used.

- the patterns found in all the above pictures are ulnar loop, arch, radial loop and central pocket loop.
- All the patterns were clearly visible for identification.

ACKNOWLEDGEMENT

I am very thankful to my mentor, for helping me in my research work.

REFERENCES

1. Development and recording of secret writing with food products. (IJARTET), Volume 10, Issue 8 (2023).
2. Fingerprint development techniques: Theory and application. SM Bleay (2018).
3. Design of a fingerprint- Based Identification system for UMAT examination centres. (IJAREEIE), Volume 10, Issue 11(2021).
4. Trends in fingerprint analysis. Sciencedirect.com (2016).
5. Deciphering of secret written content written with various fluids. Indian Journal of Forensic Medicine and Pathology, Volume14, Number 3 (2021).
6. Development of latent fingerprints using Clitoria ternatea and Curcuma longa powders. Journal of Forensic Medicine and Toxicology, Volume 40, Number 2 (2023).
7. Encyclopedia.com. Retrieved from <https://www.encyclopedia.com>
8. Secret writing. Retrieved from <https://www.faqs.org/espionage/Re-Se/secret-writing.html> (2013).
9. The use of oil red O in sequence with other methods of fingerprint development. Journal of Forensic Identification, Volume57, Issue 4 (2007).
10. Advances in fingerprint technology. CRC press (2001).
11. Wikipedia contributors. Fingerprint. In Wikipedia, The Free Encyclopedia. Retrieved from <https://en.wikipedia.org/wiki/Fingerprint>.
12. Imprintseals.org. A history of fingerprints. Retrieved from https://www.imprintseals.org/A_History_of_Fingerprint.

AUTHOR'S BIOGRAPHY:

First author, Annadi Sri Shreya is a bachelor Student at SAGE University, Indore, and is in 5th semester.

Second author, Ms. Pooja Yadav is Assistant Professor at SAGE University, Indore.