Spectral analysis of blood stains at the crime scene

Edelman, G.J.

Citation for published version (APA):


8. Evans MD, Thai CN, Grant JC. Development of a spectral imaging system based on a liquid crystal tunable filter. Transactions of the Asae 1998; 41: 1845-1852


17. van der Meer F. The effectiveness of spectral similarity measures for the analysis of hyperspectral imagery. International Journal of Applied Earth Observation and Geoinformation 2006; 8: 3-17

Ref Type: Conference Proceeding


Ref Type: Conference Proceeding


33. Bhargava R, Perlman RS, Fernandez DC, Levin IW, Bartick EG Non-invasive detection of superimposed latent fingerprints and inter-ridge
trace evidence by infrared spectroscopic imaging. Anal Bioanal Chem 2009; 394: 2069-2075


- 174 -


Ref Type: Conference Proceeding


67. Li B, Beveridge P, O'Hare WT, Islam M The estimation of the age of a blood stain using reflectance spectroscopy with a microspectrophotometer, spectral pre-processing and linear discriminant analysis. Forensic Science International 2011; 212: 198-204

68. Li B, Beveridge P, O'Hare WT, Islam M The age estimation of blood stains up to 30 days old using visible wavelength hyperspectral image analysis and linear discriminant analysis. Science and Justice 2013; 53: 270-277


Ref Type: Conference Proceeding

74. Virkler K, Lednev IK Analysis of body fluids for forensic purposes: from laboratory testing to non-destructive rapid confirmatory identification at a crime scene. Forensic Sci Int 2009; 188: 1-17

75. Lomholt B, Keiding N Tetrabase, an alternative to benzidine and orthotolidine for detection of hemoglobin in urine. The Lancet 1977; 1: 608-609


78. Saferstein R Criminalistics - an introduction to forensic science. Prentice hall, 2004

79. James SH, Nordby JJ Forensic Science: An Introduction to Scientific and Investigative Techniques. Taylor & Francis, 2005
80. Zubakov D, Hanekamp E, Kokshoorn M, van Ijken W, Kayser M
Stable RNA markers for identification of blood and saliva stains
revealed from whole enome expression analysis of time-wise degraded

81. De Wael K, Lepot L, Gason F, Gilbert B In search of blood -
Detection of minute particles using spectroscopic methods. Forensic
Science International 2008; 180: 37-42

82. Zijlstra WG, Buursma A, Meeuwsen-Vanderroest WP Absorption
spectra of human fetal and adult oxyhemoglobin, de-oxyhemoglobin,
carboxyhemoglobin, and methemoglobin. Clinical Chemistry 1991; 37:
1633-1638

83. Nagababu E, Rifkind JM Formation of fluorescent heme degradation
products during the oxidation of hemoglobin by hydrogen peroxide.
Biomedical and Biophysical Research Communications 1998; 247: 592-596

84. Virkler K, Lednev IK Raman spectroscopic signature of blood and its
potential application to forensic body fluid identification. Analytical
and Bioanalytical Chemistry 2010; 396: 525-534

85. Kotowski TM, Grieve MC The use of microspectrophotometry to
characterize microscopic amounts of blood. J Forensic Sci 1986; 31:
1079-1085

86. Gemert MJC, Welch AJ, Star WM One-dimensional transport theory.
In: Optical-thermal response of laser-irradiated tissue. Welch AJ,
Gemert M.J.C. (eds). New York: Springer science+business media,
LLC, 1995, 47-72

87. Cheong W, Prahl S, Welch A A review of the optical properties of
biological tissues. IEEE Journal of quantum electronics 1990; 26: 2166-
2185

88. Inoue H, Takabe F, Iwasa M, Maeno Y, Seko Y A New Marker for
Estimation of Bloodstain Age by High-Performance Liquid-


102. Sears DA, Udden MM, Thomas IJ. Carboxyhemoglobin levels in patients with sickle-cell anemia: Relationship to hemolytic and vasoocclusive severity. American Journal of the Medical Sciences 2001; 322: 345-348


determination using reflectance spectroscopy. Forensic Sci Int 2011; 206: 166-171


110. Tina Young A Photographic Comparison of Luminol, Fluorescein, and Bluestar. Journal of Forensic Identification 2006; 56: 906-912


Hyperspectral imaging for non-contact analysis of forensic traces.

118. Lomax RG Statistical concepts: a second course. Mahwah: Lawrence
Erlbaum Associates, 2000

interface for MCR-ALS: a new tool for multivariate curve resolution in
MATLAB. Chemometrics and Intelligent Laboratory Systems 2005; 76:
101-110

120. Budowle B, Leggitt JL, Defenbaugh DA, Keys KM, Malkiewicz SF The
presumptive reagent fluorescein for detection of dilute bloodstains and
subsequent STR typing of recovered DNA. Journal of Forensic
Sciences 2000; 45: 1090-1092

121. Barni F, Lewis SW, Berti A, Miskelly GM, Lago G Forensic application
of the luminol reaction as a presumptive test for latent blood detection.
Talanta 2007; 72: 896-913

122. Tobe SS, Watson N, Nic Daeid N Evaluation of six presumptive tests
for blood, their specificity, sensitivity, and effect on high molecular-

123. Virkler K, Lednev IK Analysis of body fluids for forensic purposes:
From laboratory testing to non-destructive rapid confirmatory
identification at a crime scene. Forensic Science International 2009;
188: 1-17

In: Handbook of Vibrational Spectroscopy, 2006

125. Hall JW, Pollard A Near-infrared spectroscopic determination of
serum total proteins, albumin, globulins, and urea. Clin Biochem 1993;
26: 483-490


130. Wood MFG, Cote D, Vitkin IA Combined optical intensity and polarization methodology for analyte concentration determination in simulated optically clear and turbid biological media. Journal of Biomedical Optics 2008; 13


Ref Type: Conference Proceeding

Ref Type: Conference Proceeding

166. Wickenheiser RA Trace DNA: A review, discussion of theory, and application of the transfer of trace quantities of DNA through skin contact. Journal of Forensic Sciences 2002; 47: 442-450


174. Hanson EK, Ballantyne JA blue spectral shift of the hemoglobin soret band correlates with the age (time since deposition) of dried bloodstains. PLoS One 2010; 5: e12830


177. Rosineide C.Simas, Gustavo B.Sanvido, Wanderson Romão, Priscila M.Lalli, Mario Benassi, Ildenize B.S.Cunha, Marcos N.Eberlin Ambient mass spectrometry: bringing MS into the "real world". Anal Bioanal Chem 2010; 398: 265-294
