



IDENTIFICATION, COMPARISON AND DEVELOPMENT OF LIP PRINTS

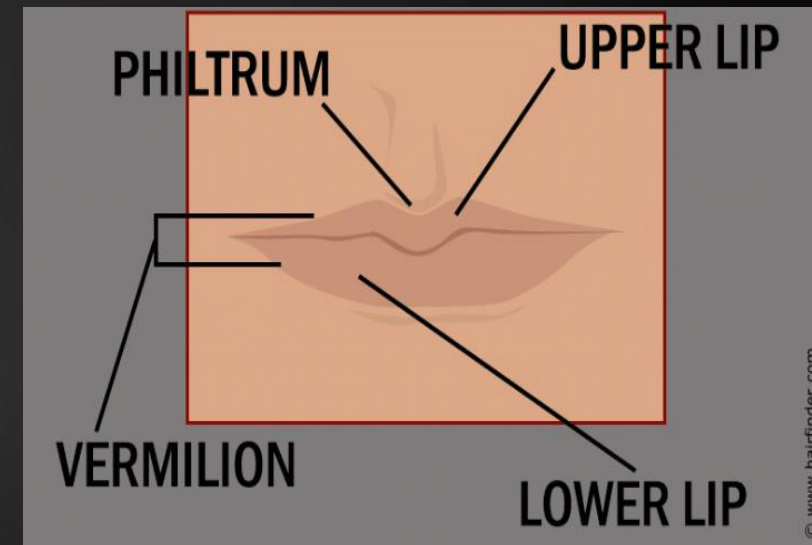
INTRODUCTION

- ❑ Lip prints are like finger print unique to an individual and can be easily recorded.
- ❑ Identification plays a major role in any crime investigation.
- ❑ The pattern of wrinkles on the lips have individual characteristics like fingerprint.
- ❑ The study of lip print are known as cheiloscopy.
- ❑ Cheiloscopy is a forensic investigation technique that deals with identification of human based on lip traces, The aim of this study is to establish the uniqueness of lip prints which aids in personal identification.

IDENTIFICATION OF LIP PRINT

❑ It is well established that every lip print has an individuality which cannot be duplicated. The individuality in a given print is established by studying the following characteristics.

- UPPER LIP- It is the strip of the smooth skin that borders the upper edge of the mouth. It is usually thinner than the lower lip.
- LOWER LIP-Is the strip of smooth skin that borders the lower edge of the mouth. It is usually wider and vertically deeper than the upper lip.
- VERMILION –It is the border of the lips and the surrounding skin of the face. In some individuals this is more pronounced and in some the two skin types seem to almost blend.
- PHILTRUM-Is the groove like indentation often found at the center of the upper lip. It is responsible for the biggest difference in shape between two lips.



- ❑ Following features are also present in lips which is used for individualization and comparison are as follows-

Sr. No.	Type of features	Graphic symbol	Sr. No.	Type of features	Graphic symbol
1	An eye	⊙	13	A closing bottom bifurcation	∧
2	A hook	└	14	A delta-like opening	∇
3	A bridge	H	15	A simple opening	⊥
4	A line		16	A closing top bifurcation	∇
5	A dot	.	17	A pentagonal arrangement	⬠
6	A rectangle-like	▢	18	A branch-like top bifurcation	∇
7	A triangle-like	▴	19	A star-like bifurcation	✱
8	A group of dots	••	20	A fence	+++
9	A simple top bifurcation	∇	21	A branch-like bottom bifurcation	∧
10	A simple bottom bifurcation	∧	22	A double fence	+++
11	A double eye	⊙	23	A hexagonal arrangement	⬡
12	Crossing lines	X			

ACCORDING TO SUZUKI AND TSUCHIHASHI THERE ARE 5 PATTERNS OF A LIP PRINT THEY ARE-

- ❖ Type I A- Long vertical
- ❖ Type I B- short vertical
- ❖ Type II – Branched
- ❖ Type III- Intersecting
- ❖ Type IV- Reticulate
- ❖ Type V- Indefinite/ Mixed



Forms Of Lip Print Found On Crime Scene

There are three types of lip print can be found at the crime scene are as follows-

1. VISIBLE LIP PRINTS- These are the lip prints which are visible to the naked eye and it do not need further development for its visualization.
2. LATENT OR HIDDEN LIP PRINT-Theses are lip prints which are not visible to human eye. It requires further development processes for its visualization.
3. 3-D OR PLASTIC LIP PRINT- Theses are the lip prints which are found on soft, gel like surfaces(wax or butter). They are visible to naked eye but sometimes need development process for photography .

DEVELOPMENT OF LIP PRINTS

Following methods are used for development of lip prints:

1. POWDER METHOD-

- ❑ A powder technique is usually used to identify latent prints on nonporous surfaces such as glass, marble, metal, plastic, and finished wood.
- ❑ When powder is distributed on the surface, it adheres to the residue deposited from the finger's touch , allowing investigators to find the print.
- ❑ Following powder method can be used to develop lip print :
 - Aluminum Powder Method
 - Magnetic Powder Method
 - Plumb Carbonate Method (White Powder)

2. CHEMICAL METHOD-

Crime scene investigators often use chemical methods to locate the print such as:

- ☐ Iodine Fuming{ must be photographed quickly because print fades away quickly after the fuming takes place}.
- ☐ Silver Nitrate { Works well on impressions left in cardboard and paper like surfaces}.
- ☐ Ninhydrin{ Reacts with the oils in the print residue to create a bluish print}.

3.X- RAY METHOD-

- ❑ Lead powder distributed on suspected areas with the help of brush
- ❑ Dusted area should be X-rayed and then the photographic film of X-Ray should treat with required chemicals

- ❑ DEVELOPMENT OF LIP PRINT IN MULTI COLOURED SURFACE –
 - Sudan black reagent-it can apply directly to the film
 - Yellow fluorescent powder
 - Nile red reagent.

LIFTING OF LIP PRINT-

1. PHOTOGRAPHIC METHOD-

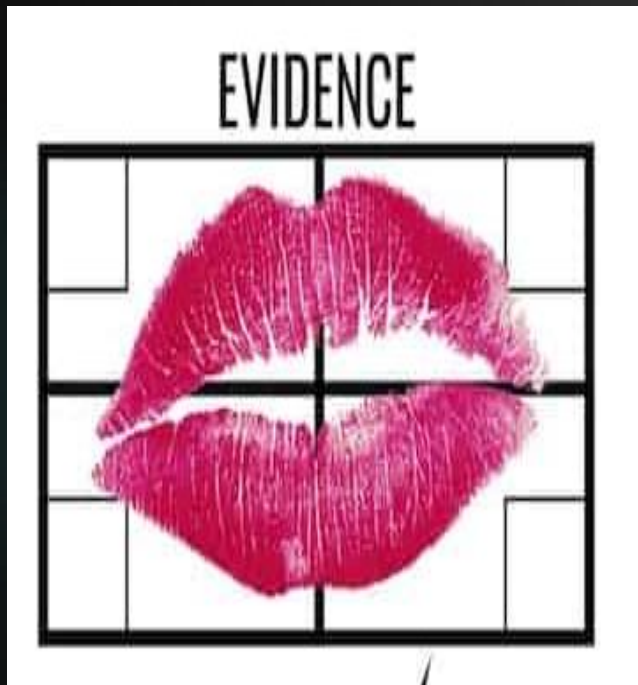
- ❑ The developed print should always be photographed

2. TRANSPARENT TAPE METHOD-

- ❑ Powdered dusted lip print can be lifted with the help of transparent tape.

COMPARISON-

Comparison between the lip print recorded from the crime scene with the print that has been taken from the suspect .



EVIDENCE



SUSPECT #1



SUSPECT #2



SUSPECT #3



Thank
you!