



Criminalistics Section – 2004

B61 The Identification of Human Saliva

Arthur W. Young, BS and Jennifer Regalia, MSFS, National Medical Services, 3701 Welsh Road, Willow Grove, PA 19090*

After attending this presentation, attendees will understand a rapid, specific, and sensitive test that can be used to identify human saliva.

This presentation will allow forensic scientists a single conclusive test for human saliva rather than only presumptive tests for saliva.

For many years, there has been no easy and conclusive test for human saliva. In forensic practice, the test for amylase has been a commonly used method as a presumptive test for the indications of saliva. Unfortunately, under certain circumstances, amylase can be detected in semen, blood, and plant sources, as well as saliva from other mammalian species, hence, the need for a more conclusive test. This study shows a method of testing using anti-human salivary amylase that is specific to human saliva. The test utilizes the classic antibody-antigen reaction which results in a precipitin band. It can be run in an agarose gel using either double immunodiffusion or crossed-over techniques. Several species have been tested including commonly found domestic animals such as feline and canines with no cross-reactivity. Other body fluids and purified plant sources also show no cross-reactivity with this test. The research in this study indicates that by using a specific anti-human amylase antibody, a rapid, specific, and sensitive result confirming human saliva can be obtained.

Saliva, Amylase, Antibody