Poster 2

IDENTIFICATION OF HUMAN BLOOD: AN IMMUNOASSAY UTILIZING ANTI-HUMAN HEMOGLOBIN

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The conclusive identification of human blood has been an often contested issue among forensic scientists. Current analysis usually consists of presumptive testing such as Kastle-Meyer (phenolphthalein) or o-tolidine and a human protein immunoassay. Due to lack of specificity in these procedures, positive results from these tests does not make conclusive identification of human blood possible. A new crossover immunoelectrophoretic assay was developed involving an anti-human hemoglobin antibody. Specificity testing established the antibody to be specific only to primates. Cross reactivity was not seen with other body fluids nor was inhibition seen in body fluid mixtures with blood. Sensitivity testing demonstrated that the antibody detected hemoglobin at very low concentrations. False negative issues arising from high concentrations of hemoglobin were resolved by running the assay in parallel with an anti-human serum antibody. By detecting the presence of human hemoglobin, which is specific to human blood, the conclusive identification of human blood is now possible.