



Questioned Documents Section – 2008

J19 Discriminatory Power of Various Dichroic Filters in the Differentiation of Ballpoint Pen Inks

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Upon attending this presentation, attendees will understand the value and limitations associated with the non-destructive examination of blue-blue and black-black ballpoint pen inks using selected dichroic filters.

Results stemming from the analysis of approximately 2000 pen-pair samples using six (6) different dichroic filter combinations will impact the forensic science community by providing attendees with data on the validity and reliability of this rapid and inexpensive method to non-destructively differentiate ballpoint pen inks.

Dichroic filters have long been a staple for the forensic document examiner in the viewing and differentiation of writing instrument inks. Although they have been in use for over fifty years, it appears that technological advances in infrared viewing systems have relegated the Dichroic filter to a "gone but not forgotten" forensic tool. In comparison to the advanced instruments of today (e.g., Foster & Freeman's Video Spectral Comparator systems) Dichroic filters remain inexpensive, easy to transport, and continue to provide a rapid means to non-destructively examine and/or compare various writing instrument inks. Data on select Dichroic filter sets (e.g., Roscolux #20/83, Roscolux #21/80, Lee #21/79, Lee #20/79, and Lee #20/85) in the differentiation of blue-blue and black-black ballpoint pen inks will be presented and compared with results obtained through other non-destructive examination methods.

Dichroic Filter, Ballpoint Pen Inks, Ink