

Trace Evidence: Hair & Fiber

Trace Evidence

small but measurable amount of physical and biological material

Comparison Microscope

allows scientists to compare samples, such as hair and fibers, side-by-side

Follicle

consists of a root embedded in the skins and a hair shaft which protrudes above the surface of the skin

Hair Shaft

non-growing portion of hair which protrudes from the follicle

Postmortem

after death

Pigmentation

natural coloring of animals or tissues

Keratin

fibrous structural protein which is the hair's main structural component

Medulla

innermost layer of the hair which is made up of cells which form a shaft through the middle of hairs

Cortex

middle layer and largest part of the hair shaft in humans

Cuticle

transparent layer of the hair shaft which shields the inner layers

Anagen

growing period of a hair follicle which can last two to five years

Catagen

intermediate period of hair growth in which hair stops growing

Telogen

resting and shedding stage of hair growth

Coronal Pattern

crown-like scales pattern which are commonly found in hairs of small rodents and dogs

Trace Evidence: Hair & Fiber

Spinous Pattern

petal-like scales which are typically seen in cats

Imbricate Pattern

flattened-scale type which consist of overlapping narrow scales and are found in human hairs

Fibers

threadlike elements from fabric or other materials, such as rope or carpet

Somatic Origin

body area a hair comes from

Scale Cast

hair analysis technique which allows scale patterns to be seen more clearly

Polyethylene

most common type of plastic

Buckling

twisting of the hair shaft

Medullary Index

diameter of the medulla to the diameter of the entire hair

Refractive Index

measurement which determines how light will refract within an object compared to how light travels in a vacuum

Birefringence

numerical difference between the refractive indices of a fiber

Cross Section

cutting of hair which allows the shape and structures to become more distinctive and gives greater detail than the appearance of the hair

Infrared Spectroscopy

deals with a longer wavelength and lower frequency than visible light

Polarized Light Microscopy

designed to observe materials internal structured due to their optical characteristics

Ovoid Bodies

cells of accumulated pigmentation