

**SYRACUSE UNIVERSITY
PROJECT ADVANCE**

**SUPA
COOL
STUFF**

SUPA Forensics

HAIR LAB

This lab involves physical observations with microscopy (Stereoscope and compound scope) and chemical reactions and changes. Record all observations and document with pictures from your phone. Be sure to explain what you see in the picture and include type of scope and the magnification used.

Samples: a) Your hair b) Animal Hair

Procedural Outline:

1) **Physical observations** of your hair. This will be our “Control”. Be sure to explain what you see in the picture.

2) **Chemical Testing** (~24 hours) with
a) 3M HCl b) H₂O c) Bleach d) Acetone

Note any changes between the tested hair and the control sample. Use gloves and/or tweezers. Rinse the hair with water and place on the slide.

3) **Cuticle pattern impressions** with nail polish.

“Paint” a narrow strip of clear nail polish on your slide. Place the hair sample on the polish. Allow to dry completely. Firmly grab the hair from the tip (distal end) and rip off from the slide. Inspect the pattern left in the dried nail polish under magnification.

4) **Flame test.**

Quickly run the hair through the Bunsen burner flame. Tap with a wet paper towel if on fire.

5) **Follicular tag from forcibly removed hair.**

“Do unto others...” Grab a single strand of hair from your partner and quickly pull from scalp. Examine the follicular tag on the proximal end of this “Forcibly removed” hair.

6) **Comparison to other animals.**

Take a sample from 2 of the animal pelts provided. Perform the same experiments and compare and contrast your results.