

Hair Analysis Notes Guide

- _____ can be very valuable to forensic scientists.

-Need to be _____ with hair _____ and _____.

-A hair is _____ of _____ layers: -C _____ -C _____
m _____

**See diagram of hair and skin layer on online notes*

Structure of Hair

-Draw a picture of the hair from the board below:

-What is proximal?

-What is distal?

C _____

-Hard, _____ covering that _____ the inner layers. Made of overlapping _____ of _____; differ in _____ and _____ of scales.

Type of Scales

1. _____ scales: found on very _____ hair of _____ and bats, _____ in humans.

2. _____ or _____ scales: _____ off from shafts of hair. _____ found on _____, found on _____ seals, minks, etc.

3. _____ or flattened scales: _____ (like _____ on a roof). Found on _____ and some animals.

**Draw below the pictures of each scale pattern below:*

Cortex

_____ Made of _____ the _____. Makes up _____ of human hair.

Contain _____ that give hair its _____.

-Forensic scientists use _____, _____, and _____ of pigment granules.

Medulla

- Made of _____ that run _____ the _____ of the _____.
- May be _____, interrupted, fragmented, or _____.
- Forensic scientists use the _____, medullar _____ and shape.

Medullary Index

-diameter of _____ / diameter of _____

- _____ → index is $<1/3$

- _____ → index is $>1/2$

-Thus _____ generally have a _____ medulla.

**Draw a picture of what continuous and fragmented medulla look like below:*

THE ROOT

-Human roots _____ different based on whether they have been _____ removed or if they are _____ hairs and have _____ out. _____ roots will vary, but in general have a _____ shape.

Hair

-B/c humans _____ their hair with _____ or other _____, this _____ in identification.

- _____ can be in the _____

-Bleaching _____ the color and gives it a _____.

- _____ of colored " _____ " helps with ID.

-Hair _____ 1 cm / month.

**Remember the picture-examples online.*

ANALYSIS PROCESS

-1st determine whether hair is _____ or _____.

-If _____: they compare hair to that of suspects using _____.

-Then determine _____ of _____: scalp, body, _____, etc.

-Hair can be used to determine _____.

-If _____: they _____ the animal.

**Remember the picture-examples online.*

Other Important Points

-Hair is one of _____ types of trace evidence.

-Hair NOT _____ type evidence unless the _____ is present (can obtain _____ sample from live _____ in hair _____).

-Hair CAN be used to _____ suspects or scenarios and to CORROBORATE (_____) other evidence.

DNA from Hair

-The _____ contains _____. If the hair has been _____, some _____ tissue may be attached _____ DNA.

-The _____ contains abundant _____ DNA, inherited only from the _____. It can be typed by comparing _____ if no DNA from the body is available. This process is more _____ and _____ than using nuclear DNA.